Mr. Joey Barulich  
Vintage Production California, LLC  
9600 Ming Avenue, Suite 300  
Bakersfield, CA 93311

Re: Proposed ATC / Certificate of Conformity (Significant Mod)  
District Facility # S-1326  
Project # S-1114230

Dear Mr. Barulich:

Enclosed for your review is the District’s analysis of an application for Authority to Construct for the facility identified above. The applicant is requesting that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project consists of retrofitting an existing permit exempt 4.2 MMBtu/hr process heater with two 5.0 MMBtu/hr ultra-low NOX burners.

After addressing any EPA comments made during the 45-day comment period, the Authority to Construct will be issued to the facility with a Certificate of Conformity. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner  
Director of Permit Services

Enclosures
JAN 18 2012

Gerardo C. Rios, Chief
Permits Office
Air Division
U.S. EPA - Region IX
75 Hawthorne St.
San Francisco, CA 94105

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1326
Project # S-1114230

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for Vintage Production California, LLC specifically the Tejon oil field (SW/4 Sec 32, T 11N, R 19W), which has been issued a Title V permit. Vintage Production California, LLC is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The project consists of retrofitting an existing permit exempt 4.2 MMBtu/hr process heater with two 5.0 MMBtu/hr ultra-low NOX burners.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authority to Construct # S-1326-416-0 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW: ST/cm

Enclosures
JAN 18 2012

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

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1326
Project # S-1114230

Dear Mr. Tollstrup:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. The applicant is requesting that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project consists of retrofitting an existing permit exempt 4.2 MMBtu/hr process heater with two 5.0 MMBtu/hr ultra-low NOX burners.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authority to Construct # S-1326-416-0 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 30-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

[Signature]
David Warner
Director of Permit Services

DW: ST/cm
Enclosures
NOTICE OF PRELIMINARY DECISION
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT AND
THE PROPOSED SIGNIFICANT MODIFICATION OF FEDERALLY
MANDATED OPERATING PERMIT

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed significant modification of Vintage Production California, LLC for its Heavy Oil Central Stationary Source, specifically the Tejon oil field (SW/4 Sec 32, T 11N, R 19W), California. The project consists of retrofitting an existing permit exempt 4.2 MMBtu/hr process heater with two 5.0 MMBtu/hr ultra-low NOX burners.

The District's analysis of the legal and factual basis for this proposed action, project #S-1114230, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested by the public, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E. GETTYSBURG AVE, FRESNO, CA 93726-0244.
<table>
<thead>
<tr>
<th>Date</th>
<th>Engineer Name</th>
<th>Engineer's Regional Manager</th>
<th>Facility Name</th>
<th>Facility #</th>
<th>Project #</th>
<th>Operation Type (gas plant, heavy oil facility, etc)</th>
<th>Location</th>
<th>ATC's with COC (i.e. ATC # S-1234-3-2)</th>
<th>More than 1 ATC?</th>
<th>Current Title V Permit (i.e. PTO # S-1234-3-1)</th>
<th>Modification Details (Complete Sentences)</th>
<th>Contact Receiving Proposed</th>
<th>Mailing Address</th>
<th>Newspaper</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Steve Davidson</td>
<td>Leonard Scandura</td>
<td>Vintage Production California, LLC</td>
<td>S-1326</td>
<td>S-1114230</td>
<td>Heavy Oil Central Stationary Source, specifically the Tejon oil field (SW/4 Sec 32, T 11N, R 19W)</td>
<td>The following should make sense: This is for its Heavy Oil Central Stationary Source, specifically the Tejon oil field (SW/4 Sec 32, T 11N, R 19W), California.</td>
<td>S-1326-416-0</td>
<td>No</td>
<td></td>
<td>The project consists of retrofitting an existing permit exempt 4.2 MMBtu/hr process heater with two 5.0 MMBtu/hr ultra-low NOX burners</td>
<td>Mr. Joey Barulich</td>
<td>9600 Ming Avenue, Suite 300 Bakersfield, CA 93311</td>
<td>Bakersfield Californian</td>
</tr>
</tbody>
</table>
San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
New 10.0 MMBtu/hr Process Heater

Facility Name: Vintage Production California, LLC
Mailing Address: 9600 Ming Avenue, Suite 300
Bakersfield, CA 93311

Date: December 21, 2011
Engineer: Steve Davidson
Lead Engineer: Allan Phillips

Contact Person: Joey Barulich
Telephone: 661-869-8075
Fax: 661-869-8170
E-Mail: joey_barulich@oxy.com
Application #(s): S-1326-416-0
Project #: S-1114230
Deemed Complete: October 27, 2011

I. Proposal

Vintage Production California, LLC (Vintage) has requested an Authority to Construct (ATC) to retrofit an existing permit exempt 4.2 MMBtu/hr process heater with two 5.0 MMBtu/hr ultra-low NOx burners. Because, the process heater is currently exempt from permit, it will be treated as a new permit unit.

Vintage received their Title V Permit on July 31, 2001. This project is a Federal Major Modification; therefore, it is classified as a Title V Significant Modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Vintage must apply to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards (4/14/99)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4301 Fuel Burning Equipment (12/17/92)
Rule 4304 Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters (10/19/95)
Rule 4305 Boilers, Steam Generators and Process Heaters – Phase II (8/21/03)
Rule 4306 Boilers, Steam Generators and Process Heaters – Phase III (10/16/08)
Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
Rule 4351  Boilers, Steam Generators and Process Heaters – Phase 1 (8/21/03)
Rule 4801  Sulfur Compounds (12/17/92)
CH&SC 41700  Health Risk Assessment
CH&SC 42301.6  School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

This Steam Generator will be operated in Vintage’s Heavy Oil Central Stationary Source within the Tejon oil field (SW/4 Sec 32, T 11N, R 19W). The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Process heaters are used to reduce viscosity of oil, thereby improving fluid flow characteristics of the heavy crude oil. Vintage could utilize the process heater as a produced gas destruction device.

V. Equipment Listing

S-326-416-0: 10 MMBTU/HR NATURAL GAS/PRODUCED GAS FIRED PIPELINE HEATER EQUIPPED WITH AMERICAN COMBUSTION TECHNOLOGIES OF CALIFORNIA ULTRA LOW NOX FORCED DRAFT BURNER (OR EQUIVALENT)

VI. Emission Control Technology Evaluation

Emissions from natural gas-fired process heaters include NOX, CO, VOC, PM10, and SOX.

NOX is the major pollutant of concern when burning natural gas. NOX formation is either due to thermal fixation of atmospheric nitrogen in the combustion air (thermal NOX) or due to conversion of chemically bound nitrogen in the fuel (fuel NOX). Due to the low fuel nitrogen content of natural gas, nearly all NOX emissions are thermal NOX. Formation of thermal NOX is affected by four furnace zone factors: (1) nitrogen concentration, (2) oxygen concentration, (3) peak temperature, and (4) time of exposure at peak temperature.

Low-NOX burners reduce NOX formation by producing lower flame temperatures (and longer flames) than conventional burners. Conventional burners thoroughly mix all the fuel and air in a single stage just prior to combustion, whereas low-NOX burners delay the mixing of fuel and air by introducing the fuel (or sometimes the air) in multiple stages. Generally, in the first combustion stage, the air-fuel mixture is fuel rich. In a fuel rich environment, all the oxygen will be consumed in reactions with the fuel, leaving no excess oxygen available to react with nitrogen to produce thermal NOX. In the secondary and tertiary stages, the combustion zone is maintained in a fuel-lean environment. The excess air in these stages helps to reduce the flame temperature so that the reaction between the excess oxygen with nitrogen is minimized.
VII. General Calculations

A. Assumptions

- The maximum operating schedule is 24 hours per day and 8760 hours per year.
- Unit will be fired on natural gas or a mixture of purchased natural gas and produced gas. (limited to 1.0 gr-S/100 dscf, per applicant)
- Maximum Heat Input: 10.0 MMBtu/hr
- EPA F-factor for natural gas is 8,578 dscf/MMBtu (40 CFR 60, Appendix B)
- Molar Specific Volume of a gas @ 60 °F is 379.5 ft³/lb-mol
- Natural Gas Heating Value: 1,000 Btu/scf (District Practice)

B. Emission Factors

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factors (EF)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOₓ</td>
<td>0.0011 lb-NOₓ/MMBtu</td>
<td>9 ppmv NOₓ (@ 3%O₂) Burner Manufacturer Guarantee</td>
</tr>
<tr>
<td>SOₓ</td>
<td>0.00285 lb SOₓ/MMBtu</td>
<td>1.0 gr-S/100 dscf District Policy APR-1720)</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>0.003¹ lb-PM₁₀/MMBtu</td>
<td>- - Applicant Proposed</td>
</tr>
<tr>
<td>CO</td>
<td>0.037 lb-CO/MMBtu</td>
<td>50 ppmv CO (@3% O₂) Burner Manufacturer Guarantee</td>
</tr>
<tr>
<td>VOC</td>
<td>0.0055 lb-VOC/MMBtu</td>
<td>- - AP-42 (07/98) Table 1.4-2</td>
</tr>
</tbody>
</table>

¹ Based on a steam generator source test documenting that fired natural gas fired has a PM₁₀ emissions rate of 0.001 lb/MMBtu (See Appendix B)

C. Calculations

1. Pre-Project Potential to Emit (PE₁)

Since this is a new emissions unit, PE₁ = 0 for all pollutants.

2. Post Project Potential to Emit (PE₂)

The PE₂ for each pollutant is calculated with the following equation (and summarized on the next table):

\[ \text{PE₂} = \text{EF (lb/MMBtu)} \times \text{Heat Input (MMBtu)} \times \text{Operating Schedule (hours)} \]
Pursuant to Section 4.9 of District Rule 220.1, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>EF2 (lb/MBtu)</th>
<th>Heat Input (MMBtu/hr)</th>
<th>Operating Schedule (hr/day)</th>
<th>Daily PE2 (lb/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>0.011</td>
<td>10</td>
<td>24</td>
<td>2.6</td>
</tr>
<tr>
<td>SOx</td>
<td>0.00285</td>
<td>10</td>
<td>24</td>
<td>0.7</td>
</tr>
<tr>
<td>PM10</td>
<td>0.0030</td>
<td>10</td>
<td>24</td>
<td>0.7</td>
</tr>
<tr>
<td>CO</td>
<td>0.037</td>
<td>10</td>
<td>24</td>
<td>8.9</td>
</tr>
<tr>
<td>VOC</td>
<td>0.0055</td>
<td>10</td>
<td>24</td>
<td>1.3</td>
</tr>
</tbody>
</table>

3. **Pre-Project Stationary Source Potential to Emit (SSPE1)**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>EF2 (lb/MBtu)</th>
<th>Heat Input (MMBtu/hr)</th>
<th>Operating Schedule (hr/year)</th>
<th>Annual PE2 (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>0.011</td>
<td>10</td>
<td>8,760</td>
<td>964</td>
</tr>
<tr>
<td>SOx</td>
<td>0.00285</td>
<td>10</td>
<td>8,760</td>
<td>250</td>
</tr>
<tr>
<td>PM10</td>
<td>0.0030</td>
<td>10</td>
<td>8,760</td>
<td>263</td>
</tr>
<tr>
<td>CO</td>
<td>0.037</td>
<td>10</td>
<td>8,760</td>
<td>3,241</td>
</tr>
<tr>
<td>VOC</td>
<td>0.0055</td>
<td>10</td>
<td>8,760</td>
<td>482</td>
</tr>
</tbody>
</table>

From project S1112303

4. **Post Project Stationary Source Potential to Emit (SSPE2)**

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.
5. Major Source Determination

Pursuant to Section 3.23 of District Rule 2201, a Major Source is a stationary source with post-project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.23.2 states, “for the purposes of determining major source status, the SSPE2 shall not include the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.”

<table>
<thead>
<tr>
<th>Post-Project Stationary Source Potential to Emit (SSPE2) (lb/year)</th>
<th>NOx</th>
<th>SOx</th>
<th>PM10</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSPE1</td>
<td>101,335</td>
<td>36,603</td>
<td>35,587</td>
<td>209,054</td>
<td>1,020,198</td>
</tr>
<tr>
<td>S-1326-416-0</td>
<td>964</td>
<td>250</td>
<td>263</td>
<td>3241</td>
<td>482</td>
</tr>
<tr>
<td>SSPE2</td>
<td>102,299</td>
<td>36,853</td>
<td>35,850</td>
<td>212,295</td>
<td>1,020,680</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Major Source Determination (lb/year)</th>
<th>NOx</th>
<th>SOx</th>
<th>PM10</th>
<th>PM2.5</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Project SSPE (SSPE1)</td>
<td>101,335</td>
<td>36,603</td>
<td>35,587</td>
<td>209,054</td>
<td>1,020,198</td>
<td>101,335</td>
</tr>
<tr>
<td>Post Project SSPE (SSPE2)</td>
<td>102,299</td>
<td>36,853</td>
<td>35,850</td>
<td>212,295</td>
<td>1,020,680</td>
<td>102,299</td>
</tr>
<tr>
<td>Major Source Threshold</td>
<td>&gt;20,000</td>
<td>&gt;140,000</td>
<td>&gt;140,000</td>
<td>200,000</td>
<td>200,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Major Source?</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

6. Baseline Emissions (BE)

The BE calculation (in lbs/year) is performed pollutant-by-pollutant for each unit within the project, to calculate the QNEC and if applicable, to determine the amount of offsets required.

Pursuant to Section 3.7 of District Rule 2201, BE = Pre-project Potential to Emit for:
- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.22 of District Rule 2201.

The process heater is a new emissions unit; therefore, BE = 0 for all pollutants.
7. **SB 288 Major Modification**

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this facility is a major source for NO\textsubscript{X} and VOC, the project’s PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Project PE2 (lb/year)</th>
<th>Threshold (lb/year)</th>
<th>SB 288 Major Modification Calculation Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{X}</td>
<td>964</td>
<td>50,000</td>
<td>No</td>
</tr>
<tr>
<td>VOC</td>
<td>482</td>
<td>50,000</td>
<td>No</td>
</tr>
</tbody>
</table>

Since none of the SB 288 Major Modification thresholds are surpassed with this project, this project does not constitute a SB288 Major Modification.

8. **Federal Major Modification**

District Rule 2201, Section 3.17 states that Federal Major Modifications are the same as "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. Emission decreases may not cancel out the increases for this determination.

**Step 1**

For new emissions units, the increase in emissions is equal to the PE2

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Total Emissions Increases (lb/yr)</th>
<th>Thresholds (lb/yr)</th>
<th>Federal Major Modification?</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{X}</td>
<td>964</td>
<td>0</td>
<td>Yes</td>
</tr>
<tr>
<td>VOC</td>
<td>482</td>
<td>0</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Since there is an increase in NO\textsubscript{X} and VOC emissions, this project constitutes a Federal Major Modification, and no further analysis is required.

9. **Quarterly Net Emissions Change (QNEC)**

The QNEC is calculated solely to establish emissions that are used to complete the District’s PAS emissions profile screen. The QNEC for the new emissions unit was calculated for each pollutant by dividing annual emissions by 4 quarters/year.
VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis for the following*:

a. Any new emissions unit with a potential to emit exceeding two pounds per day,
b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification, as defined by the rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

As seen in Section VII.C.2 of this evaluation, the applicant is proposing to install a new pipeline heater with a PE greater than 2 lb/day for NO\textsubscript{x} and CO. The SSPE2 for CO is greater than 200,000 lbs/ per year.

BACT is triggered for NO\textsubscript{x} and CO since the PEs are greater than 2 lbs/day and the SSPE2 for CO is greater than 200,000 lbs/ per year.
b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore, BACT is not triggered.

c. Modification of emissions units – AlPE > 2 lb/day

As discussed in Section I above, there are no modified emissions units associated with this project; therefore, BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project does not constitute a SB 288 Major Modification for NO\textsubscript{x}, SO\textsubscript{x}, PM\textsubscript{10}, and VOC emissions; therefore, BACT is not triggered for a SB 288 Major Modification.

As discussed in Section VII.C.8 above, this project does constitute a Federal Major Modification for NO\textsubscript{x} and VOC emissions; therefore, BACT is triggered for NO\textsubscript{x} and VOC for the pipeline heater.

2. BACT Guideline

Please note that BACT Guideline 1.8.5 [Process Heater (non-refinery, < or = 20 MMBtu/hr) for NO\textsubscript{x} has been rescinded and replaced by District Rule 4320. BACT Guideline 1.8.5 would still apply for CO and VOC (see Appendix D).

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see Appendix D), BACT has been satisfied with the following:

\[ \text{NO}_{x}: \quad 9 \text{ ppmvd @ 3\% O}_2 \]
\[ \text{CO}: \quad \text{Natural gas} \]
\[ \text{VOC}: \quad \text{Natural gas} \]

B. Offsets

1. Offset Applicability

Pursuant to Section 4.5.3, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the Post Project Stationary Source Potential to Emit (SSPE2) equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.
The following table compares the post-project facility-wide annual emissions in order to determine if offsets will be required for this project.

<table>
<thead>
<tr>
<th>Offset Determination (lb/year)</th>
<th>NOx</th>
<th>SOx</th>
<th>PM10</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Project SSPE (SSPE2)</td>
<td>102,299</td>
<td>36,853</td>
<td>35,850</td>
<td>212,295</td>
<td>1,020,680</td>
</tr>
<tr>
<td>Offset Threshold</td>
<td>20,000</td>
<td>54,750</td>
<td>29,200</td>
<td>200,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Offsets triggered?</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

2. Quantity of Offsets Required

As seen above, the facility is an existing Major Source for NOx, PM10, CO, and VOC and the SSPE2 is greater than the offset thresholds; therefore offset calculations will be required for this project.

Per Sections 4.7.1 and 4.7.3, the quantity of offsets in pounds per year is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = (Σ[PE2 – BE] + ICCE) x DOR, for all new or modified emissions units in the project.

Where,

- PE2 = Post Project Potential to Emit, (lb/year)
- BE = Baseline Emissions, (lb/year)
- ICCE = Increase in Cargo Carrier Emissions, (lb/year)
- DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = Pre-project Potential to Emit for:
- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE)

There is only one emissions unit associated with this project and there are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

Offset Calculations:

Offsets Required (lb/year) = ((PE2 – BE]) x DOR

BE = 0 (new emissions unit)
**NOx:**

PE2 = 964 lb NOx/yr

The DOR = 1.5 (Federal Major Modification), the amount of NOx ERCs that need to be withdrawn is:

Offsets Required (lb/year) = 964 x 1.5

= 1446 lb-NOX/year

The quarterly ERC required is as follows:

DOR = 1.5

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>1st Quarter</th>
<th>2nd Quarter</th>
<th>3rd Quarter</th>
<th>4th Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>362</td>
<td>362</td>
<td>362</td>
<td>362</td>
</tr>
</tbody>
</table>

The applicant has stated that the facility plans to use ERC certificate S-3523-2, or a certificate derived from it, to offset the increases in NOx emissions associated with this project. The ERC certificates have available quarterly NOx credits as follows:

<table>
<thead>
<tr>
<th>ERC #*</th>
<th>1st Qtr</th>
<th>2nd Qtr</th>
<th>3rd Qtr</th>
<th>4th Qtr</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-3697-2 (S-3523-2)</td>
<td>2424</td>
<td>3160</td>
<td>3898</td>
<td>3896</td>
</tr>
</tbody>
</table>

*parent certificate in parentheses

Reserved in PAS (proposed by applicant)

<table>
<thead>
<tr>
<th>ERC #*</th>
<th>1st Qtr</th>
<th>2nd Qtr</th>
<th>3rd Qtr</th>
<th>4th Qtr</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-3697-2 (S-3523-2)</td>
<td>362</td>
<td>362</td>
<td>362</td>
<td>362</td>
</tr>
<tr>
<td>Total Reserved</td>
<td>362</td>
<td>362</td>
<td>362</td>
<td>362</td>
</tr>
</tbody>
</table>

*parent certificate in parentheses

**PM10:**

PE2 = 263 lb/yr

Assuming DOR = 1.5, the amount of PM10 ERCs that need to be withdrawn is:

Offsets Required (lb/year) = 263 x 1.5

= 395 lb-PM10/year

The quarterly ERC required is as follows:

DOR = 1.5

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>1st Quarter</th>
<th>2nd Quarter</th>
<th>3rd Quarter</th>
<th>4th Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM10</td>
<td>99</td>
<td>99</td>
<td>99</td>
<td>99</td>
</tr>
</tbody>
</table>

The applicant has stated that the facility plans to use ERC S-3061-5 to offset the increases in PM10 emissions associated with this project. PM10 may be offset using SOx
at an interpollutant offset ratio of 1.0 tons SOx/ton PM$_{10}$. The ERC certificate has available quarterly SOx credits as follows:

<table>
<thead>
<tr>
<th>ERC #*</th>
<th>1st Qtr</th>
<th>2nd Qtr</th>
<th>3rd Qtr</th>
<th>4th Qtr</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-3061-5</td>
<td>617</td>
<td>0</td>
<td>251</td>
<td>351</td>
</tr>
</tbody>
</table>

*parent certificate in parentheses

District Rule 2201, Section 4.13.7 states, "Actual emissions reductions of PM that occurred from October through March, inclusive, may be used to offset increases in PM during any period of the year." Therefore Vintage has requested emissions credits from the 1st quarter be used to offset emissions in the 2nd quarter.

Reserved in PAS

<table>
<thead>
<tr>
<th>ERC #*</th>
<th>1st Qtr</th>
<th>2nd Qtr</th>
<th>3rd Qtr</th>
<th>4th Qtr</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-3061-5</td>
<td>198</td>
<td>0</td>
<td>99</td>
<td>99</td>
</tr>
</tbody>
</table>

*parent certificate in parentheses

As seen above, the facility has proposed sufficient credits to fully offset the quarterly emission increases associated with this project.

**CO:**

$$PE2 = 3,241 \text{ lb/yr}$$

Notwithstanding the above, Section 4.6.1 of Rule 2201 states that emissions offsets are not required for increases in carbon monoxide in attainment areas provided the applicant demonstrates to the satisfaction of the APCO that the Ambient Air Quality Standards are not violated in the areas to be affected, and such emissions will be consistent with Reasonable Further Progress, and will not cause or contribute to a violation of Ambient Air Quality Standards. The District performed an Ambient Air Quality Analysis (discussed later) and determined that this project will not result in or contribute to a violation of an Ambient Air Quality Standard for CO (see Appendix E). Therefore, CO offsets are not required for this project.

**VOC:**

$$PE2 = 482 \text{ lb VOC/yr}$$

Assuming DOR = 1.5 (Federal Major Modification), the amount of VOC ERCs that need to be withdrawn is:

$$\text{Offsets Required (lb/year)} = 482 \times 1.5 = 723$$

Calculating the appropriate quarterly emissions to be offset is as follows:
DOR = 1.5

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>1st Quarter</th>
<th>2nd Quarter</th>
<th>3rd Quarter</th>
<th>4th Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC</td>
<td>181</td>
<td>181</td>
<td>181</td>
<td>181</td>
</tr>
</tbody>
</table>

The applicant has stated that the facility plans to use ERC certificates S-3065-1 to offset the increases in VOC emissions associated with this project. The above certificates have available quarterly VOC credits as follows:

<table>
<thead>
<tr>
<th>ERC #*</th>
<th>1st Qtr</th>
<th>2nd Qtr</th>
<th>3rd Qtr</th>
<th>4th Qtr</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-3699-1 (S-3065-1)</td>
<td>63,025</td>
<td>71,704</td>
<td>74,280</td>
<td>69,593</td>
</tr>
</tbody>
</table>

*parent certificate in parentheses

Reserved in PAS

<table>
<thead>
<tr>
<th>ERC #*</th>
<th>1st Qtr</th>
<th>2nd Qtr</th>
<th>3rd Qtr</th>
<th>4th Qtr</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-3699-1 (S-3065-1)</td>
<td>181</td>
<td>181</td>
<td>181</td>
<td>181</td>
</tr>
</tbody>
</table>

*parent certificate in parentheses

As seen above, the facility has sufficient credits to fully offset the quarterly NOx, PM10 and VOC emissions increases associated with this project.

**Proposed Rule 2201 (offset) Conditions:**

- Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 362 lb/quarter; PM10: 99 lb/quarter, and VOC: 723 lb/quarter. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). SOx may be offset using PM10 at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201] Y

- ERC Certificate Numbers S-3523-2, S-3061-5, and S-3699-1 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Y

**C. Public Notification**

**1. Applicability**

Public noticing is required for:

a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
c. Any project which results in the offset thresholds being surpassed, and/or
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

As demonstrated in VII.C.7, this project does not constitute a SB 288; therefore, public noticing for SB 288 purposes is not required.

As demonstrated in VII.C.8, this project is a Federal Major Modification; therefore, public noticing for Federal Major Modification purposes is required.

b. PE > 100 lb/day

Applications which include a new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant; therefore public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>SSPE1 (lb/year)</th>
<th>SSPE2 (lb/year)</th>
<th>Offset Threshold</th>
<th>Public Notice Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOX</td>
<td>&gt;20,000</td>
<td>&gt;20,000</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>SOX</td>
<td>&gt;54,750</td>
<td>&gt;54,750</td>
<td>54,750 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>PM10</td>
<td>&gt;29,200</td>
<td>&gt;29,200</td>
<td>29,200 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>CO</td>
<td>&gt;200,000</td>
<td>&gt;200,000</td>
<td>200,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>VOC</td>
<td>&gt;20,000</td>
<td>&gt;20,000</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
</tbody>
</table>

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-
Project Stationary Source Potential to Emit (SSPE1), i.e. SSIPE = SSPE2 – SSPE1. The values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>SSPE1 (lb/year)</th>
<th>SSPE2 (lb/year)</th>
<th>SSIPE Public Notice Threshold</th>
<th>Public Notice Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>964</td>
<td>0</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>SOx</td>
<td>250</td>
<td>0</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>PM&lt;sub&gt;10&lt;/sub&gt;</td>
<td>263</td>
<td>0</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>CO</td>
<td>3241</td>
<td>0</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>VOC</td>
<td>482</td>
<td>0</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
</tbody>
</table>

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

2. Public Notice Action

As discussed above, public noticing is required Federal Major Modification purposes. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELS)

Daily Emissions Limitations (DELS) and other enforceable conditions are required by Section 3.15 to restrict a unit’s maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

For this pipeline heater the DELs are stated in the form of emission factors and the maximum operational time of 24 hours per day.

Proposed Rule 2201 (DEL) Conditions:

- Emissions from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.00285 lb SOx/MMBtu, 0.003 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4801]
- The unit shall only be fired on gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 and 4320]
E. Compliance Assurance

1. Source Testing

This unit is subject to District Rule 4305, Boilers, Steam Generators and Process Heaters, Phase 2, District Rule 4306, Boilers, Steam Generators and Process Heaters, Phase 3, and District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr. Source testing requirements, in accordance with these rules will be discussed in Section VIII of this evaluation.

2. Monitoring

Vintage is proposing to utilize a combination of certified and non-certified natural gas to fuel this process heater; therefore, monthly monitoring of non-certified fuel sulfur content will be required. The following condition will be placed on the permit.

- Permittee shall measure and record, at least monthly, the sulfur content of any non-certified fuel. [District Rule 2201 and 4320]

This unit is subject to District Rule 4305, Boilers, Steam Generators and Process Heaters, Phase 2, District Rule 4306, Boilers, Steam Generators and Process Heaters, Phase 3, and District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr. Monitoring requirements, in accordance with these rules will be discussed in Section VIII of this evaluation.

3. Recordkeeping

This steam generator is subject to District Rule 4305, Boilers, Steam Generators and Process Heaters, Phase 2, District Rule 4306, Boilers, Steam Generators and Process Heaters, Phase 3, and District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr. Recordkeeping, in accordance with these rules will be discussed in Section VIII of this evaluation.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201

F. Ambient Air Quality Analysis

Section 4.6.1 of this rule states that emissions offsets are not required for increases in carbon monoxide in attainment areas provided the applicant demonstrates to the satisfaction of the APCO that the Ambient Air Quality Standards are not violated in the areas to be affected, such emissions will be consistent with Reasonable Further Progress, and will not cause or contribute to a violation of Ambient Air Quality Standards.
Section 4.14.1 of this Rule requires that an ambient air quality analysis (AAQA) be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard.

The proposed location is in an attainment area for NO\textsubscript{x}, CO, and SO\textsubscript{x}. The proposed location is in a non-attainment area for PM\textsubscript{10}. The increase in criteria pollutants due to the proposed equipment will not cause a violation as shown on the table below titled “Criteria pollutant Modeling Results”.

<table>
<thead>
<tr>
<th></th>
<th>1 Hour</th>
<th>3 Hours</th>
<th>8 Hours</th>
<th>24 Hours</th>
<th>Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>Pass</td>
<td>X</td>
<td>Pass</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>NO\textsubscript{x}</td>
<td>Pass</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Pass</td>
</tr>
<tr>
<td>SO\textsubscript{x}</td>
<td>Pass</td>
<td>Pass</td>
<td>X</td>
<td>Pass</td>
<td>Pass</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>X</td>
<td>X</td>
<td>Pass</td>
<td>Pass</td>
<td>Pass</td>
</tr>
<tr>
<td>PM\textsubscript{2.5}</td>
<td>X</td>
<td>X</td>
<td>Pass</td>
<td>Pass</td>
<td>Pass</td>
</tr>
</tbody>
</table>

As shown, the calculated contribution of CO, NO\textsubscript{x}, SO\textsubscript{x}, PM\textsubscript{10}, and PM\textsubscript{2.5}, will not exceed the EPA significance level. This project is not expected to cause or make worse a violation of an air quality standard. See Appendix E of this document for the AAQA summary sheet.

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Title I Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Sections VIII-Rule 2201-C.1.a and VIII-Rule 2201-C.1.b, this facility is a new major source and this project does constitute a Title I modification, therefore this requirement is applicable. Included in Appendix F is Berry’s Statewide Compliance Statement.

H. Alternate Siting Analysis

Since the project will at the facility location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Significant Modification to the Title V Permit pursuant to Section 3.20 of this rule:

In accordance with Rule 2520, 3.20, these modifications:
- Do not violate requirements of any applicable federally enforceable local or federal requirement;
- Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
- Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
- Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
  • A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
  • An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
- Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
- Do not seek to consolidate overlapping applicable requirements.

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment application.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. 40 CFR Part 60, Subpart Dd applies to Small Industrial-Commercial-Industrial Process heaters between 10 MMBtu/hr and 100 MMBtu/hr.

This process heater has a rating of 10 MMBtu/hr and is fired on natural gas. Subpart Dd has no standards for gas-fired steam generators. Therefore, testing and monitoring requirements of subpart Dd do not apply.

Subpart Dd, subpart 60.48c requires the owner or operator of each affected facility to submit notification of the date of construction or reconstruction, anticipated startup, actual startup, as provided by §60.7 of this part. Notification shall include

1) The design heat input capacity of the facility and identification of the fuels to be combusted:

The designed heat input capacity and the identified fuels will be listed on the equipment description. No other permit conditions are required.
(2) If applicable, a copy of any federally enforceable requirements that limit the annual
capacity factor for any fuel mixture of fuel under §60.42c or §60.43c.

The requirements is not applicable since the unit is not subject to §60.42c or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the
affected facility based on all fuels fired and based on each individual fuel fired.

The facility has not proposed an annual capacity factor and one will not be imposed on the
facility.

(4) Notification if an emerging technology will be used for controlling SO₂ emissions. The
Administrator will examine the description of the control and will determine whether the
technology qualifies as an emerging technology. In making this determination, the
Administrator may require the owner or operator of the affected facility to submit
additional information concerning the control device. The affected facility is subject to
the provisions of §60.42c (a) or (b)1, unless the unit determination is made by the
Administrator.

Section 60.48c(g) states that the owner or operator of each affected facility shall record
and maintain records of the amounts of each fuel combusted during each day.

Since the unit has been evaluated assuming that it will consume the maximum amount of
fuel allowed by the unit each day, the facility will not be required to record the daily fuel
consumption.

Section 60.48c(i) states that all records required under this section shall be maintained by
the owner operator of the affected facility for a period of two years following the date of
such record. District Rule 4306 requires that records be kept for 5 years.

Rule 4101 Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air
contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than
Ringelmann 1 (or 20% opacity). As the steam generator is fired solely on natural gas, visible
emissions are not expected to exceed Ringelmann 1 or 20% opacity. The following condition
will be listed on the steam generator permit to ensure compliance:

- No air contaminant shall be discharged into the atmosphere for a period or periods aggregating
  more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% 
  opacity. [District Rule 4101]

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants which could cause injury, detriment,
nuisance or annoyance to the public. Public nuisance conditions are not expected as a result
of these operations provided the equipment is well maintained. Therefore, compliance with
this rule is expected. This facility wide permit for BPC contains the following condition:
• No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (Appendix E), the total facility prioritization score including this project was greater than one. Therefore, a health risk assessment was required to determine the short-term acute and long-term chronic exposure from this project.

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot.

F-Factor for NG: 8,578 dscf/MMBtu at 60 °F
PM10 Emission Factor: 0.0076 lb-PM10/MMBtu

Percentage of PM as PM10 in Exhaust: 100%
Exhaust Oxygen (O₂) Concentration: 3%
Excess Air Correction to F Factor = 20.9/(20.9 - 3) = 1.17

\[
GL = \left( \frac{0.003 \text{ lb} - PM}{\text{MMBtu}} \right) \times \left( \frac{7,000 \text{ grain}}{\text{lb} - PM} \right) \times \left( \frac{8,578 \text{ ft}^3}{\text{MMBtu}} \right) \times 1.17
\]

\[
GL = 0.003 \frac{\text{grain}}{\text{dscf}} < 0.1 \frac{\text{grain}}{\text{dscf}}
\]

Therefore, compliance with District Rule 4201 requirements is expected. Additionally, particulate matter emissions from the steam generator is already limited by Rule 2201 to a value less than or equal to the rule limit of 0.1 grain per cubic foot of gas at dry standard conditions. Therefore the following condition, previously discussed, will ensure compliance with this rule:

• Emissions from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O₂ or 0.011 lb-NOx/MMBtu, 0.00285 lb SOX/MMBtu, 0.003 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O₂ or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4801]

Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO₂, NO₂, and combustion contaminants
(defined as total PM in Rule 1020). This rule also limits combustion contaminants to ≤ 0.1 gr/scf. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas combustion are less than 1 μm in diameter.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>NO₂</th>
<th>Total PM</th>
<th>SO₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-1326-416-0</td>
<td>0.11</td>
<td>0.03</td>
<td>0.03</td>
</tr>
<tr>
<td>Rule Limit (lb/hr)</td>
<td>140</td>
<td>10</td>
<td>200</td>
</tr>
</tbody>
</table>

The above table indicates compliance with the maximum lb/hr emissions in this rule; therefore, the following condition, previously discussed, will ensure compliance with this rule:

- Emissions from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O₂ or 0.011 lb-NOx/MMBtu, 0.00285 lb SOx/MMBtu, 0.003 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O₂ or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4801]

Rule 4304 Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters

This rule provides equipment tuning procedures for boilers, steam generators and process heaters to control visible emissions and emissions of both nitrogen oxides (NOx) and carbon monoxide (CO).

This unit follows District approved Alternate Monitoring scheme A, where the applicable emission limits are periodically monitored for compliance with Rule 4320 and is not required to perform tuning in accordance with the procedures of this Rule.

Rule 4305 Boilers, Steam Generators and Process Heaters – Phase II

This unit is natural gas-fired with a maximum heat input of 85 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4305, the unit is subject to District Rule 4305, Boilers, Steam Generators and Process Heaters – Phase 2.

In addition, the unit is also subject to District Rule 4306, Boilers, Steam Generators and Process Heaters – Phase 3.

Since the emissions limits of District Rule 4306 and all other requirements are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rule 4306 requirements will satisfy the requirements of District Rule 4305.

Rule 4306 Boilers, Steam Generators and Process Heaters – Phase III

This unit is natural gas-fired with a maximum heat input of 85 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4306, the unit is subject to District Rule 4306.

In addition, the unit is also subject to District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr.
Since the emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4306 requirements, compliance with District Rule 4320 requirements will satisfy the requirements of District Rule 4306.

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

This rule limits NOx, CO, SO2 and PM10 emissions from boilers, steam generators and process heaters rated greater than 5 MMBtu/hr. This unit is rated at greater than 5 MMBtu/hr heat input. Therefore this rule applies.

Section 5.1 NOx Emission Limits

Section 5.1 states that an operator of a unit(s) subject to this rule shall comply with all applicable requirements of the rule and one of the following, on a unit-by-unit basis:

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

Section 5.2.1 states that on and after the indicated Compliance Deadline units shall not be operated in a manner which exceeds the applicable NOx limit specified in Table 1 of this rule.

This unit has a maximum heat input of 10.0 MMBtu/hr; therefore, the applicable emission limit category Section 5.2, Table 1, Category A.a from District Rule 4320 applies as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>NOx Limit</th>
<th>Authority to Construct</th>
<th>Compliance Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Units with a total rated heat input &gt; 5.0 MMBtu/hr to ≤ 20.0 MMBtu/hr, except for Categories C through G units</td>
<td>a) Standard Schedule 9 ppmv or 0.011 lb/MMBtu; or</td>
<td>July 1, 2011</td>
<td>July 1, 2012</td>
</tr>
<tr>
<td></td>
<td>b) Enhanced Schedule 6 ppmv or 0.007 lb/MMBtu</td>
<td>January 1, 2013</td>
<td>January 1, 2014</td>
</tr>
</tbody>
</table>

Vintage has proposed to comply with Rule 4320 by limiting the burner to 9 ppm NOx @ 3% O2 (or 0.011 lb NOx/MMBtu). The following condition will be listed on the ATC to ensure compliance:

• Emissions from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmv NOx @ 3% O2 or 0.011 lb NOx/MMBtu, 0.00285 lb SOX/MMBtu, 0.003 lb PM10/MMBtu, 50 ppmv CO @ 3% O2 or 0.037 lb CO/MMBtu, or 0.0055 lb VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4801]
Section 5.4 Particulate Matter Control Requirements

5.4.1 To limit particulate matter emissions, an operator shall comply with one of the following requirements:

5.4.1.1 On and after the applicable NOx Compliance Deadline specified in Section 5.2 Table 1, operators shall fire units exclusively on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases;

5.4.1.2 On and after the applicable NOx Compliance Deadline specified in Section 5.2 Table 1, operators shall limit fuel sulfur content to no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet; or

5.4.1.3 On and after the applicable NOx Compliance Deadline specified in Section 5.2 Table 1, operators shall install and properly operate an emission control system that reduces SO2 emissions by at least 95% by weight; or limit exhaust SO2 to less than or equal to 9 ppmv corrected to 3.0% O2.

5.4.1.4 Notwithstanding the compliance deadlines indicated in Sections 5.4.1.1 through 5.4.1.3, refinery units, which require modification of refinery equipment to reduce sulfur emissions, shall be in compliance with the applicable requirement in Section 5.4.1 no later than July 1, 2013.

BPC will address the particulate matter by limiting the fuel sulfur content to 1 gr/S/100 scf (previously proposed in the Rule 2201 compliance section VIII.D):

- The unit shall only be fired on gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 and 4320] Y

- The higher heating value of each non-certified fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D 3588. [District Rules 2201 and 4320] Y

- PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Y

Compliance with section 5.4 is expected.

Section 5.6 Startup and Shutdown Provisions

Vintage is not requesting start up or shut down provisions for the unit.

Section 5.7 Monitoring Provisions

Section 5.7.1 requires that permit units subject to District Rule 4320, Section 5.2 shall both install and maintain an operational APCO approved Continuous Emission Monitoring System (CEMS) for NOx, CO and O2, or implement an APCO-approved alternate monitoring.
Vintage proposes to use Alternate Monitoring Scheme A (pursuant to District Policy SSP-1105), which requires that monitoring of NO\textsubscript{x}, CO, and O\textsubscript{2} exhaust concentrations shall be conducted at least once per month (in which a source test is not performed) using a portable analyzer. The following conditions will be incorporated into the ATCs to ensure compliance with the requirements of the proposed alternate monitoring plan:

- **(4063)** The permittee shall monitor and record the stack concentration of NO\textsubscript{x}, CO, and O\textsubscript{2} at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]

- **(4064)** If either the NO\textsubscript{x} or CO concentrations corrected to 3% O\textsubscript{2}, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320]

- **(4065)** All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320]

- **(4066)** The permittee shall maintain records of: (1) the date and time of NO\textsubscript{x}, CO, and O\textsubscript{2} measurements, (2) the O\textsubscript{2} concentration in percent by volume and the measured NO\textsubscript{x} and CO concentrations corrected to 3% O\textsubscript{2}, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320]

Section 5.7.6 requires operators complying with Sections 5.4.1.1 or 5.4.1.2 to provide an annual fuel analysis to the District unless a more frequent sampling and reporting period is included in the Permit to Operate. Sulfur analysis shall be performed in accordance with the test methods in Section 6.2.

- **(4356)** Permittee shall determine sulfur content of all types of fuel combusted gas annually. [District Rules 1081 and 4320]

The following condition will be listed on the ATCs to ensure compliance with the reporting section of this requirement:
• All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c(i)]

Section 5.8 Compliance Determination

Section 5.8.1 requires that the operator of any unit shall have the option of complying with either the applicable heat input (lb/MBtu), emission limits or the concentration (ppmv) emission limits specified in Section 5.2. The emission limits selected to demonstrate compliance shall be specified in the source test proposal pursuant to Rule 1081 (Source Sampling).

Therefore, the following condition will be listed on the ATCs as follows:

• {2976} The source test plan shall identify which basis (ppmv or lb/MBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

Section 5.8.2 requires that all emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. Therefore, the following permit condition will be listed on the ATCs as follows:

• {2972} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320]

Section 5.8.4 requires that for emissions monitoring pursuant to Sections 5.7.1 and 6.3.1 using a portable NOX analyzer as part of an APCO approved Alternate Emissions Monitoring System, emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15-consecutive-minute sample reading or by taking at least five (5) readings evenly spaced out over the 15-consecutive-minute period. Therefore, the following previously listed permit condition will be on the ATCs as follows:

• {4065} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320]

Section 5.8.5 requires that for emissions source testing performed pursuant to Section 6.3.1 for the purpose of determining compliance with an applicable standard or numerical limitation of this rule, the arithmetic average of three (3) 30-consecutive-minute test runs shall apply. If
two (2) of three (3) runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. Therefore, the following permit condition will be listed on the permit as follows:

- (2980) For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320]

**Section 6.1 Recordkeeping**

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.5 shall be maintained for five calendar years and shall be made available to the APCO and EPA upon request. Failure to maintain records or information contained in the records that demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule.

A permit condition will be listed on the permit as follows:

- (2983) All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320]

**Section 6.2, Test Methods**

Section 6.2 identifies the following test methods as District-approved source testing methods for the pollutants listed:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Units</th>
<th>Test Method Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>ppmv</td>
<td>EPA Method 7E or ARB Method 100</td>
</tr>
<tr>
<td>NOx</td>
<td>lb/MMBtu</td>
<td>EPA Method 19</td>
</tr>
<tr>
<td>CO</td>
<td>ppmv</td>
<td>EPA Method 10 or ARB Method 100</td>
</tr>
<tr>
<td>Stack Gas O2</td>
<td>%</td>
<td>EPA Method 3 or 3A, or ARB Method 100</td>
</tr>
<tr>
<td>Stack Gas Velocities</td>
<td>ft/min</td>
<td>EPA Method 2</td>
</tr>
<tr>
<td>Stack Gas Moisture Content</td>
<td>%</td>
<td>EPA Method 4</td>
</tr>
<tr>
<td>Oxides of sulfur</td>
<td></td>
<td>EPA Method 6C, EPA Method 8, or ARB Method 100</td>
</tr>
<tr>
<td>Total Sulfur as Hydrogen Sulfide (H₂S) Content</td>
<td></td>
<td>EPA Method 11 or EPA Method 15, as appropriate.</td>
</tr>
<tr>
<td>Sulfur Content of Liquid Fuel</td>
<td></td>
<td>ASTM D 6920-03 or ASTM D 5453-99</td>
</tr>
</tbody>
</table>

The following permit conditions will be listed on the permit as follows:
• (4346) NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320]

• (4347) CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]

• (4348) Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]

• (4349) Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]

Section 6.3, Compliance Testing

Section 6.3.1 requires that this unit be tested to determine compliance with the applicable requirements of section 5.1 and 5.2.3 not less than once every 12 months. Upon demonstrating compliance on two consecutive compliance source tests, the following source test may be deferred for up to thirty-six months.

The following permit conditions will be listed on the ATCs:

• Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial startup and at least once every twelve (12) months thereafter. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320]

• The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

Section 7.0, Compliance Schedule

Section 7.0 identifies the dates by which the operator shall submit an application for an ATC and the date by which the owner shall demonstrate compliance with this rule.

The unit will be in compliance with the emissions limits listed in Table 1, Section 5.2 of this rule, and periodic monitoring and source testing as required by District Rule 4320. Therefore, requirements of the compliance schedule, as listed in Section 7.0 of District Rule 4320, are satisfied. No further discussion is required.

Conclusion

Conditions will be incorporated into the permit in order to ensure compliance with each section of this rule, see attached draft permits in Appendix I. Therefore, compliance with District Rule 4320 requirements is expected.
Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1 (8/21/03)

This rule applies to boilers, steam generators, and process heaters at NOX Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. The emission limits, monitoring provisions, and testing requirements of this rule are satisfied when the unit is operated in compliance with Rule 4306. Therefore, compliance with this rule is expected.

Rule 4801 Sulfur Compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes.

In addition, the unit is also subject to District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBTU/hr. Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4801 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4801. Therefore the following condition, previously discussed, will ensure compliance with this rule:

- Emissions from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmvd NOₓ @ 3% O₂ or 0.011 lb-NOₓ/MMBTu, 0.00285 lb SOₓ/MMBTu, 0.003 lb-PM10/MMBTu, 50 ppmvd CO @ 3% O₂ or 0.037 lb-CO/MMBTu, or 0.0055 lb-VOC/MMBTu. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4801]

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its Environmental Review Guidelines (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.
Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

Project specific impacts on global climate change were evaluated consistent with the adopted District policy – Addressing GHG Emission Impacts for Stationary Source Projects under CEQA When Serving as the Lead Agency. The District’s engineering evaluation (this document – Appendix G) demonstrates that the project includes Best Performance Standards (BPS) for each class and category of greenhouse gas emissions unit. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue Authority to Construct S-1326-416-0 subject to the permit conditions on the attached draft Authority to Construct in Appendix A.

X. Billing Information

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Fee Schedule</th>
<th>Fee Description</th>
<th>Annual Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-1326-416-0</td>
<td>3020-02-G</td>
<td>10.0 MMBtu/hr</td>
<td>$815.00</td>
</tr>
</tbody>
</table>

Appendices
A: Draft ATC
B: March 27, 2008 Source Test
C: Manufacturer’s Information on Low NOx Burner
D: BACT Guideline and Analysis
E: Health Risk Assessment and Ambient Air Quality Analysis
F: Statewide Compliance Statement and Title V Compliance Certification Form
G: BPS Analysis
H: Emissions Profiles
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-416-0

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
KERN COUNTY, CA

SECTION: SW 32  TOWNSHIP: 11N  RANGE: 19W

EQUIPMENT DESCRIPTION:
10 MMBtu/HR PIPELINE HEATER EQUIPPED WITH AMERICAN COMBUSTION TECHNOLOGIES OF CALIFORNIA
ULTRA LOW NOX FORCED DRAFT BURNER (OR EQUIVALENT)

CONDITIONS

1. (1839) This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40
   CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally
   Enforceable Through Title V Permit

2. (1831) Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an
   application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520
   Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three
   minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
   Federally Enforceable Through Title V Permit

4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize
   emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with an O2 trim control system and burner designed to operate at an O2 exhaust
   percentage of no greater than 4.5% [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This IS NOT A PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with
the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director | APCO

DAVID WARNER, Director of Permit Services
S-1326-416-0 : Jan 12 2012 10:27AM - KELEARNED : Joint Inspection NOT Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. The electric motors driving combustion air fans or induced draft fans shall have an efficiency meeting the standards of the National Electrical Manufacturer's Association (NEMA) for premium efficiency motors and shall each be operated with a variable speed control or equivalent for control of flow through the fan. [Public Resources Code 21000-21177: California Environmental Quality Act]

7. The unit shall only be fired on natural/TEOR/ethane rich gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

8. At least quarterly, when fired on produced gas or produced gas/natural gas mixture, the permittee shall monitor using the methods specified in this permit the higher heating value of each non-certified fuel supplied to this unit, or, alternatively, have the higher heating value certified by the fuel supplier. The records of higher heating value and quantity of fuel combusted shall be used to demonstrate that the rated heat input capacity of this unit, as averaged over a calendar quarter, is not exceeded. [District Rules 2201] Federally Enforceable Through Title V Permit

9. The higher heating value of produced gas or produced gas/natural gas mixture shall be determined by ASTM D1826 or D1945 in conjunction with ASTM D 3588. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

10. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

11. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.00285 lb SOX/MMBtu, 0.003 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4801] Federally Enforceable Through Title V Permit

12. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial startup and at least once every twelve (12) months thereafter. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

13. Permittee shall determine sulfur content of all types of fuel combusted gas annually. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit

14. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

17. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

20. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

23. Permittee shall determine sulfur content of combusted gas weekly for eight consecutive weeks. After demonstrating compliance for eight consecutive weeks testing may be conducted on a quarterly basis. Weekly sulfur testing shall resume if quarterly testing does not indicate compliance. Weekly gas analysis shall be performed using Draeger tubes and quarterly analysis using ASTM method D3246 or double GC for H2S and mercaptans. First of the weekly gas analyses shall be done using laboratory analysis. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

24. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

29. Permittee shall maintain monthly records of gas combusted in this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4305, 4306, 4320, and 40 CFR 60.48c(i)] Federally Enforceable Through Title V Permit

CONDIT I ON S CONTINUE ON NEXT PAGE
31. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for
the following quantities of emissions: NOx: 362 lb/quarter; PM10: 99 lb/quarter, and VOC: 181 lb/qtr. Offsets include
the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). SOx may be offset using PM10
at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201] Federally Enforceable Through Title V
Permit

32. ERC Certificate Numbers S-3523-2, S-3061-5, and S-3699-1 (or certificates split from these certificates) shall be used
to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which
this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public
noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule
2201] Federally Enforceable Through Title V Permit

33. PEER S-1326-2 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable
Through Title V Permit
APPENDIX B

March 27, 2008 Source Test
### AEROS ENVIRONMENTAL, INC.

#### Summary Of Results

**Vintage Production California, LLC**  
**Kern Front Facility**  
**Steam Generator 5**  
**Project 300-5871A**  
**March 27, 2008**  
**ATC No. S-1326-338-0**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>gr/dscf</th>
<th>gr/scf</th>
<th>lb/hr</th>
<th>lb/MMBtu</th>
<th>Permit Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate</td>
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<td>0.00090</td>
<td>0.150</td>
<td>0.0016</td>
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</tr>
<tr>
<td>PM-10</td>
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<td>0.00037</td>
<td>0.068</td>
<td>0.0007</td>
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<td>0.0010</td>
<td>0.005 lb/MMBtu</td>
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<tr>
<td>Particulate</td>
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<td>0.00090</td>
<td>0.150</td>
<td>0.0016</td>
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<tr>
<td>Total</td>
<td>0.00057</td>
<td>0.00048</td>
<td>0.032</td>
<td>0.0008</td>
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<tr>
<td>Mean</td>
<td>0.00070</td>
<td>0.00058</td>
<td>0.103</td>
<td>0.0010</td>
<td>N/A</td>
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</table>

**Comments:**
APPENDIX C

Manufacturer's Information on Low NOx Burner
THE SLE SERIES
SUPER LOW NOx BURNER

AMERICAN COMBUSTION TECHNOLOGIES OF CALIFORNIA, INC. (ACT) OFFERS A SERIES OF SUPER LOW EMISSION BURNERS CAPABLE OF MAINTAINING EMISSIONS BELOW 10 PPM AND BELOW 5 PPM NOx LEVELS CORRECTED TO 3% EXCESS OXYGEN.

ACT BURNERS ARE AVAILABLE FROM 200,000 BTU/HR AND ARE CAPABLE OF OPERATING WITH BOTH GASEOUS AND LIQUID FUELS WHILE MAINTAINING VERY LOW EMISSION LEVELS THROUGHOUT THE ENTIRE RANGE.

THE CONICAL FLAME FLAME GENERATES THE COMBUSTION PROCESSES AT A HIGH VELOCITY FLAMENING WHICH RELEASES THE ENERGY OVERFAST PREVENTING THE FORMATION OF NOx EMISSIONS.

THE SLE BURNER IS DESIGNED COMBINING STAGED COMBUSTION, INTERNAL FUEL GAS REGULATION AND STRONG INTERNAL GAS REGULATION. THE PRIMARY AND SECONDARY BURNERS ARE INDEPENDENT OF EACH OTHER AND THEY CAN BE ADJUSTED TO MEET EMISSION REQUIREMENTS OF THE SOUTHEAST AIR QUALITY MANAGEMENT DISTRICT. WHILE COMBUSTION TAKES PLACE AT A LOW EXCESS AIR LEVEL, THE COMBINATION OF THERmal COMBUSTION ZONES MAKES IT PERFECTLY CLEAN AND STABLE.

WITH OVER 20 YEARS OF EXPERIENCE, THE ACT BURNER PACKAGES ENSURE COMPLIANCE WITH EXISTING AND UPCOMING SEAMLESS EMISSION REGULATIONS AND DO SO AT MUCH LOWER COSTS COMPARED TO ANY AVAILABLE LOW-NOx COMBUSTION TECHNOLOGIES.
APPENDIX D

BACT Guideline 1.8.5 and Analysis
Top Down BACT Analysis for the Pipeline Heater

Oxides of nitrogen (NO$_x$) are generated from the high temperature combustion of the natural gas fuel. A majority of the NO$_x$ emissions are formed from the high temperature reaction of nitrogen and oxygen in the inlet air. The rest of the NO$_x$ emissions are formed from the reaction of fuel-bound nitrogen with oxygen in the inlet air.

1. BACT Analysis for NO$_x$ Emissions:

   a. Step 1 - Identify all control technologies

   The District adopted District Rule 4320 on October 16, 2008. The NO$_x$ emission limit requirements in District Rule 4320 are lower than the current BACT limits; therefore a project specific BACT analysis will be performed to determine BACT for this project. District Rule 4320 includes a compliance option that limits units with heat input ratings greater than 5.0 MMBtu/hr but less than 20.0 MMBtu/hr to 9 ppm @ 3% O$_2$. This emission limit is Achieved in Practice control technology for the BACT analysis. District Rule 4320 also contains an enhanced schedule option that allows applicants additional time to meet the requirements of the rule. The enhanced schedule NO$_x$ emission limit requirement is 6 ppmv @ 3% O$_2$. Since this is an enhanced option in the rule, it will be considered the Technologically Feasible control technology for the BACT analysis.

   The SJVUAPCD BACT Clearinghouse Guideline 1.8.5 has been rescinded. Therefore a new BACT analysis is required. The following are possible control technologies:

   1) 6 ppmv @ 3% O$_2$ with SCR
   2) 9 ppmv @ 3% O$_2$

   b. Step 2 - Eliminate technologically infeasible options

   There are no technologically infeasible options to eliminate from step 1.

   c. Step 3 - Rank remaining options by control effectiveness

   1) 6 ppmv @ 3% O$_2$ with SCR
   2) 9 ppmv @ 3% O$_2$

   d. Step 4 - Cost Effectiveness Analysis

   A cost effective analysis is required for technologically feasible control options that are not proposed. The applicant is proposing a NO$_x$ limit of 9 ppmv @ 3% O$_2$; therefore, a cost effective analysis is required for the 6 ppmv option (SCR).

   SCR Cost Effectiveness Analysis

   Total annualized cost = $48,769/yr (Project S1110835)
NOx Reduction due to Selective Catalytic Reduction system:

Total reduction = Emissions\(_9\) ppm - Emissions\(_6\) ppm
Total reduction = 964 lb/year - 643 lb/year
Total reduction = 321 lb/year = 0.16 ton NO\(_x\) per year

Cost effectiveness:

Cost effectiveness = $48,769/0.16 tpy
Cost effectiveness = $304,806/ton

The cost effectiveness is greater than the $24,500/ton cost effectiveness threshold of the District BACT policy. Therefore the use of SCR with ammonia injection is not cost effective and is not required as BACT.

e. Step 5 - Select BACT

BACT for NO\(_x\) emissions is a NO\(_x\) limit of 9 ppmvd @ 3% O\(_2\). The applicant has proposed to install heater with a NO\(_x\) limit of 9 ppmvd @ 3% O\(_2\); therefore BACT for NO\(_x\) emissions is satisfied.
Top Down BACT Analysis for the Pipeline Heater

1. BACT Analysis for CO Emissions:
   a. Step 1 - Identify all control technologies

   The SJVUAPCD BACT Clearinghouse Guideline 1.8.5 has been rescinded for NOX; however, Guideline 1.8.5 would still apply for CO. The following are possible control technologies:

   1) Natural gas with LPG backup or Propane fired

   b. Step 2 - Eliminate technologically infeasible options

   There are no technologically infeasible options to eliminate from step 1.

   c. Step 3 - Rank remaining options by control effectiveness

   1) Natural gas with LPG backup or Propane fired

   d. Step 4 - Cost Effectiveness Analysis

   There are no other technologically feasible control options; therefore, a cost effective analysis is not required.

   e. Step 5 - Select BACT

   BACT for CO emissions is the unit being fired on natural gas
Top Down BACT Analysis for the Pipeline Heater

1. BACT Analysis for VOC Emissions:
   a. Step 1 - Identify all control technologies
      
      The SJVUAPCD BACT Clearinghouse Guideline 1.8.5 has been rescinded for NO<sub>x</sub>; however, Guideline 1.8.5 would still apply for VOC. The following are possible control technologies:

      1) Natural gas with LPG backup or Propane fired
   
   b. Step 2 - Eliminate technologically infeasible options
      
      There are no technologically infeasible options to eliminate from step 1.
   
   c. Step 3 - Rank remaining options by control effectiveness
      
      1) Natural gas with LPG backup or Propane fired
   
   d. Step 4 - Cost Effectiveness Analysis
      
      There are no other technologically feasible control options; therefore, a cost effective analysis is not required.
   
   e. Step 5 - Select BACT
      
      BACT for VOC emissions is a the unit being fired on natural gas
Best Available Control Technology (BACT) Guideline 1.8.5
Last Update: 1/24/2006

Process Heater (non-refinery, < or = 20 MMBtu/hr)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Achieved in Practice or in the SIP</th>
<th>Technologically Feasible</th>
<th>Alternate Basic Equipment</th>
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<tbody>
<tr>
<td>CO</td>
<td>natural gas with LPG backup or propane fired</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOx</td>
<td>12 ppmv @ 3% O2 (low-NOx burner)</td>
<td>9 ppmv @ 3% O2 (low-NOx burner and/or SCR)</td>
<td></td>
</tr>
<tr>
<td>PM10</td>
<td>natural gas with LPG backup or propane fired</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOC</td>
<td>natural gas with LPG backup or propane fired</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

This is a Summary Page for this Class of Source. For background information, see Permit Specific BACT Determinations on Details Page.
APPENDIX E

Health Risk Assessment and Ambient Air Quality Analysis
San Joaquin Valley Air Pollution Control District
Risk Management Review

To: Ashley Dahlstrom, AQE – Permit Services
From: Joe Aguayo, AQS – Technical Services
Date: November 15, 2011
Facility Name: Vintage Production
Location: HOC Stationary Source – Tejon Field
Application #(s): S-1326-416-0
Project #: S-1114230

A. RMR SUMMARY.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Pipeline Heater (Unit 416-0)</th>
<th>Project Totals</th>
<th>Facility Totals</th>
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<tbody>
<tr>
<td>Prioritization Score</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
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<tr>
<td>Acute Hazard Index</td>
<td>N/A¹</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Chronic Hazard Index</td>
<td>N/A¹</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Maximum Individual Cancer Risk (10⁻⁶)</td>
<td>N/A¹</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>T-BACT Required?</td>
<td>No</td>
<td></td>
<td></td>
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<tr>
<td>Special Permit Conditions?</td>
<td>No</td>
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</table>

¹Acute and Chronic Hazard Index and Maximum Individual Cancer Risk were not calculated since the total facility prioritization score was less than 1.0.

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit # 416-0

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on October 27, 2011, to perform an Ambient Air Quality Analysis and a Risk Management Review for 10 MMBtu/hr pipeline heater equipped with an American Combustion Technologies of California (or equivalent) ultra-low NOx burner.
II. Analysis

Toxic emissions for this proposed unit were calculated using emission factors for natural gas-fired external combustion sources. In accordance with the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, March 2, 2001), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEARTs database. The prioritization score for this proposed unit was less than 1.0 (see RMR Summary Table). Therefore, no further analysis was necessary.

The following parameters were used for the review:

<table>
<thead>
<tr>
<th>Analysis Parameters</th>
<th>Unit 416-0</th>
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<tbody>
<tr>
<td>Throughput (MMBtu/hr)</td>
<td>10</td>
</tr>
<tr>
<td>Max Hours per Year</td>
<td>8760</td>
</tr>
<tr>
<td>Closest Receptor (m)</td>
<td>304.8</td>
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</table>

Technical Services performed modeling for criteria pollutants CO, NOx, SOx and PM\textsubscript{10}, as well as a RMR. The emission rates used for criteria pollutant modeling were 0.37 lb/hr CO, 0.011 lb/hr NOx, 0.0285 lb/hr SOx, and 0.03 lb/hr PM\textsubscript{10}. The engineer supplied the maximum fuel rate for the heater used during the analysis.

The results from the Criteria Pollutant Modeling are as follows:

<table>
<thead>
<tr>
<th>Criteria Pollutant Modeling Results*</th>
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<tbody>
<tr>
<td>Diesel ICE</td>
</tr>
<tr>
<td>CO</td>
</tr>
<tr>
<td>NO\textsubscript{x}</td>
</tr>
<tr>
<td>SO\textsubscript{x}</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
</tr>
<tr>
<td>PM\textsubscript{2.5}</td>
</tr>
</tbody>
</table>

*Results were taken from the attached PSD spreadsheet:

1. The project was compared to the 1-hour NO\textsubscript{2} National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures. The criteria pollutant 1-hour value passed using TIER I NO\textsubscript{2} NAAQS modeling.
2. The project was compared to the 1-hour SO\textsubscript{2} National Ambient Air Quality Standard that became effective on August 23, 2010 using the District's approved procedures.
3. The maximum predicted concentration for emissions of these criteria pollutants from the proposed unit are below EPA's level of significance as found in 40 CFR Part 51.185 (b)(2).
4. A refined PM2.5 review was performed using AERMOD's PM2.5 NAAQS pollutant type.

III. Conclusion

The prioritization score is less than 1.0. In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.
APPENDIX F

Statewide Compliance Statement and Title V Compliance Certification Form
CERTIFICATION

OXY USA Inc. hereby certifies as follows:

1. OXY USA Inc. owns or operates certain major stationary sources in the State of California. Such sources are comprised of a vast number of emission points. As used in this certification, the term "major stationary source" shall, with respect to OXY USA Inc. stationary sources in the SJVUAPCD, have the meaning ascribed thereto in SJVUAPCD Rule 2201, Section 3.23, and shall, with respect to all of OXY USA Inc.'s other stationary sources in the State of California, have the meaning ascribed thereto in section 302(j) of the Clean Air Act (42 U.S.C. Section 7602 (j)).

2. Subject to paragraphs 3 and 4 below, all major stationary sources owned or operated by OXY USA Inc. in the State of California are either in compliance, or on an approved schedule of compliance, with all applicable emission limitations and standards under the Clean Air Act and all of the State Implementation Plan approved by the Environmental Protection Agency.

3. This certification is made on information and belief and is based upon a review of OXY USA Inc.'s major stationary sources in the State of California by those employees of OXY USA Inc. who have operational responsibility for compliance. In conducting such reviews, OXY USA Inc. and its employees have acted in good faith and have exercised best efforts to identify any exceedance of the emission limitations and standards referred to in paragraph 2 thereof.

4. This certification shall speak as of the time and date of its execution.

CERTIFICATION

By: [Signature]  Date: 10-10-11
Title: [Title]  Time: 6:40 AM
San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

1. TYPE OF PERMIT ACTION (Check appropriate box):

[ ] SIGNIFICANT PERMIT MODIFICATION
[ ] MINOR PERMIT MODIFICATION
[ ] ADMINISTRATIVE AMENDMENT

COMPANY NAME: Vintage Production California LLC
FACILITY ID: S-1326

1. Type of Organization: [X]Corporation [ ]Sole Ownership [ ]Government [ ]Partnership [ ]Utility

2. Owner's Name: Vintage Production California LLC

3. Agent to the Owner: Denny Brown

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

[X] Based on information and belief formed after reasonable inquiry, the source identified in this application will continue to comply with the applicable federal requirement(s) which the source is in compliance.

[X] Based on information and belief formed after reasonable inquiry, the source identified in this application will comply with applicable federal requirement(s) that will become effective after the permit term, on a timely basis.

[X] Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

[X] Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

Denny Brown
Name of Responsible Official (please print)

Operations Manager
Title of Responsible Official (please print)

Mailing Address: Central Regional Office * 1550 E. Gatsenburg Avenue * Fresno, California 93726-0264 * (559) 230-5900 * FAX (559) 230-6061
TVFORM-009
San Joaquin Valley
Unified Air Pollution Control District

Best Performance Standard (BPS) x.x.xx

Date: December 23, 2011

<table>
<thead>
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<th>Process Heaters</th>
</tr>
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<tbody>
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<td>Category</td>
<td>All Industries</td>
</tr>
<tr>
<td><strong>Best Performance Standard</strong></td>
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</tr>
<tr>
<td>1. The process heater shall be either:</td>
<td></td>
</tr>
<tr>
<td>A. Designed as a forced draft process heater equipped with an ( O_2 ) trim control system and burner designed to operate at an ( O_2 ) exhaust percentage of no greater than 4.5%, or</td>
<td></td>
</tr>
<tr>
<td>B. Continuously operated at no greater than 4.5% by Volume ( O_2 ) exhaust percentage</td>
<td></td>
</tr>
<tr>
<td>And</td>
<td></td>
</tr>
<tr>
<td>2. Electric motors driving combustion air fans or induced-draft fans shall have an efficiency meeting the standards of the National Electrical Manufacturer’s Association (NEMA) for “premium efficiency” motors and shall each be operated with a variable speed control or equivalent for control of flow through the fan.</td>
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<tr>
<td><strong>Percentage Achieved GHG Emission Reduction Relative to Baseline Emissions</strong></td>
<td>1.5%</td>
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<table>
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<tr>
<th>District Project Number</th>
<th>S1104548</th>
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<tbody>
<tr>
<td>Evaluating Engineer</td>
<td>Steven Davidson</td>
</tr>
<tr>
<td>Lead Engineer</td>
<td>Arnaud Marjollet</td>
</tr>
<tr>
<td>Public Notice: Start Date</td>
<td>December 23, 2011</td>
</tr>
<tr>
<td>Public Notice: End Date</td>
<td>January 26, 2012</td>
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<tr>
<td>Determination Effective Date</td>
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</table>
Steve,  
Following up on our earlier telephone conversation, the burner fan information is addressed in the attached e-mail chain. 
If you have any questions please let me know. 
Thanks, 
Joey

Joey Barulich  
HES Consultant  
Vintage Production California LLC  
9600 Ming Avenue, Suite 300  
Bakersfield, CA 93311  
(661) 869-8075 - Office  
(661) 869.8170 - Fax  
(661) 979-0228 - Cell  
joey_barulich@oxy.com

From: Doug Shaffer [mailto:dshaffer@insenv.com]  
Sent: Wednesday, October 26, 2011 5:42 PM  
To: 'Ashley Dahlstrom'; Barulich, Joey A.  
Subject: RE: Additional Information Required for the Installation of one 10.0 MMbtu/hr Process Heater  
Importance: High

Attached is an image with distances to each edge of Vintage's parcel.

W. D. S. PE  
Insight Environmental Consultants

From: Ashley Dahlstrom [mailto:Ashley.Dahlstrom@valleyair.org]  
Sent: Wednesday, October 26, 2011 4:24 PM  
To: Doug Shaffer; Joey_Barulich@oxy.com  
Subject: RE: Additional Information Required for the Installation of one 10.0 MMbtu/hr Process Heater

Since this project triggers public notice for NSR, please provide the distances from the exhaust to the fenclined in each direction.

Thanks,

Ashley Dahlstrom
They will include premium efficiency forced draft fan motors with VFDs.

W. D. S. PE
Insight Environmental Consultants

Are these burners natural draft or forced draft?

Ashley Dahlstrom

From: Doug Shaffer [mailto:dshaffer@insenv.com]
Sent: Monday, October 17, 2011 9:32 AM
To: Joey Barulich@oxy.com; Ashley Dahlstrom
Subject: RE: Additional Information Required for the Installation of one 10.0 MMBtu/hr Process Heater
Importance: High

True enough. The total for the permit is 10 MMBtu. Each stack is half that at full fire rate.

W. D. S. PE
Insight Environmental Consultants

From: Joey Barulich@oxy.com [mailto:Joey_Barulich@oxy.com]
Sent: Monday, October 17, 2011 8:50 AM
To: dshaffer@insenv.com
Subject: RE: Additional Information Required for the Installation of one 10.0 MMBtu/hr Process Heater

Doug,
Because there are two burners (5mmbtu/hr each) with separate stacks, would the flow rate be half this rate?
Joey

From: Doug Shaffer [mailto:dshaffer@insenv.com]
Sent: Monday, October 17, 2011 8:47 AM
To: Barulich, Joey A.; Ashley.Dahlstrom@valleyair.org
Cc: dwmccomn@insenv.com
Subject: RE: Additional Information Required for the Installation of one 10.0 MMBtu/hr Process Heater

Ms. Dahlstrom,
You could also utilize either the EPA F-factor for natural gas, or the F-factor from the fuel analysis= 8647 dsf/MMBtu * 10 MMBtu/hr * 1 hr/60 min = 1,441 dsf/min exhaust flow rate

W. D. S. PE
APPENDIX H

Emissions Profiles
<table>
<thead>
<tr>
<th></th>
<th>NOX</th>
<th>SOX</th>
<th>PM10</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential to Emit (lb/Yr):</td>
<td>964.0</td>
<td>250.0</td>
<td>263.0</td>
<td>3241.0</td>
<td>482.0</td>
</tr>
<tr>
<td>Daily Emis. Limit (lb/Day)</td>
<td>2.6</td>
<td>0.7</td>
<td>0.7</td>
<td>8.9</td>
<td>1.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quarterly Net Emissions Change (lb/Qtr)</th>
<th>Q1:</th>
<th>Q2:</th>
<th>Q3:</th>
<th>Q4:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>241.0</td>
<td>66.0</td>
<td>66.0</td>
<td>810.0</td>
</tr>
<tr>
<td></td>
<td>241.0</td>
<td>66.0</td>
<td>66.0</td>
<td>810.0</td>
</tr>
<tr>
<td>Check if offsets are triggered but exemption applies</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Offset Ratio</th>
<th>Q1:</th>
<th>Q2:</th>
<th>Q3:</th>
<th>Q4:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Quarterly Offset Amounts (lb/Qtr)</th>
<th>Q1:</th>
<th>Q2:</th>
<th>Q3:</th>
<th>Q4:</th>
</tr>
</thead>
</table>