 APR 30 2013

Jerry Frost
Vintage Production California, LLC
9600 Ming Ave
Bakersfield, CA 93311

RE: Notice of Final Action - Authority to Construct
Facility Number: S-1326
Project Number: S-1123499

Dear Mr. Frost:

The Air Pollution Control Officer has issued the Authority to Construct permits to Vintage Production California, LLC for the installation of new steam generators and the addition of Potential of Significant Deterioration requirements for previously issued Authorities to Construct, at Vintage's Kern Front Oilfield. Enclosed are the Authority to Construct permits and a copy of the notice of final action to be published approximately three days from the date of this letter.

Notice of the District's preliminary decision to issue the Authority to Construct permits was published on March 11, 2013. The District's analysis of the proposal was also sent to CARB and US EPA Region IX on March 5, 2013. All comments received following the District's preliminary decision on this project were considered.

Comments received by the District during the public notice period resulted in minor changes to the Rule 2410 discussion. A summary of comments and the District's response to each comment is included as an appendix of the revised application review document. These changes were minor and did not trigger additional public notification requirements, nor did they have any impact upon the Best Available Control Technology determination or on the amount of offsets required for project approval.

Seyed Sadredin
Executive Director/Air Pollution Control Officer
Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Leonard Scandura at (661) 392-5500.

Sincerely,

David Warner
Director of Permit Services

DW:KTR/st

Enclosures

cc:  Mike Tollstrup, CARB (w/enclosure) via email
cc:  Gerardo C. Rios, EPA (w/enclosure) via email
NOTICE OF FINAL DECISION
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT AND
THE PROPOSED SIGNIFICANT MODIFICATION OF FEDERALLY
MANDATED OPERATING PERMIT

NOTICE IS HEREBY GIVEN that the Air Pollution Control Officer has issued the Authority to Construct permits to Vintage Production California, LLC for the installation of new steam generators and the addition of Potential of Significant Deterioration requirements for previously issued Authorities to Construct, at Vintage's Kern Front Oilfield.

All comments received following the District's preliminary decision on this project were considered.

Comments received by the District during the public notice period resulted in minor changes to the Rule 2410 discussion. A summary of comments and the District's response to each comment is included as an appendix of the revised application review document. These changes were minor and did not trigger additional public notification requirements, nor did they have any impact upon the Best Available Control Technology determination or on the amount of offsets required for project approval.

The District's analysis of the legal and factual basis for this proposed action, project #1123499, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm, the SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308, and at any other District office. For additional information, please contact the District at (661) 392-5500.
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-263-20
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: SW23  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 3,000 BBL FIXED ROOF WASH TANK SERVED BY TANK VAPOR CONTROL SYSTEM SHARED
WITH CASING VENT RECOVERY (CVR) SYSTEM LISTED ON S-1326-287 AND VARIOUS CRUDE OIL STORAGE
TANKS (SECTION 23 FACILITY): ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-263-17 shall be implemented prior to or concurrently with this ATC. [District
Rule 2201] Federally Enforceable Through Title V Permit

4. Tank vapor recovery (TVR) system includes vapor piping shared between wellhead casing vent recovery (CVR)
system on S-1326-287 and storage tanks S-1326-263, -279, -280, -281, -283, -285, '-315, '-394, '-395, '-396, '-408
through '-415, two compressors routing vapor either to DOGGR approved vapor disposal well or to sulfur scrubber(s),
field fuel gas system (Section 23 facility), or steam generators S-1326-9, '-294, '-314, '-337, and '-338. [District Rules
2201 and 2410] Federally Enforceable Through Title V Permit

5. Operator shall ensure the vapor control system is functional and operating as designed at all times, except during
periods of routine maintenance. [District Rules 2410 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-6500 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 Sadeghian, Executive Director / APCO

[Signature]

WALTER WARNER, Director of Permit Services
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93305 • (661) 392-5500 • Fax (661) 392-5585
6. The tank shall be equipped with a vapor loss prevention system capable of collecting all VOC emissions and preventing their emissions to the atmosphere at an efficiency of at least 99% by weight. [District Rules 2410 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The true vapor pressure of the liquids stored in this tank shall not exceed 0.5 psia. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

8. Connections between this TVR system and the wellhead casing vent recovery (CVR) system listed on S-1326-287 shall be made upstream of the hydrogen sulfide removal system included in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Prior to injecting collected TVR (and S-1326-287 CVR) vapors into field fuel gas system, the collected vapors shall be treated by a hydrogen sulfide removal system which reduces the hydrogen sulfide concentration in the collected vapors by at least 95%. The sulfur content of the treated vapors may not exceed 1.0 grains S/ 100 scf gas. The treated TVR (and CVR) vapors injected into the field fuel gas line shall not be greater than five percent by weight hydrocarbons heavier than butane as determined by test method ASTM D-1945 or equivalent test method with prior District approval. [District Rules 2020 and 2201] Federally Enforceable Through Title V Permit

10. The vapor control system compressor shall activate when the tank internal pressure exceeds 1.5 in. w.c. and deactivate when the tank internal pressure falls to 0.5 in. w.c. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

11. The tank pressure relief valves shall not open unless the tank internal pressure exceeds 2.0 oz. or falls below 0.5 oz. vacuum. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

13. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

15. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
19. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

21. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

22. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

23. The permittee shall keep accurate records of VOC content of vapors, liquids stored and true vapor pressure of such liquids for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-287-11
ISSUANCE DATE: 04/23/2013

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/23 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 1085 STEAM ENHANCED PRODUCTION WELLS CONNECTED TO WELL HEAD CASING VENT VAPOR RECOVERY SYSTEM (CVR) VENTING VAPORS TO SECTION 23 TANK VAPOR RECOVERY SYSTEM (S-1326-263): ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-287-10 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit


5. Well casing vents shall remain closed, connected to well produced fluids lines, or connected to a well vent VOC collection and control system at all times except during periods of actual service or repair when wells are not producing. [District Rules 2201, 2410, and 4401] Federally Enforceable Through Title V Permit

6. Collected CVR vapor shall be piped to tank vapor recovery system (TVR) serving S-1326-263. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

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

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DAVID WARNER, Director of Permit Services
7. VOC content of gas collected by the CVR system shall not exceed 10% by weight. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. Permittee may use test results obtained from S-1326-263 to demonstrate compliance. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit

8. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit

9. Fluids produced from these steam enhanced wells shall be introduced only to tanks listed on permit S-1326-263 that are vented to an approved vapor collection and control system achieving 99% control. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

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

11. Steam enhanced production wells covered by this permit shall each have a visible identification number. Field personnel shall be provided with written instructions concerning proper operation and maintenance of these wells. [District Rule 2201] Federally Enforceable Through Title V Permit

12. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407] Federally Enforceable Through Title V Permit

13. Total combined fugitive emissions from all components associated with this TEOR operation shall not exceed 0.0 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit

14. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended June 16, 2011). [District Rule 4401] Federally Enforceable Through Title V Permit

15. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

16. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv as methane; and 2) A minor gas leak is a detection of 400 to 10,000 ppmv as pressure relief devices (PRDs) and 2,000 to 10,000 for components other than PRDs. [District Rule 4401] Federally Enforceable Through Title V Permit

17. A liquid leak is defined as the dripping of VOC-containing liquid. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak that is not a major liquid leak and drips liquid at a rate of more than three drops per minute, except for seal lubricant. [District Rule 4401] Federally Enforceable Through Title V Permit

18. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401] Federally Enforceable Through Title V Permit

19. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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

21. An operator shall be in violation of this rule if any District inspection demonstrates that the following conditions in Section 5.2.2 exist at the facility: Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines. [District Rule 4401] Federally Enforceable Through Title V Permit

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

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

24. Permittee shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak. The following information shall be included on the tag: 1) the date and time of leak detection; 2) the date and time of leak measurement; 3) leak concentration in ppmv for a gaseous leak; 4) description of whether it is a major liquid leak or a minor liquid leak; and 5) whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit

25. Permittee shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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

27. Except for leaking critical components or leaking essential components, if the operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 4 of Rule 4401: 1) repair or replace the leaking component; 2) vent the leaking component to a VOC collection and control system; or 3) remove the leaking component from operation. [District Rule 4401] Federally Enforceable Through Title V Permit

28. The leak rate, measured after leak minimization has been performed, shall be used to determine the applicable repair period specified in Table 4 of Rule 4401 and the time of initial leak detection shall be the start of the repair period specified in Table 4 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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

30. Flanges shall be monitored with a portable hydrocarbon detection instrument along the entire circumference of the flange-gasket interface. Threaded connections, tubing fittings, and other types of non-permanent joints shall be monitored along the entire circumference of joint interface. [District Rule 2201] Federally Enforceable Through Title V Permit

31. Valves shall be monitored with a portable hydrocarbon detection instrument where the stem comes through the packing gland, and at any attached or connected body flange(s), bonnet flange(s), or plug(s). [District Rule 2201] Federally Enforceable Through Title V Permit

32. All other components such as diaphragms, dump arms, instruments, meters shall be monitored at all points of possible emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. In lieu of conducting annual source tests of all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC, all uncondensed VOC emissions collected by a vapor collection and control system shall be incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare. [District Rule 4401] Federally Enforceable Through Title V Permit

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

35. The control efficiency of the vapor collection and control system used to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on most stringent of a source test, USEPA approved emission factors, or Air Pollution (AP)-42 emission factors for components and number of components; and the efficiency of destruction devices determined by USEPA Method 25, 25a, or 25b as applicable. [District Rule 4401] Federally Enforceable Through Title V Permit

36. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

38. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended January 15, 1998), excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

39. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520] Federally Enforceable Through Title V Permit

40. Permittee shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit

41. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit

42. Permittee shall maintain a current list of all steam enhanced wells authorized by this permit and shall update the list whenever a well is added, replaced, or deleted. [District Rule 2201] Federally Enforceable Through Title V Permit

43. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit

44. Permittee shall maintain an accurate component count for the well vent collection and control system serving this operation, in accordance with CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit

45. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-405-1 

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: NE 23 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 85.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM: ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-405-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

5. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

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

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
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. 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

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

9. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4801, and 4320] Federally Enforceable Through Title V Permit

10. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D2346 and make test results readily available for District inspection. [District Rules 2320, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOX @ 3% O2, or CO: 10 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

13. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

14. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

15. 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

16. 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

17. 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

18. 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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

19. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 160; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hlv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

20. 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

CONDITIONS CONTINUE ON NEXT PAGE
21. 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

22. All NOx, CO, and O2 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

23. 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

24. 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

25. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit


27. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-406-1

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: NE 23  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 85.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85
GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM: ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-406-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

5. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

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

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 Sadravini, Executive Director / AFCO

[Signature]

DAVID WARNER, Director of Permit Services
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. 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

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

9. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 4801, and 4320] Federally Enforceable Through Title V Permit

10. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed: PM10: 0.003 lb/MBtu, VOC: 0.0055 lb/MBtu, NOx (as NO2): 7 ppmv NOx @ 3% O2, or CO: 10 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

13. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

14. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

15. 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

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

17. 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

18. 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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

19. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

20. 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

CONDITIONS CONTINUE ON NEXT PAGE
21. 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

22. All NOx, CO, and O2 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

23. 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

24. 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

25. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit


27. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-407-1

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: NE 23  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 85.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85
GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM: ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-407-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

5. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

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

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

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. 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

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

9. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 4801, and 4320] Federally Enforceable Through Title V Permit

10. Permitee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmv NOx @ 3% O2, or CO: 10 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

13. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

14. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

15. 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

16. 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

17. 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

18. 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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

19. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

20. 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

CONDITIONS CONTINUE ON NEXT PAGE
21. 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

22. All NOx, CO, and O2 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

23. 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

24. 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

25. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit


27. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-408-2
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 23 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 20,000 BBL FWKO VESSEL SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263:
ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-408-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. FWKO vapors shall be vented only to vapor control system listed on tank permit S-1326-263. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

5. This FWKO shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201]

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 Sadreolin, Executive Director / APCO

[Signature]

Southern Regional Office • 34948 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17, and 3.18] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a vessel vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall visually inspect vessel shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated vessel for structural integrity annually. [District Rule 2210] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2210] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rule 2201] Federally Enforceable Through Title V Permit

13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

15. If a component type for the vessel is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

18. This permit authorizes FWKO cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall conduct FWKO cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. FWKO may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permittee shall notify the APCO in writing at least three (3) days prior to performing FWKO degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical/actual location of the FWKO being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the FWKO, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the FWKO to allow FWKO cleaning, one of the following procedures must be followed: 1) Prior to venting the FWKO to the atmosphere, operate the FWKO vapor recovery system/vapor control device for at least 24 hours such that it collects the FWKO vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil FWKO by restricting the outflow of water, such that 90% of the FWKO volume is displaced; or 3) Vent the FWKO to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the FWKO to the vapor control system for a length of time determined by the following relationship: $t = \frac{2.3 V}{Q}$, where $t = \text{time}$, $V = \text{tank volume (cubic feet)}$, and $Q = \text{flow rate to the vapor control system as determined using appropriate engineering calculations.}$ [District Rule 2080] Federally Enforceable Through Title V Permit

23. The FWKO shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The FWKO sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the FWKO, the FWKO shall be filled to the maximum possible level with water, the FWKO vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the FWKO with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular FWKO maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the FWKO is disconnected or isolated from the vapor control system. Records shall include the date that FWKO cleaning was initiated, the date FWKO cleaning was completed, the procedure used to vent FWKO vapors prior to opening, the method of FWKO cleaning used, and a description of internal and external FWKO repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

29. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-409-2

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 23   TOWNSHIP: 28S   RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 20,000 BBL FWKO VESSEL SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263:
ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-409-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall vent only to vapor control system listed on S-1326-263. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

5. This FWKO shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [40 CFR 60 Subpart Kb and District Rule 4623] Federally Enforceable Through Title V Permit

6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201]

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

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7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17, and 3.18] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a vessel vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall visually inspect vessel shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and all other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated vessel for structural integrity annually. [District Rule 2210] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2210] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rule 2201] Federally Enforceable Through Title V Permit

13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2210] Federally Enforceable Through Title V Permit

15. If a component type for the vessel is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

18. This permit authorizes FWKO cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall conduct FWKO cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. FWKO may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permittee shall notify the APCO in writing at least three (3) days prior to performing FWKO degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the FWKO being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the FWKO, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the FWKO to allow FWKO cleaning, one of the following procedures must be followed: 1) Prior to venting the FWKO to the atmosphere, operate the FWKO vapor recovery system/vapor control device for at least 24 hours such that it collects the FWKO vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil FWKO by restricting the outflow of water, such that 90% of the FWKO volume is displaced; or 3) Vent the FWKO to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the FWKO to the vapor control system for a length of time determined by the following relationship: \( t = \frac{V}{Q} \) where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

23. The FWKO shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302°F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The FWKO sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the FWKO, the FWKO shall be filled to the maximum possible level with water, the FWKO vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the FWKO with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular FWKO maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the FWKO is disconnected or isolated from the vapor control system. Records shall include the date that FWKO cleaning was initiated, the date FWKO cleaning was completed, the procedure used to vent FWKO vapors prior to opening, the method of FWKO cleaning used, and a description of internal and external FWKO repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

29. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO:  S-1326-410-2

LEGAL OWNER OR OPERATOR:  VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS:  9800 MING AVE, SUITE 300
                      BAKERSFIELD, CA 93311

LOCATION:  HEAVY OIL CENTRAL STATIONARY SOURCE
            KERN COUNTY, CA

SECTION:  SW 23  TOWNSHIP:  28S  RANGE:  27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 5,000 BBL FIXED ROOF CRUDE OIL WASH TANK SERVED BY VAPOR RECOVERY SYSTEM
LISTED IN S-1326-263.  ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-410-0 shall be implemented prior to or concurrently with this ATC.  [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall vent only to vapor control system listed on S-1326-263.  [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions.  [District Rule 4623] Federally Enforceable Through Title V Permit

6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight.  [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5800 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 Sadreddin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

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7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rule 2201] Federally Enforceable Through Title V Permit

13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

15. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

18. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

19. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off of a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \) where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

23. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302°F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

28. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-411-2 ISSUANCE DATE: 04/23/2013

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 23 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 5,000 BBL FIXED ROOF CRUDE OIL LACT TANK SERVED BY VAPOR RECOVERY SYSTEM
LISTED IN S-1326-263: ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-411-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall vent only to vapor control system listed on S-1326-263. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

5. This tank shall store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

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
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rule 2201] Federally Enforceable Through Title V Permit

13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

15. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

18. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

19. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permitee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less, or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \ V / Q \ where \ t = \text{time}, \ V = \text{tank volume (cubic feet)}, \ D = \text{flow rate to the vapor control system as determined using appropriate engineering calculations}. \) [District Rule 2080] Federally Enforceable Through Title V Permit

23. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

28. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Permitee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-412-2

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 5600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
KERN COUNTY, CA

SECTION: SW 23 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 3,400 BBL FIXED ROOF CRUDE OIL DRAIN TANK SERVED BY VAPOR RECOVERY SYSTEM
LISTED IN S-1326-263: ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-412-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall vent only to vapor control system listed on S-1326-263. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-6600 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 Sadedin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
Conditions for S-1326-412-2 (continued)

7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

15. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

18. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

19. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

23. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

28. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-413-2

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 23 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 5,000 BBL FIXED ROOF CRUDE OIL REJECT TANK SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263: ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-413-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall vent only to vapor control system listed on S-1326-263. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

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 UNITED 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

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 36 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

15. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

18. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

19. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

23. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302°F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

28. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-414-2

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9800 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
KERN COUNTY, CA

SECTION: SW 23  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 3,400 BBL FIXED ROOF CRUDE OIL LACT TANK SERVED BY VAPOR RECOVERY SYSTEM
LISTED IN S-1326-263: ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-414-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall vent only to vapor control system listed on S-1326-263. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

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
Southern Regional Office  34946 Flyover Court  Bakersfield, CA 93308  (661) 392-5500  Fax (661) 392-5585
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rule 2201] Federally Enforceable Through Title V Permit

13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

15. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

18. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

19. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

23. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

28. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-415-2
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 23   TOWNSHIP: 28S   RANGE: 27E
EQUIPMENT DESCRIPTION:
MODIFICATION OF 3,400 BBL FIXED ROOF CRUDE OIL LACT TANK SERVED BY VAPOR RECOVERY SYSTEM
LISTED IN S-1326-263: ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-415-0 shall be implemented prior to or concurrently with this ATC. [District
   Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall vent only to vapor control system listed on S-1326-263. [District Rules 2201 and 2410] Federally
   Enforceable Through Title V Permit

5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all
   storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight.
   [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5600 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
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rule 2201] Federally Enforceable Through Title V Permit

13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

15. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

18. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

19. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \times V/Q}{V} \), where \( t = \) time, \( V = \) tank volume (cubic feet), and \( Q = \) flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

23. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302°F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

28. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-417-1

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

EQUIPMENT DESCRIPTION:
MODIFICATION OF 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85
GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM: ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-417-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

5. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

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

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 Sadresar, Executive Director / APCO

DAVID WARNER, Director of Permit Services
Conditions for S-1326-417-1 (continued)

7. 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

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

9. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 4801, and 4320] Federally Enforceable Through Title V Permit

10. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

13. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

14. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

15. 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

16. 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

17. 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

18. 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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

19. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel lHV (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

20. 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

CONDITIONS CONTINUE ON NEXT PAGE
21. 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

22. All NOx, CO, and O2 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

23. 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

24. 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

25. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit


27. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-418-1
ISSUANCE DATE: 04/23/2013

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

EQUIPMENT DESCRIPTION:
MODIFICATION OF 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85
GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM: ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-418-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

5. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

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

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 Sadreddin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. 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

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

9. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 0.05% S/100scf. [District Rules 2201, 4801, and 4320] Federally Enforceable Through Title V Permit

10. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed: PM10: 0.002 lb/MMBtu, VOC: 0.055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

13. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

14. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

15. 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

16. 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

17. 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

18. 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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

19. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 190; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hivv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

20. 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
21. 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

22. All NOx, CO, and O2 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

23. 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

24. 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

25. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit


27. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-419-1
ISSUANCE DATE: 04/23/2013

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

EQUIPMENT DESCRIPTION:
MODIFICATION OF 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85
GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM: ADD RULE 2410 CONDITIONS

CONDITIONS

1. 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. 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. Authority to Construct (ATC) S-1326-419-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

5. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

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

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
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. 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

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

9. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 4801, and 4320] Federally Enforceable Through Title V Permit

10. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

13. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

14. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

15. 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

16. 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

17. 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

18. 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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

19. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

20. 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

CONDITIONS CONTINUE ON NEXT PAGE
21. 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

22. All NOx, CO, and O2 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

23. 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

24. 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 88% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

25. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit


27. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit
San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-420-0

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

EQUIPMENT DESCRIPTION:
85 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

ISSUANCE DATE: 04/23/2013

CONDITIONS

1. 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. 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. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantities of emissions: 1st quarter - 2,234 lb, 2nd quarter - 2,234 lb, 3rd quarter - 2,234 lb, and fourth quarter - 2,234 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of PM10 emissions: 1st quarter - 838 lb, 2nd quarter - 838 lb, 3rd quarter - 838 lb, and fourth quarter - 838 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,536 lb, 2nd quarter - 1,536 lb, 3rd quarter - 1,536 lb, and fourth quarter - 1,536 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. ERC Certificate Numbers C-1190-1, C-1190-2, C-1190-5, N-1066-1, S-3929-1, and S-3943-1 (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

7. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

8. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

15. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE
16. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (USEPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

18. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

19. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

22. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014; CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309; and, USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE
24. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed project, all work within 100 feet of the find shall cease. Permittee will notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. Permittee shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the project site once the evaluation of the find is complete by the qualified archaeologist/paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. In the event that human remains are discovered during construction of the project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believe to be the nearest descendants of the remains for recommendations. Permittee shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Prior to the start of construction activities, Permittee shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

27. During construction activities, if unknown, unrecorded or abandoned wells are discovered or if any wells are damaged, Permittee shall immediately notify DOGGR. Permittee shall retain records of such discoveries onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. Permittee shall comply with all applicable Department of Toxic Substances Control (DTSC) regulations and, if necessary, submit all necessary biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials. In addition, Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

30. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

31. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

32. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

33. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
36. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

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

38. 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

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

40. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320, and 4801] Federally Enforceable Through Title V Permit

41. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rule 4320] Federally Enforceable Through Title V Permit

42. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmv NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

44. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

45. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. 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 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

CONDITIONS CONTINUE ON NEXT PAGE
51. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

52. 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

53. 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

54. All NOx, CO, and O2 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

55. 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

56. 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

57. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

58. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

59. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

60. 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] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-421-0
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

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. 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. 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

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Seyed Sadedin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
Southern Regional Office • 34948 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
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10. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE
16. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (USEPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

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18. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

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22. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014; CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309; and, USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

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27. During construction activities, if unknown, unrecorded or abandoned wells are discovered or if any wells are damaged, Permittee shall immediately notify DOGGR. Permittee shall retain records of such discoveries onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

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30. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

31. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

32. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

33. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
36. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

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

38. 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

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

40. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320, and 4801] Federally Enforceable Through Title V Permit

41. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rule 4320] Federally Enforceable Through Title V Permit

42. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

44. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

45. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. 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 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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
51. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

52. 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

53. 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

54. All NOx, CO, and O2 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

55. 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

56. 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

57. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

58. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

59. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

60. 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] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-422-0

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

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. 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. 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. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 2,234 lb, 2nd quarter - 2,234 lb, 3rd quarter - 2,234 lb, and fourth quarter - 2,234 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of PM10 emissions: 1st quarter - 838 lb, 2nd quarter - 838 lb, 3rd quarter - 838 lb, and fourth quarter - 838 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,536 lb, 2nd quarter - 1,536 lb, 3rd quarter - 1,536 lb, and fourth quarter - 1,536 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

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
6. ERC Certificate Numbers C-1190-1, C-1190-2, C-1190-5, N-1066-1, S-3929-1, and S-3943-1 (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

7. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

8. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

15. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]
16. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (USEPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

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28. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. Permittee shall comply with all applicable Department of Toxic Substances Control (DTSC) regulations and, if necessary submit all necessary biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials. In addition, Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

30. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

31. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

32. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

33. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
36. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

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

38. 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

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

40. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320, and 4801] Federally Enforceable Through Title V Permit

41. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rule 4320] Federally Enforceable Through Title V Permit

42. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed: PM 10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

44. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

45. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. 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 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

CONDITIONS CONTINUE ON NEXT PAGE
Conditions for S-1326-422-0 (continued)

51. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOX - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

52. 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

53. 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 performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

54. All NOX, CO, and O2 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

55. 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

56. 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

57. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

58. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

59. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

60. 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] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-423-0

ISSUANCE DATE: 04/23/2013

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9800 MING AVE, SUITE 300
Bakersfield, CA 93311

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECYCLATION SYSTEM

CONDITIONS

1. 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. 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. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 2,234 lb, 2nd quarter - 2,234 lb, 3rd quarter - 2,234 lb, and fourth quarter - 2,234 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of PM10 emissions: 1st quarter - 838 lb, 2nd quarter - 838 lb, 3rd quarter - 838 lb, and fourth quarter - 838 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,536 lb, 2nd quarter - 1,536 lb, 3rd quarter - 1,536 lb, and fourth quarter - 1,536 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadedin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. ERC Certificate Numbers C-1190-1, C-1190-2, C-1190-5, N-1066-1, S-3929-1, and S-3943-1 (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

7. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

8. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

15. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]
16. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (USEPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

18. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

19. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

22. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project-related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014; CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309; and, USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]
24. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed project, all work within 100 feet of the find shall cease. Permittee will notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. Permittee shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the project site once the evaluation of the find is complete by the qualified archaeologist/paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. In the event that human remains are discovered during construction of the project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believe to be the nearest descendants of the remains for recommendations. Permittee shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Prior to the start of construction activities, Permittee shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR’s "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

27. During construction activities, if unknown, unrecorded or abandoned wells are discovered or if any wells are damaged, Permittee shall immediately notify DOGGR. Permittee shall retain records of such discoveries onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. Permittee shall comply with all applicable Department of Toxic Substances Control (DTSC) regulations and, if necessary submit all necessary biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials. In addition, Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

30. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

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32. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

33. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District’s determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

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42. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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51. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MBTtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

52. 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

53. 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

54. All NOX, CO, and O2 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

55. 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

56. 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

57. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

58. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

59. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

60. 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] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-424-0

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

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. 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. 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. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 2,234 lb, 2nd quarter - 2,234 lb, 3rd quarter - 2,234 lb, and fourth quarter - 2,234 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of PM10 emissions: 1st quarter - 838 lb, 2nd quarter - 838 lb, 3rd quarter - 838 lb, and fourth quarter - 838 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,536 lb, 2nd quarter - 1,536 lb, 3rd quarter - 1,536 lb, and fourth quarter - 1,536 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

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
SOUTHERN REGIONAL OFFICE • 34946 FLYOVER COURT • BAKERSFIELD, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. ERC Certificate Numbers C-1190-1, C-1190-2, C-1190-5, N-1066-1, S-3929-1, and S-3945-1 (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

7. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 85%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

8. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during nighttime, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

15. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]
16. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (USEPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

18. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

19. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

22. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is: CDFW: Ms. Reagen O’Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014; CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309; and, USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE
24. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed project, all work within 100 feet of the find shall cease. Permittee will notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. Permittee shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the project site once the evaluation of the find is complete by the qualified archaeologist/paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. In the event that human remains are discovered during construction of the project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believe to be the nearest descendants of the remains for recommendations. Permittee shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Prior to the start of construction activities, Permittee shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR’s "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

27. During construction activities, if unknown, unrecorded or abandoned wells are discovered or if any wells are damaged, Permittee shall immediately notify DOGGR. Permittee shall retain records of such discoveries onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. Permittee shall comply with all applicable Department of Toxic Substances Control (DTSC) regulations and, if necessary submit all necessary biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials. In addition, Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

30. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

31. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

32. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

33. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District’s determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The permittee’s request for approval of equivalent equipment shall include the make, model, manufacturer’s maximum rating, manufacturer’s guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
36. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

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

38. 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

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

40. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320, and 4801] Federally Enforceable Through Title V Permit

41. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rule 4320] Federally Enforceable Through Title V Permit

42. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmv @ NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

44. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

45. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. 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 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

CONDITIONS CONTINUE ON NEXT PAGE
Conditions for S-1326-424-0 (continued)

51. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hlv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

52. 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

53. 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

54. All NOX, CO, and O2 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

55. 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

56. 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

57. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

58. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

59. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

60. 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] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-425-0

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

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. 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. 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. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 2,234 lb, 2nd quarter - 2,234 lb, 3rd quarter - 2,234 lb, and fourth quarter - 2,234 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit.

4. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of PM10 emissions: 1st quarter - 838 lb, 2nd quarter - 838 lb, 3rd quarter - 838 lb, and fourth quarter - 838 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit.

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,536 lb, 2nd quarter - 1,536 lb, 3rd quarter - 1,536 lb, and fourth quarter - 1,536 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit.

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

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661)392-5500 • Fax (661) 392-5585
6. ERC Certificate Numbers C-1190-1, C-1190-2, C-1190-5, N-1066-1, S-3929-1, and S-3943-1 (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 220] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

8. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

15. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE
16. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (USEPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

18. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

19. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-19 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

22. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014; CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309; and, USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]
24. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed project, all work within 100 feet of the find shall cease. Permittee will notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. Permittee shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the project site once the evaluation of the find is complete by the qualified archaeologist/paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. In the event that human remains are discovered during construction of the project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believe to be the nearest descendants of the remains for recommendations. Permittee shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Prior to the start of construction activities, Permittee shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

27. During construction activities, if unknown, unrecorded or abandoned wells are discovered or if any wells are damaged, Permittee shall immediately notify DOGGR. Permittee shall retain records of such discoveries onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. Permittee shall comply with all applicable Department of Toxic Substances Control (DTSC) regulations and, if necessary submit all necessary biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials. In addition, Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

30. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

31. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

32. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

33. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
36. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

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

38. 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

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

40. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320, and 4801] Federally Enforceable Through Title V Permit

41. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rule 4320] Federally Enforceable Through Title V Permit

42. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

44. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

45. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. 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 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

CONDITIONS CONTINUE ON NEXT PAGE
51. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 109, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhy (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

52. 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

53. 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 performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

54. All NOx, CO, and O2 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

55. 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

56. 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

57. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

58. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

59. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

60. 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] Federally Enforceable Through Title V Permit
San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review
Install Six New 85.0 MMBtu/hr Steam Generators &
Reissue Permits for Previously Approved Equipment Associated with Expansion Project

Facility Name: Vintage Production California, LLC
Revised: April 22, 2013
Mailing Address: 9600 Ming Ave
Bakersfield, CA 93311
Engineer: Kris Rickards
Lead Engineer: Rich Karrs
Contact Person: Jerry Frost
Nick Diercks (Cnslt)
Colin Campbell (PSD Cnslt)
Telephone: 661-869-8000
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661-377-0074
919-845-1424
E-Mail: Jerry_Frost@Oxy.com ndiercks@ix.netcom.com campbell@rtpev.com
Project #: S-1123499
Deemed Complete: October 4, 2012

I. Proposal

Vintage Production Company, LLC (VPC) operates oil and gas production equipment in the Kern Front Oilfield within VPC’s Heavy Oil Central Stationary Source. VPC has requested Authority to Construct (ATC) six new 85.0 MMBtu/hr natural gas-fired steam generators, in addition to reauthorizing, under Rule 2410, previously approved equipment.

VPC’s Kern Front Oilfield Heavy Oil Central Stationary Source is also a major source of Greenhouse Gas (GHG) as discussed in this evaluation. Installation of six previously authorized steam generators (S-1326-405-1, ‘406-1, ‘407-1, ‘417-1, ‘418-1, ‘419-1), eight vessels and crude oil storage tanks (‘408-0 through ‘415-0), expansion of an existing tank vapor control system (‘263-17), and to add additional wells and expand locations of an existing well casing vapor collection system (‘287-8, ‘287-9, and ‘287-10) triggered application for Potential for Significant Deterioration (PSD) requirements, which was not applied for with the EPA during or after District approval of the units. VPC has applied for a PSD permit with this project for the previously installed equipment and the proposed six new steam generator units.

The new steam generators will also trigger Best Available Control Technology (BACT), offsets, public notice, and require Best Performance Standards (BPS) to satisfy the California Environmental Quality Act (CEQA). Previously issued ATCs being evaluated as part of this larger PSD project are not considered modifications under New Source Review.

VPC received their Title V Permit on August 31, 2001. This project is a Federal Major Modification; therefore, it is classified as a Title V significant modification pursuant to Rule 2520, Section 3.29, 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. VPC must apply to administratively amend their Title V permit.

1 As defined in 40 CFR 52.21(b)(45) and (b)(50)
II. Applicable Rules

Rule 2201  New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410  Prevention of Significant Deterioration (6/16/11)
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 I (8/21/03)
Rule 4401  Steam Enhanced Crude Oil Production Well Vents (12/14/06)
Rule 4406  Sulfur Compounds From Oil-Field Steam Generators – Kern County (12/17/92)
Rule 4623  Storage of Organic Liquids (05/19/05)
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

Existing equipment and new steam generators will be operated at the Kern Front Oil Field within VPC's Heavy Oil Central Stationary Source. New steam generators will be operated within Sections 23 and 26 of T28S, R27E. 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

VPC operates permitted equipment within their Heavy Oil Central Stationary Source, utilized for the thermally enhanced production of crude oil and natural gas. In thermally enhanced oil recovery (TEOR), natural gas is combusted in steam generators to produce steam for injection into heavy crude oil bearing strata via injection wells to reduce viscosity of the crude oil, thereby facilitating thermally enhanced oil production.
V. Equipment Listing

New Equipment Description:

S-1326-420-0,‘421-0, ‘422-0, ‘423-0, ‘424-0, and ‘425-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

Pre-Project Equipment Description:

(ATC)

(ATC)
S-1326-287-10 THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 1085 STEAM ENHANCED PRODUCTION WELLS CONNECTED TO WELL HEAD CASING VENT VAPOR RECOVERY SYSTEM (CVR) VENTING VAPORS TO SECTION 23 TANK VAPOR RECOVERY SYSTEM (S-1326-263)

(ATCs)
S-1326-405-0, ‘406-0, ‘407-0, ‘417-0, ‘418-0, and ‘419-0: 85.0 MMBTU/HR NATURAL GAS - FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

(ATC)
S-1326-408-0 20,000 BBL FWKO VESSEL SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263

(ATC)
S-1326-409-0 20,000 BBL FWKO VESSEL SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263

(ATC)
S-1326-410-0 5,000 BBL FIXED ROOF CRUDE OIL WASH TANK SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263

(ATC)
S-1326-411-0 5,000 BBL FIXED ROOF CRUDE OIL LACT TANK SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263

(ATC)
S-1326-412-0 3,400 BBL FIXED ROOF CRUDE OIL DRAIN TANK SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263

(ATC)
S-1326-413-0 5,000 BBL FIXED ROOF CRUDE OIL REJECT TANK SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263

(ATC)
S-1326-414-0 3,400 BBL FIXED ROOF CRUDE OIL LACT TANK SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263
(ATC)
S-1326-415-0  3,400 BBL FIXED ROOF CRUDE OIL LACT TANK SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263

Proposed Modification:
No change to pre-project equipment descriptions.

Post Project Equipment Description:
No change to pre-project equipment descriptions.

VI. Emission Control Technology Evaluation

Emissions from natural gas-fired steam generators 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.

Flue gas recirculation (FGR) reduces NOX emissions by recirculating a percentage of the exhaust gas back into the windbox. This reduces the oxygen concentration in the air-fuel mixture and regulates the combustion process, lowering the combustion temperature. The lowered availability of oxygen in conjunction with lowered combustion temperature reduces the formation of NOX.

VPC will comply with Rule 4320 by limiting the burners to 7 ppm-NOX @ 3% O2 (or 0.008 lb-NOX/MMBtu) and limiting the fuel sulfur content to 1 gr-S/100 dscf. VPC will comply with BACT by combusting PUC quality natural gas.

VII. General Calculations

The previously issued ATCs for steam generators listed on permits S-1326-405, '406, '407, '417, '418, and '419 and other ancillary equipment (tanks and wells) do not meet the criteria for a Rule 2201 Modification, as defined in Section 3.25, and are not subject to the requirements of Rule 2201. Therefore, formal calculations for Rule 2201 are not necessary for these emissions units and no further discussion is required.

A. Assumptions

- The maximum operating schedule is 24 hours per day (per applicant)
- Steam generators are fired solely on natural gas (limited to 1 gr-S/100 dscf, per applicant)
- Maximum Heat Input: 85.0 MMBtu/hr (per applicant)
- Annual potential to emit is calculated based on 8,760 hours of operation per year
- 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>NO\textsubscript{x}</td>
<td>0.008 lb-NO\textsubscript{x}/MMBtu</td>
<td>7 ppmv NO\textsubscript{x} (@ 3%O\textsubscript{2}) Rule 4320, Table 1 Category C.2.a</td>
</tr>
<tr>
<td>SO\textsubscript{x}</td>
<td>0.00285 lb SO\textsubscript{x}/MMBtu</td>
<td>1 gr-S/100 dscf Applicant Proposed (PUC Quality Gas)</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>0.003 lb-PM\textsubscript{10}/MMBtu</td>
<td>-- Applicant Proposed*</td>
</tr>
<tr>
<td>PM\textsubscript{2.5}</td>
<td>0.003 lb-PM\textsubscript{2.5}/MMBtu</td>
<td>-- AP-42 Table 1.4-2, Footnote c**</td>
</tr>
<tr>
<td>CO</td>
<td>0.018 lb-CO/MMBtu</td>
<td>25 ppmv CO (@3% O\textsubscript{2}) Burner Manufacturer</td>
</tr>
<tr>
<td>VOC</td>
<td>0.0055 lb-VOC/MMBtu</td>
<td>-- AP-42 (07/98) Table 1.4-2</td>
</tr>
<tr>
<td>CO\textsubscript{2}e</td>
<td>116.67 lb-CO\textsubscript{2}e/MMBtu</td>
<td>53.97 kg/MMBtu ARB GHG Emission Factor for Natural Gas</td>
</tr>
</tbody>
</table>

*Factor used is based on startup emissions source testing of Kern Front Units S-1326-385 and *-390
**According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas combustion are less than 1 \( \mu \text{m} \) in diameter.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since these are new emissions units, PE1 = 0 for all pollutants.

2. Post Project Potential to Emit (PE2)

Emissions are calculated with the following equation and summarized on the following table (emissions are identical for each steam generator):

\[
PE2 = EF \ (\text{lb/MMBtu}) \times \text{Heat Input (MMBtu)} \times \text{Operating Schedule (hours)}
\]
### Pollutant Emissions Table

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>EF2 (lb/MMBtu)</th>
<th>Heat Input (MMBtu/hr)</th>
<th>Operating Schedule (hr/day)</th>
<th>Daily PE2 (lb/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{X}</td>
<td>0.008</td>
<td>85</td>
<td>24</td>
<td>16.3</td>
</tr>
<tr>
<td>SO\textsubscript{X}</td>
<td>0.00285</td>
<td>85</td>
<td>24</td>
<td>5.8</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>0.003</td>
<td>85</td>
<td>24</td>
<td>6.1</td>
</tr>
<tr>
<td>CO</td>
<td>0.018</td>
<td>85</td>
<td>24</td>
<td>36.7</td>
</tr>
<tr>
<td>VOC</td>
<td>0.0055</td>
<td>85</td>
<td>24</td>
<td>11.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>EF2 (lb/MMBtu)</th>
<th>Heat Input (MMBtu/hr)</th>
<th>Operating Schedule (hr/year)</th>
<th>Annual PE2 (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{X}</td>
<td>0.008</td>
<td>85</td>
<td>8,760</td>
<td>5,957</td>
</tr>
<tr>
<td>SO\textsubscript{X}</td>
<td>0.00285</td>
<td>85</td>
<td>8,760</td>
<td>2,122</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>0.003</td>
<td>85</td>
<td>8,760</td>
<td>2,234</td>
</tr>
<tr>
<td>CO</td>
<td>0.018</td>
<td>85</td>
<td>8,760</td>
<td>13,403</td>
</tr>
<tr>
<td>VOC</td>
<td>0.0055</td>
<td>85</td>
<td>8,760</td>
<td>4,095</td>
</tr>
<tr>
<td>CO\textsubscript{2e}</td>
<td>116.67</td>
<td>85</td>
<td>8,760</td>
<td>86,872,482</td>
</tr>
</tbody>
</table>

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

Pursuant to District Rule 2201, the 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 (AER) that have occurred at the source, and which have not been used on-site.

The SSPE1 for permitted units is calculated in Appendix H and presented in the following table. The SSPE1 is calculated by adding the PE1 from all units with valid ATCs or PTOs and the sum of the ERCs that have been banked at the source and which have not been used on-site (Total\textsubscript{ERC}).

\[ SSPE1_{\text{Total}} = SSPE1_{\text{Permit Unit}} + \text{Total}_{\text{ERC}} \]
<table>
<thead>
<tr>
<th>Permit Unit/ERC</th>
<th>NOₓ</th>
<th>SOₓ</th>
<th>PM₁₀</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSPE1 Permit Unit</td>
<td>114,866</td>
<td>38,874</td>
<td>38,143</td>
<td>265,668</td>
<td>953,978</td>
</tr>
<tr>
<td>ERC S-730-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>343</td>
</tr>
<tr>
<td>ERC S-734-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>24</td>
</tr>
<tr>
<td>ERC S-735-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>39</td>
</tr>
<tr>
<td>ERC S-736-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>483</td>
</tr>
<tr>
<td>ERC S-737-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,805</td>
</tr>
<tr>
<td>ERC S-738-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,160</td>
</tr>
<tr>
<td>ERC S-755-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>334</td>
</tr>
<tr>
<td>ERC S-756-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2,393</td>
</tr>
<tr>
<td>ERC S-757-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>22</td>
</tr>
<tr>
<td>ERC S-758-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>569</td>
</tr>
<tr>
<td>ERC S-759-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>979</td>
</tr>
<tr>
<td>TotalERC</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8,151</td>
</tr>
<tr>
<td>SSPE1</td>
<td>114,866</td>
<td>38,874</td>
<td>38,143</td>
<td>265,668</td>
<td>962,129</td>
</tr>
</tbody>
</table>

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.

The SSPE2 for permitted units is calculated in Appendix I and presented in the following table. The SSPE2 is calculated by adding the PE2 from all units with valid ATCs or PTOs and the sum of the ERCs that have been banked at the source and which have not been used on-site (TotalERC). Since ERCs generated onsite are not being used in this project there is no change from the previously summed TotalERC figure.

\[
SSPE2_{\text{Total}} = SSPE2_{\text{Permit Unit}} + \text{TotalERC}
\]

<table>
<thead>
<tr>
<th>Permit Unit/ERC</th>
<th>NOₓ</th>
<th>SOₓ</th>
<th>PM₁₀</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSPE2 Permit Unit</td>
<td>150,608</td>
<td>51,606</td>
<td>51,547</td>
<td>346,086</td>
<td>978,548</td>
</tr>
<tr>
<td>TotalERC</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8,151</td>
</tr>
<tr>
<td>SSPE2</td>
<td>150,608</td>
<td>51,606</td>
<td>51,547</td>
<td>346,086</td>
<td>986,699</td>
</tr>
</tbody>
</table>
5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

<table>
<thead>
<tr>
<th>Rule 2201 Major Source Determination (lb/year)</th>
<th>NOx</th>
<th>SOx</th>
<th>PM10</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility emissions pre-project</td>
<td>114,868</td>
<td>38,874</td>
<td>38,143</td>
<td>265,668</td>
<td>&gt;20,000</td>
</tr>
<tr>
<td>Facility emissions - post project</td>
<td>150,608</td>
<td>51,606</td>
<td>51,547</td>
<td>346,086</td>
<td>&gt;20,000</td>
</tr>
<tr>
<td>Major Source Threshold</td>
<td>20,000</td>
<td>140,000</td>
<td>140,000</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>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

\(^1\)Since the facility is expected to be over the major source threshold regardless of excluding fugitive emissions, these values were not recalculated from the SSPE1 and SSPE2 listed previously (this value contains all fugitive VOC emissions at the source).

As seen in the table above, the facility is an existing Major Source for NO\(_x\), CO, and VOC only and will remain a major source for only these pollutants as a result of this project. Since the facility is not a major source for PM\(_{10}\) (140,000 lb/year), it is not a major source for PM\(_{2.5}\) (200,000 lb/year).

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). Therefore the following PSD Major Source thresholds are applicable.

Since this facility currently operates steam generators totaling 915 MMBtu/hr the resultant CO\(_2\)e using the factor listed previously (not including other combustion equipment) is approximately (915 MMBtu/hr)(116.67 lb-CO\(_2\)e/MMBtu)(8,760 hrs/yr) = 467,578 tons-CO\(_2\)e/yr.

<table>
<thead>
<tr>
<th>PSD Major Source Determination (tons/year)</th>
<th>NO(_x)</th>
<th>VOC</th>
<th>SO(_2)</th>
<th>CO</th>
<th>PM</th>
<th>PM(_{10})</th>
<th>CO(_2)e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Facility PE before Project Increase</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>&gt;467,578</td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>100,000</td>
</tr>
<tr>
<td>PSD Major Source? (Y/N)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Y</td>
</tr>
</tbody>
</table>
As shown in the preceding table, the facility is an existing major source for PSD for at least one pollutant. Therefore the facility is an existing major source for PSD.

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 District Rule 2201.

Since these steam generators are new emissions units, BE = PE1 = 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 not a major source for SOX and PM10, this project does not constitute an SB 288 major modification for these pollutants.

VPC has identified new TEOR well expansion ATCs, 8 new produced water and oil storage vessels, tank and casing vapor recovery expansion (using existing steam generators to combust gas), and possible expansion of plant roadways as the same expansion project that all result in fugitive emissions only. Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are not included in the following PSD Major Source Determination. Therefore, only combustion emissions from the 12 steam generators are considered part of this determination.

Potential emissions from the previously approved steam generators are taken from the SSPE tables in Appendix H and summarized in the following table:

<table>
<thead>
<tr>
<th>Potential to Emit [lb/year]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing ATCs</td>
</tr>
<tr>
<td>'405, '406, '407, '410</td>
</tr>
<tr>
<td>417, '418, and '419</td>
</tr>
</tbody>
</table>

Since this facility is a major source for NOX 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.
Since the project’s PE2 surpasses the SB 288 Major Modification Threshold for NO\textsubscript{x}, the Net Emissions Increase (NEI) will be compared to the SB 288 Major Modification thresholds in order to determine if this project constitutes an SB 288 Major Modification.

The NEI is the total of emission increases for every permit unit addressed in this project and is calculated as follows:

\[
\text{NEI} = \text{PE2} - \text{BAE}
\]

Where: PE2 = the sum of all the PE2s for each permit unit in this project

BAE = for units that are fully offset, the BAE = the PE1 for every unit, otherwise, the BAE is the actual annual emissions averaged over the baseline period for every unit.

Since these emission units are all considered new (for this larger project) the BAE is equal to zero and the NEI = PE2. Therefore, this project is a major modification for NO\textsubscript{x} as shown in the preceding table.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a “Major Modification” as defined in 40 CFR 51.165 and part D of Title I of the CAA.

Since this facility is not a Major Source for SO\textsubscript{x} or PM\textsubscript{10}, this project does not constitute a Federal Major Modification for these pollutants. Additionally, since the facility is not a major source for PM\textsubscript{10} (140,000 lb/year), it is not a major source for PM2.5 (200,000 lb/year).

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 for each new unit included in this project.

As discussed previously, equipment installed as part of the Kern Front Oilfield project, besides the steam generators, result in fugitive emissions only. Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the, increases in fugitive emissions are not included in the Federal Major Modification calculation. Therefore, only combustion emissions from the 12 steam generators are considered part of this Federal Major Modification.
The project's combined total emission increases are compared to the Federal Major Modification Thresholds in the following table (for the purposes of this calculation, as in the SB 288 Major Modification calculation made previously, steam generators issued in projects S-1112303 and S-1120405 are considered part of the same expansion project in the Kern Front Oilfield, all other units installed result in fugitive emissions only and are not considered).

<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>71,484</td>
<td>0</td>
<td>Yes</td>
</tr>
<tr>
<td>VOC*</td>
<td>49,140</td>
<td>0</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*If there is any emission increases in NO\textsubscript{x} or VOC, this project is a Federal Major Modification and no further analysis is required.

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

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to all regulated NSR pollutants, except for those which the District has been classified as non-attainment (including PM\textsubscript{2.5}), and that of those pollutants, the ones emitted from the subject emission units are listed below:

- NO\textsubscript{2} (as a primary pollutant)
- SO\textsubscript{2} (as a primary pollutant)
- CO
- PM
- PM\textsubscript{10}
- Greenhouse gases (GHG): CO\textsubscript{2}, N\textsubscript{2}O, CH\textsubscript{4}, HFCs, PFCs, and SF\textsubscript{6}

As discussed previously, equipment installed as part of the Kern Front Oilfield project, besides the steam generators, result in fugitive emissions only. Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the, increases in fugitive emissions are not included in the Federal Major Modification calculation. Therefore, only combustion emissions from the 12 steam generators are considered for the PSD determinations that follow.

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not (See Section VII.C.5 of this document).

In the case the facility is an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project results in a PSD significant increase.
I. Project Location Relative to Class 1 Area

As demonstrated in the "PSD Major Source Determination" Section above, the facility was determined to be a existing major source for PSD. Because the project is not located within 10 km of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

II. Significance of Project Emission Increase Determination

a. Potential to Emit of subject PSD pollutant for New or Modified Emission Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if total potential to emit from all new and modified units is below this threshold, no further analysis will be needed.

| PSD Significant Emission Increase Determination: Potential to Emit (tons/year) |
|----------------------|------|------|------|------|------|------|
|                      | NO₂  | SO₂  | CO   | PM  | PM₁₀ | CO₂e |
| Total PE from New and Modified Units | 36   | 13   | 69   | 13¹ | 13   | 521,235 |
| PSD Significant Emission Increase Thresholds | 40   | 40   | 100  | 25  | 15   | 75,000  |
| PSD Significant Emission Increase? | N    | N    | N    | N   | N    | Y     |

¹Total PM is assumed to be equal to PM₁₀ and PM₂.₅ for the combustion of natural gas.

As demonstrated above, because the project has a total potential to emit from all new and modified emission units greater than PSD significant emission increase threshold for CO₂e, further analysis is required to determine if the project has an emission increase greater than the PSD significant emission increase thresholds, see step below.

b. Emission Increase for Each Subject PSD Pollutant with a Significant Emission Increase vs PSD Significant Emission Increase Thresholds

In this step, the emission increase for each subject PSD pollutant is compared to the PSD significant emission increase thresholds, and if emission increase for each attainment pollutant is below this threshold, no further analysis is needed.

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project. The following tables summarize previously discussed emissions for these units.
The project's combined total emission increases, as calculated in the SB 288 and Major Modification determination previously, are summarized and then compared to the PSD significant emission increase thresholds in the following tables:

<table>
<thead>
<tr>
<th>Emission Increase (tons/year)</th>
<th>NO₂</th>
<th>SO₂</th>
<th>CO</th>
<th>PM₁₀</th>
<th>CO₂e</th>
</tr>
</thead>
<tbody>
<tr>
<td>'405, '406, '407, '417, '418, and '419</td>
<td>17.9</td>
<td>6.4</td>
<td>28.9</td>
<td>6.7</td>
<td>260,617</td>
</tr>
<tr>
<td>'420, '421, '422, '423, '424, and '425</td>
<td>17.9</td>
<td>6.4</td>
<td>40.2</td>
<td>6.7</td>
<td>260,617</td>
</tr>
<tr>
<td>Total (tons/year)</td>
<td>36</td>
<td>13</td>
<td>69</td>
<td>13</td>
<td>521,235</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PSD Significant Emission Increase Determination: Emission Increase (tons/year)</th>
<th>NO₂</th>
<th>SO₂</th>
<th>CO</th>
<th>PM</th>
<th>PM₁₀</th>
<th>CO₂e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Increases (only)</td>
<td>36</td>
<td>13</td>
<td>69</td>
<td>13</td>
<td>13</td>
<td>521,235</td>
</tr>
<tr>
<td>PSD Significant Emission Increase Thresholds</td>
<td>40</td>
<td>40</td>
<td>100</td>
<td>25</td>
<td>15</td>
<td>75,000</td>
</tr>
<tr>
<td>PSD Significant Emission Increase?</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
</tbody>
</table>

*Total PM is assumed to be equal to PM₁₀ for the combustion of natural gas.

As demonstrated in the table above, the project emissions increase exceed the PSD significant emission increase thresholds for CO₂e. Therefore further analysis is required to determine if the project has a net emission increase greater than the PSD significant emission increase threshold for this (these) specific pollutant(s).

c. **Net Emission Increase for Each Subject PSD Pollutant with a Significant Emission Increase vs PSD Significant Emission Increase Thresholds**

The net emission increase needs to be calculated only for the pollutant(s) with a PSD significant emission increase. VPC is not claiming any emission reductions in an attempt to mitigate or "offset" the significant emissions increase of CO₂e below the significance threshold. Therefore, creditable decreases of actual emissions at this stationary source are not considered and the previously discussed increase in CO₂e will exceed the significance threshold.

The project results in a significant net emission increase for CO₂e emissions only. As such, the project is subject to Rule 2410 requirements for CO₂e only and BACT is required for CO₂e.
Conclusion

For projects subject to the requirements of District Rule 2410, the following are required:

I. BACT is required for all emission units in the project that have any emission increase and only for those pollutants for which the project has a significant emission increase (for new major sources) or a significant net emission increase (for existing major sources), see 40CFR 52.21(j). Please note that in such cases BACT is required for fugitive emission sources as well, even if the source category is not listed in 40 CFR 52.21 (b)(1)(i).

II. Ambient air quality impact analysis (including secondary emissions), see 40CFR 52.21(k), (except for significant increases in GHG emissions only).

III. Ambient air quality monitoring, see 40CFR 52.21(m), (except for significant increases in GHG emissions only).

IV. Additional impact analyses, including visibility, soils, vegetation, see 40CFR 52.21(o), (except for significant increases in GHG emissions only).

V. Public noticing requirements pursuant to Rule 2410 and District guidance.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

As noted in Section VII of this engineering evaluation, the proposed PSD modification to previously authorized steam generators listed on permits S-1326-405, '406, '407, '417, '418, and '419 do not constitute a NSR modification; Pursuant to section 3.25 of District Rule 2201, a modification is defined as:

3.25.1.1 Any change in hours of operation, production rate, or method of operation of an existing emissions unit, which would necessitate a change in permit conditions.

The proposed modification does not result in a change in the hour of operation, production rate or method of operation which necessitates a change in permit conditions.

3.25.1.2 Any structural change or addition to an existing emissions unit which would necessitate a change in permit conditions. Routine replacement shall not be considered to be a structural change.

The proposed modification does not constitute a structural change or addition to an existing emissions unit which necessitates a change in permit conditions.

3.25.1.3 An increase in emissions from an emissions unit caused by a modification of the Stationary Source when the emissions unit is not subject to a daily emissions limitation.

The proposed modification does not result in an increase in emissions from these emissions units.
3.25.1.4 Addition of any new emissions unit which is subject to District permitting requirements.

The proposed modification to these units does not result in the addition of any new emissions units.

3.25.1.5 A change in a permit term or condition proposed by an applicant to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

The proposed modification does not result in an exemption from any applicable requirements of which the source would otherwise be subject.

As discussed above, consideration for PSD of steam generators listed on permits S-1326-405, '406, '407, '417, '418, and '419 and equipment listed on '263, '287, and '408 through '415 do not meet any of the criteria for a modification. Therefore, they are not subject to the requirements of District Rule 2201.

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, VPC is proposing to install six new steam generators with a PE greater than 2 lb/day for NOx, SOx, PM10, CO, and VOC.

BACT is triggered for NOx, SOx, PM10, CO, and VOC because the PEs are greater than 2 lbs/day and the SSPE2 for CO is greater than 200,000 lb/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 – AIPE > 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.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.

e. **PSD Significant Modification**

As discussed in Section VII.C.9 above, this project does constitute a significant net emissions increase for GHG; therefore, BACT is triggered for GHG for all units that have an increase in GHG emissions.

2. **BACT Guideline**

Please note that BACT Guideline 1.2.1 [Steam Generator (>5 MMBtu/hr, Oilfield] has been rescinded. The NO\textsubscript{X} emission limit requirement of District Rule 4320 is lower than the Achieved-in-Practice requirement of BACT Guideline 1.2.1 (14 ppmv @ 3% O\textsubscript{2}); therefore a project specific BACT analysis will be performed to determine BACT for this project. More details regarding this are provided in Appendix B.

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 C), BACT has been satisfied with the following:

- NO\textsubscript{X}: 7 ppmvd @ 3% O\textsubscript{2}
- SO\textsubscript{X}: Fired on PUC quality natural gas
- PM\textsubscript{10}: Fired on PUC quality natural gas
- CO: 25 ppmvd @ 3% O\textsubscript{2}
- VOC: Gaseous fuel

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>150,608</td>
<td>51,606</td>
<td>51,547</td>
<td>346,086</td>
<td>978,548</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, CO, and VOC, and the SSPE2 is greater than the offset thresholds for NOx, SOx, PM10, CO, and VOC; 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 are no increases in cargo carrier emissions; therefore offsets can be determined as follows: Offsets required (lb/year) = ([PE2 – BE] + ICCE) x DOR
### Post Project Potential to Emit [PE2] (lb/yr)

<table>
<thead>
<tr>
<th>Permit No.</th>
<th>NOx</th>
<th>SOx</th>
<th>PM10</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-1326-420</td>
<td>5.957</td>
<td>NA</td>
<td>2.234</td>
<td>13,403</td>
<td>4,095</td>
</tr>
<tr>
<td>S-1326-421</td>
<td>5.957</td>
<td>NA</td>
<td>2.234</td>
<td>13,403</td>
<td>4,095</td>
</tr>
<tr>
<td>S-1326-422</td>
<td>5.957</td>
<td>NA</td>
<td>2.234</td>
<td>13,403</td>
<td>4,095</td>
</tr>
<tr>
<td>S-1326-423</td>
<td>5.957</td>
<td>NA</td>
<td>2.234</td>
<td>13,403</td>
<td>4,095</td>
</tr>
<tr>
<td>S-1326-424</td>
<td>5.957</td>
<td>NA</td>
<td>2.234</td>
<td>13,403</td>
<td>4,095</td>
</tr>
<tr>
<td>S-1326-425</td>
<td>5.957</td>
<td>NA</td>
<td>2.234</td>
<td>13,403</td>
<td>4,095</td>
</tr>
</tbody>
</table>

### Baseline Emissions [BE] (lb/yr)

<table>
<thead>
<tr>
<th>NOx</th>
<th>SOx</th>
<th>PM10</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>NA</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>NA</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>NA</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>NA</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>NA</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*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 (AAQ) 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 AAQ Standards. The District performed an AAQ Analysis and determined that this project will not result in or contribute to a violation of an AAQ Standard for CO (see Appendix D). Therefore, CO offsets are not required for this project.

### Offsets Required [PE2 – BE] (lb/yr)

<table>
<thead>
<tr>
<th>Permit No.</th>
<th>NOx</th>
<th>SOx</th>
<th>PM10</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-1326-420</td>
<td>5.957</td>
<td>NA</td>
<td>2.234</td>
<td>13,403</td>
<td>4,095</td>
</tr>
<tr>
<td>S-1326-421</td>
<td>5.957</td>
<td>NA</td>
<td>2.234</td>
<td>13,403</td>
<td>4,095</td>
</tr>
<tr>
<td>S-1326-422</td>
<td>5.957</td>
<td>NA</td>
<td>2.234</td>
<td>13,403</td>
<td>4,095</td>
</tr>
<tr>
<td>S-1326-423</td>
<td>5.957</td>
<td>NA</td>
<td>2.234</td>
<td>13,403</td>
<td>4,095</td>
</tr>
<tr>
<td>S-1326-424</td>
<td>5.957</td>
<td>NA</td>
<td>2.234</td>
<td>13,403</td>
<td>4,095</td>
</tr>
<tr>
<td>S-1326-425</td>
<td>5.957</td>
<td>NA</td>
<td>2.234</td>
<td>13,403</td>
<td>4,095</td>
</tr>
</tbody>
</table>

\[ \text{Sum} = 35,742 \]

\[ \text{Offset Required} = 13,404 \]

**As demonstrated in the preceding calculation:**

- NOx, PM10, and VOC offsets are required
- CO offsets are not required (no violation of an Ambient Air Quality Standard)
- SOx offsets are not required (VPCs Light Oil Central Stationary Source SOx emissions do not exceed the offset applicability threshold)

**NOx:**

Since this project results in a Federal Major Modification for NOx the distance offset ratio (DOR) for these pollutants will be equal to 1.5 (per Rule 2201, Section 4.8.1). VPC has proposed the following ERCs:

<table>
<thead>
<tr>
<th>ERC #C-1190-2</th>
<th>1st Quarter</th>
<th>2nd Quarter</th>
<th>3rd Quarter</th>
<th>4th Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>13,750</td>
<td>13,750</td>
<td>13,750</td>
<td>13,750</td>
<td></td>
</tr>
</tbody>
</table>

**Total Offsets Required (at 1.5:1 distance offset ratio):**

<table>
<thead>
<tr>
<th>Permit No.</th>
<th>NOx Offsets Required (lb/qtr)</th>
<th>1st Quarter</th>
<th>2nd Quarter</th>
<th>3rd Quarter</th>
<th>4th Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-1326-420</td>
<td>2,234</td>
<td>2,234</td>
<td>2,234</td>
<td>2,234</td>
<td></td>
</tr>
<tr>
<td>S-1326-421</td>
<td>2,234</td>
<td>2,234</td>
<td>2,234</td>
<td>2,234</td>
<td></td>
</tr>
<tr>
<td>S-1326-422</td>
<td>2,234</td>
<td>2,234</td>
<td>2,234</td>
<td>2,234</td>
<td></td>
</tr>
<tr>
<td>S-1326-423</td>
<td>2,234</td>
<td>2,234</td>
<td>2,234</td>
<td>2,234</td>
<td></td>
</tr>
<tr>
<td>S-1326-424</td>
<td>2,234</td>
<td>2,234</td>
<td>2,234</td>
<td>2,234</td>
<td></td>
</tr>
<tr>
<td>S-1326-425</td>
<td>2,234</td>
<td>2,234</td>
<td>2,234</td>
<td>2,234</td>
<td></td>
</tr>
</tbody>
</table>

\[ \text{Sum} = 13,404 \]
Offsets Reserved in PAS (at discussed offset ratios):

<table>
<thead>
<tr>
<th>ERC #C-1190-2</th>
<th>1st Quarter</th>
<th>2nd Quarter</th>
<th>3rd Quarter</th>
<th>4th Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13,404</td>
<td>13,404</td>
<td>13,404</td>
<td>13,404</td>
</tr>
</tbody>
</table>

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

**PM10:**

VPC has proposed using SOx ERCS to offset the increases in PM10.

Interpollutant offset ratios for trades between SOx and PM10 are allowed pursuant to Rule 2201, Section 4.13.3.1.2. An interpollutant ratio of 1.000:1 for SOx to PM10 will be applied. Please refer to the interpollutant offset explanation in Appendix G of this evaluation for an explanation of the derivation of the SOx:PM10 interpollutant offset ratio.

VPC has proposed the following ERCS:

<table>
<thead>
<tr>
<th>ERC #C-1190-5</th>
<th>1st Quarter</th>
<th>2nd Quarter</th>
<th>3rd Quarter</th>
<th>4th Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generated at:</td>
<td>Facility C-603</td>
<td>10,250</td>
<td>10,250</td>
<td>10,250</td>
</tr>
<tr>
<td>DOR</td>
<td>1.5 (&gt;15 miles)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No prior reservations

**Total Offsets Required (at 1.5:1 distance offset ratio):**

<table>
<thead>
<tr>
<th>Permit No.</th>
<th>PM10 Offsets Required (lb/qtr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st Quarter</td>
</tr>
<tr>
<td>S-1326-420</td>
<td>838</td>
</tr>
<tr>
<td>S-1326-421</td>
<td>838</td>
</tr>
<tr>
<td>S-1326-422</td>
<td>838</td>
</tr>
<tr>
<td>S-1326-423</td>
<td>838</td>
</tr>
<tr>
<td>S-1326-424</td>
<td>838</td>
</tr>
<tr>
<td>S-1326-425</td>
<td>838</td>
</tr>
<tr>
<td>Sum =</td>
<td>5,028</td>
</tr>
</tbody>
</table>

Offsets Reserved in PAS (at discussed offset ratios):

<table>
<thead>
<tr>
<th>ERC #C-1190-5</th>
<th>1st Quarter</th>
<th>2nd Quarter</th>
<th>3rd Quarter</th>
<th>4th Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5,028</td>
<td>5,028</td>
<td>5,028</td>
<td>5,028</td>
</tr>
</tbody>
</table>

As seen above, VPC has sufficient SOx credits to fully offset the quarterly PM10 emissions increases associated with this project.

**VOC:**

Since this project results in a Federal Major Modification for VOC the distance offset ratio (DOR) for these pollutants will be equal to 1.5 (per Rule 2201, Section 4.8.1).
VPC has proposed the following ERCs:

<table>
<thead>
<tr>
<th>ERC #</th>
<th>1st Quarter</th>
<th>2nd Quarter</th>
<th>3rd Quarter</th>
<th>4th Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-1190-1</td>
<td>202</td>
<td>211</td>
<td>201</td>
<td>184</td>
</tr>
<tr>
<td>Generated at:</td>
<td>Facility C-603</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOR</td>
<td>1.5 (Federal Major Modification)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No prior reservations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ERC #</th>
<th>1st Quarter</th>
<th>2nd Quarter</th>
<th>3rd Quarter</th>
<th>4th Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-1066-1</td>
<td>40</td>
<td>184</td>
<td>131</td>
<td>98</td>
</tr>
<tr>
<td>Generated at:</td>
<td>Facility N-784</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOR</td>
<td>1.5 (Federal Major Modification)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No prior reservations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ERC #</th>
<th>1st Quarter</th>
<th>2nd Quarter</th>
<th>3rd Quarter</th>
<th>4th Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-3929-1</td>
<td>7,000</td>
<td>7,000</td>
<td>7,000</td>
<td>7,000</td>
</tr>
<tr>
<td>Generated at:</td>
<td>Facility S-40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOR</td>
<td>1.5 (Federal Major Modification)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No prior reservations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ERC #</th>
<th>1st Quarter</th>
<th>2nd Quarter</th>
<th>3rd Quarter</th>
<th>4th Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-3943-1</td>
<td>2,000</td>
<td>1,999</td>
<td>1,999</td>
<td>2,000</td>
</tr>
<tr>
<td>Generated at:</td>
<td>Facility S-1637</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOR</td>
<td>1.5 (Federal Major Modification)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No prior reservations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Offsets Required (at 1.5:1 distance offset ratio):**

<table>
<thead>
<tr>
<th>Permit No.</th>
<th>VOC Offsets Required (lb/qtr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st Quarter</td>
</tr>
<tr>
<td>S-1326-420</td>
<td>1,536</td>
</tr>
<tr>
<td>S-1326-421</td>
<td>1,536</td>
</tr>
<tr>
<td>S-1326-422</td>
<td>1,536</td>
</tr>
<tr>
<td>S-1326-423</td>
<td>1,536</td>
</tr>
<tr>
<td>S-1326-424</td>
<td>1,536</td>
</tr>
<tr>
<td>S-1326-425</td>
<td>1,536</td>
</tr>
<tr>
<td>Sum =</td>
<td>9,216</td>
</tr>
</tbody>
</table>

**Offsets Reserved in PAS (at discussed offset ratios):**

<table>
<thead>
<tr>
<th>ERC #</th>
<th>1st Quarter</th>
<th>2nd Quarter</th>
<th>3rd Quarter</th>
<th>4th Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-1190-1</td>
<td>202</td>
<td>211</td>
<td>201</td>
<td>184</td>
</tr>
<tr>
<td>N-1066-1</td>
<td>40</td>
<td>184</td>
<td>131</td>
<td>98</td>
</tr>
<tr>
<td>S-3929-1</td>
<td>7,000</td>
<td>7,000</td>
<td>7,000</td>
<td>7,000</td>
</tr>
<tr>
<td>S-3943-1</td>
<td>1,974</td>
<td>1,821</td>
<td>1,884</td>
<td>1,934</td>
</tr>
<tr>
<td>Total:</td>
<td>9,216</td>
<td>9,216</td>
<td>9,216</td>
<td>9,216</td>
</tr>
</tbody>
</table>

As seen above, VPC has sufficient VOC credits to fully offset the quarterly VOC emissions increases associated with this project.
**Proposed Rule 2201 (offset) Conditions:**

- [GC# 4447 - edited] Prior to operating equipment under this Authority to Construct, permittee shall surrender NO\textsubscript{X} emission reduction credits for the following quantity of emissions: 1st quarter - 2,234 lb, 2nd quarter - 2,234 lb, 3rd quarter - 2,234 lb, and fourth quarter - 2,234 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

- [GC# 4447 - edited] Prior to operating equipment under this Authority to Construct, permittee shall surrender SO\textsubscript{X} emission reduction credits for the following quantity of PM10 emissions: 1st quarter - 838 lb, 2nd quarter - 838 lb, 3rd quarter - 838 lb, and fourth quarter - 838 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

- [GC# 4447 - edited] Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,536 lb, 2nd quarter - 1,536 lb, 3rd quarter - 1,536 lb, and fourth quarter - 1,536 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

- [GC# 1983] ERC Certificate Numbers C-1190-1, C-1190-2, C-1190-5, N-1066-1, S-3929-1, and S-3943-1 (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]

**C. Public Notification**

1. **Applicability**

   Public noticing is required for:
   a. New Major Sources, Federal Major Modifications, SB288 Major Modifications, and Significant PSD Emission Increases
   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 SS\textsubscript{LIE} of greater than 20,000 lb/year for any pollutant.

   a. New Major Sources, Federal Major Modifications, SB288 Major Modifications, and Significant PSD Emission Increases

   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 constitute a SB 288; therefore, public noticing for SB 288 purposes is required.

   As demonstrated in VII.C.8, this project is a Federal Major Modification; therefore, public noticing for Federal Major Modification purposes is required.
As demonstrated in VII.C.9, this project results in a significant PSD emission increase; therefore, public noticing for PSD significant emission increase 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>NO\textsubscript{X}</td>
<td>114,866</td>
<td>150,608</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>SO\textsubscript{X}</td>
<td>38,874</td>
<td>51,606</td>
<td>54,750 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>38,143</td>
<td>51,547</td>
<td>29,200 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>CO</td>
<td>265,668</td>
<td>346,086</td>
<td>200,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>VOC</td>
<td>953,978</td>
<td>978,548</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
</tbody>
</table>

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

d. SSIFE > 20,000 lb/year

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

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PE2 (lb/year)</th>
<th>PE1 (lb/year)</th>
<th>SSIFE (lb/year)</th>
<th>SSIFE Public Notice Threshold</th>
<th>Public Notice Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{X}</td>
<td>150,608</td>
<td>114,866</td>
<td>35,742</td>
<td>20,000 lb/year</td>
<td>Yes</td>
</tr>
<tr>
<td>SO\textsubscript{X}</td>
<td>51,606</td>
<td>38,874</td>
<td>12,732</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>51,547</td>
<td>38,143</td>
<td>13,404</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>CO</td>
<td>346,086</td>
<td>240,873</td>
<td>105,213</td>
<td>20,000 lb/year</td>
<td>Yes</td>
</tr>
<tr>
<td>VOC</td>
<td>978,548</td>
<td>953,978</td>
<td>24,570</td>
<td>20,000 lb/year</td>
<td>Yes</td>
</tr>
</tbody>
</table>
As demonstrated previously, the SSIPES for NO\textsubscript{X}, CO, and VOC were greater than 20,000 lb/year; therefore public noticing for SSIPE purposes is required.

2. Public Notice Action

As discussed above, public noticing is required for SB 288, Federal Major Modification, PSD significant emission increase, and SSIPE>20,000 lb/year 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.

Additionally, pursuant to the draft policy titled "PSD Administrative Requirements Procedure", public notice documents will be submitted to the following agencies to satisfy PSD public noticing requirements:

- EPA;
- The chief executive of the city the where the proposed project will be located
- The chief executive of the county where the proposed project will be located
- Any Federal Land Manager whose lands may be affected\textsuperscript{2} by emissions from the proposed project
- Any Indian Governing Body whose lands may be affected\textsuperscript{1} by emissions from the proposed project
- Affected\textsuperscript{1} local air pollution control agencies;
- Any persons who have expressed interest in the project and have requested to be on a mailing list;

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.

- The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320, and 4801]
- Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NO\textsubscript{X} (as NO\textsubscript{2}): 7 ppmvd NO\textsubscript{X} @ 3% O\textsubscript{2}, or CO: 25 ppmv @ 3% O\textsubscript{2}. [District Rules 2201, 4305, 4306, 4320, and 4351]

\textsuperscript{2} For the purposes of this document, "affected" means those agencies or entities within 50 miles of the project location.
E. Compliance Assurance

1. Source Testing

These steam generators are 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

These steam generators are 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

These steam generators are 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 NOX, CO, and SOX. The proposed location is in a non-attainment area for PM10. 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".
Criteria Pollutant Modeling Results*

<table>
<thead>
<tr>
<th>Diesel ICE</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>NO₂</td>
<td>Pass¹</td>
<td>X</td>
<td>X</td>
<td>Pass</td>
<td>Pass</td>
</tr>
<tr>
<td>SO₂</td>
<td>Pass</td>
<td>Pass</td>
<td>X</td>
<td>Pass</td>
<td>Pass</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Pass²</td>
<td>Pass²</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Pass²</td>
<td>Pass²</td>
</tr>
</tbody>
</table>

*Results were taken from the attached PSD spreadsheet.

¹The project was compared to the 1-hour NO₂ National Ambient Air Quality Standard that became effective on April 12, 2010 using the District’s approved procedures.

²The criteria pollutants are below EPA’s level of significance as found in 40 CFR Part 51.165 (b)(2).

As shown, the calculated contribution of CO, NOₓ, SOₓ, PM₁₀, and PM₂.₅, 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 D 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 Section VIII above, this project does constitute a Title I modification, therefore this requirement is applicable. VPC’s compliance certification is included in Appendix F.

H. Alternate Siting Analysis

The current project occurs at an existing facility. Since the project will provide steam for injection into wells at a nearby 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 2410 Prevention of Significant Deterioration

As shown in Section VII C.8 above the project results in a Significant Emissions Increase for GHG. Therefore, Rule 2410 is applicable and public notice (pursuant to District Rule 2201, § 5.5.1 through 5.5.6 and § 5.9.1.1 through 5.9.1.5) and BACT for GHG is required for all associated units that result in a GHG emissions increase.

Below is a listing of the requirements of Rule 2410, and demonstration that compliance with the requirements is expected.
A. Best Available Control Technology (BACT)

GHG BACT analyses for all emission units was performed (see Appendix B), and resulted with GHG BACT being satisfied. The results of these analyses are summarized below:


GHG: Equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer)

S-1326-263 (existing tank and vapor recovery system) & S-1326-408 through '415 (new storage tanks and vessels):

GHG: 99% VOC Control by recovering waste gas and incinerating in equipment that creates useful work, transferring gas to pipelines, or reinjecting back to formation

S-1326-287 (TEOR wells and casing gas collection system):

GHG: 99% VOC Control by recovering waste gas and incinerating in equipment that creates useful work, transferring gas to pipelines, or reinjecting back to formation

B. Ambient air quality impact analysis

40 CFR 52.21(k) (as referenced in Rule 2410) requires that applications with significant emission increases would not cause or contribute to a violation of and Federal Ambient air quality standard or any applicable maximum allowable increase over baseline concentration (increment consumption).

EPA's March 2011 guidance titled "PSD and Title V Permitting Guidance for Greenhouse Gases" (pages 47 and 48) states that because there are no ambient air quality standards for GHGs that EPA does not recommend that sources be required to model the impacts of GHG emissions due to a project.

The District concurs with this recommendation. Therefore, no modeling of GHG emission increases is required.

C. Ambient air quality monitoring,

40 CFR 52.21(m) (as referenced in Rule 2410) requires that applications with significant emission increases contain an analysis of air ambient air quality in the area that the project would affect, i.e. ambient air quality monitoring.

EPA's March 2011 guidance titled "PSD and Title V Permitting Guidance for Greenhouse Gases" (pages 47 and 48) states that there is an exemption from ambient air quality monitoring in 40 CFR 52.(j)(5)(iii) for pollutants for which there is not an ambient air quality standard (AAQS), i.e. GHGs. Additionally, notwithstanding the provisions of 40 CFR 52.21(m)(1)(i) that allows the Administrator to require ambient air monitoring for pollutants for which an AAQS does not exist, EPA does not consider it necessary or appropriate for applicants to perform ambient monitoring of GHGs.
The District concurs with this recommendation. Therefore, no ambient monitoring of GHGs is required.

D. Additional impact analyses, including visibility, soils, vegetation

40 CFR 52.21(o) (as referenced in Rule 2410) requires that applications prepare an analysis on the impairment to visibility, soils, and vegetation that would occur as a result of the proposed modification and the general commercial, residential, industrial, or other growth associated with the project.

EPA's March 2011 guidance titled "PSD and Title V Permitting Guidance for Greenhouse Gases" (pages 47 and 48) states that it is not necessary for applicants to assess impacts due to GHG emission increases as there is no method to quantify project level on visibility, soils, and vegetation. The only modeling techniques available for emission increases several orders of magnitude greater than project level emission increases.

The District concurs with this recommendation. Therefore, no additional impact analysis for visibility, soils, vegetation or other related growth is required.

E. Public noticing requirements

District Rule 2410 requires that the project's preliminary decision undergo a 30-day public notification process prior to issuance of ATC(s). Therefore, notification of the preliminary decision shall be given by the following methods:

The notice shall state the emissions change and the degree of increment consumption that is expected from the proposed project. The notice shall also state the ability for the public to make a request for a public hearing.

A list of entities to receive the notification is included in Appendix G.

Compliance with Rule 2410 is expected.

Rule 2520  Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. Section 3.29 defines a significant permit modification as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

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 A, Section 14, defines the meaning of modification to which the standards are applicable. §60.14, paragraph (e)(5) states that the following will not be considered as a modification: "the addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or replaced by a system which the Administrator determines to be less environmentally beneficial".

ATCs in this project except for those authorizing the construction of new steam generators are being reviewed solely for PSD implications, no newly constructed or reconstructed units are proposed for these, nor are the units being modified (as defined above). Therefore the requirements of these sections do not apply to these units.

40 CFR Part 60, Subpart Dc applies to Small Industrial-Commercial-Industrial Steam Generators between 10 MMBtu/hr and 100 MMBtu/hr (post-6/9/89 construction, modification or, reconstruction)

These steam generators have a rating of 85 MMBtu/hr and are fired on gaseous fuel. Subpart Dc has no standards for gas-fired steam generators. Therefore subpart Dc does not apply.

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 generators are fired solely on natural gas and the TEOR and tank vapor recovery system will result in fugitive emissions only, visible emissions are not expected to exceed Ringelmann 1 or 20% opacity. The following condition will remain listed on the facility-wide permit to ensure compliance:

- No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101. If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [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 VPC 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 or equal to one. According to the Technical Services Memo for this project (Appendix D), the total facility prioritization score including this project was less than or equal to one. Therefore, no future analysis is required to determine the impact from this project and compliance with the District’s Risk Management Policy is expected.

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is not required for this project because the HRA indicates that the risk is not above the District’s thresholds for triggering T-BACT requirements; therefore, compliance with the District’s Risk Management Policy is expected.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District’s significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 10 in a million). As outlined by the HRA Summary in Appendix D of this report, the emissions increases for this project was determined to be less than significant.

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.

\[
\text{F-Factor for NG:} \quad 8,578 \text{ dscf/MMBtu at } 60 \degree \text{F} \\
\text{PM10 Emission Factor:} \quad 0.003 \text{ lb-PM10/MMBtu} \\
\text{Percentage of PM as PM10 in Exhaust:} \quad 100\% \\
\text{Exhaust Oxygen (O}_2\text{) Concentration:} \quad 3\% \\
\text{Excess Air Correction to F Factor} = \frac{20.9}{(20.9 - 3)} = 1.17
\]

\[
\text{GL} = \left(\frac{0.003 \text{ lb} - \text{PM}}{\text{MMBtu}}\right) \times \left(\frac{7,000 \text{ grain}}{\text{lb-PM}}\right) \times \left(\frac{8,578 \text{ ft}^3}{\text{MMBtu}}\right) \\
\text{GL} = 0.002 \frac{\text{grain/dscf}}{< 0.1 \frac{\text{grain/dscf}}{}}
\]

Therefore, compliance with District Rule 4201 requirements is expected. Additionally, particulate matter emissions from the steam generators are 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:

All steam generators except S-1326-405, '406, and '407:

- Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, and 4320]

Steam generators S-1326-405, '406, and '407:

- Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 10 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, and 4320]

Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO2, NOx, 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>District Rule 4301 Limits (lb/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NOx</td>
</tr>
<tr>
<td>All Steam Generators</td>
<td>0.68</td>
</tr>
<tr>
<td>Rule Limit (lb/hr)</td>
<td>140</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:

- The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320, and 4801]

All steam generators except S-1326-405, '406, and '407:

- Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, and 4320]

Steam generators S-1326-405, '406, and '407:

- Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 10 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, and 4320]
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).

These units follow District approved Alternate Monitoring scheme A, where the applicable emission limits will be periodically monitored for compliance with Rule 4320; therefore, VPC will not be required to perform tuning in accordance with the procedures of this Rule.

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

These steam generators are 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, these units are 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

These steam generators are 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, these units are 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 rule also provides a compliance option of payment of fees in proportion to the actual amount of NOx emitted over the previous year.

These steam generators are 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.

These units are fired on >50% PUC quality gas and have a maximum heat input of 85.0 MMBtu/hr; therefore, the applicable emission limit category Section 5.2, Table 1, Category C.2.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>2. Units with a total rated heat input &gt;20.0 MMBtu/hr</td>
<td>a) Standard Schedule 7 ppmv or 0.008 lb/MMBtu; or</td>
<td>July 1, 2009</td>
<td>July 1, 2010</td>
</tr>
<tr>
<td></td>
<td>b) Staged Enhanced Schedule Initial Limit 9 ppmv or 0.011 lb/MMBtu; and</td>
<td>July 1, 2011</td>
<td>July 1, 2012</td>
</tr>
<tr>
<td></td>
<td>Final Limit 5 ppmv or 0.0062 lb/MMBtu</td>
<td>January 1, 2013</td>
<td>January 1, 2014</td>
</tr>
</tbody>
</table>
VPC has proposed to comply with Rule 4320 by limiting the burners to 7 ppm-NOx @ 3% O2 (or 0.008 lb-NOx/MMBtu). The following conditions will be listed on the ATCs to ensure compliance:

**All steam generators except S-1326-405, '406, and '407:**

- Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmvd @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, and 4320]

**Steam generators S-1326-405, '406, and '407:**

- Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 10 ppmvd @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, and 4320]

**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 ppmvd 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.

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

- The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320, and 4801]

Compliance with section 5.4 is expected.

**Section 5.6 Startup and Shutdown Provisions**

Section 5.6 states that on and after the full compliance deadline specified in Section 5.0, the applicable emission limits of Sections 5.2 Table 1 and 5.5.2 shall not apply during start-up or
shutdown provided an operator complies with the requirements specified in Sections 5.6.1 through 5.6.5. However, VPC has not requested any start-up or shutdown requirements.

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.

VPC proposes to use Alternate Monitoring Scheme A (pursuant to District Policy SSP-1105), which requires that monitoring of NOx, CO, and O2 exhaust concentrations 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 NOx, CO, and O2 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 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]

- **(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 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 NOx, CO, and O2 measurements, (2) the O2 concentration in percent by volume 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]
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. The following condition will ensure compliance:

- If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 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, and 4320]

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/MMBtu), 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:

- The source test plan shall identify which basis (ppmv or lb/MMBtu) 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:

- 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 of District Rule 4320. [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:

- All NOx, CO, and O2 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 ATCs 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:

- 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>Pollutant</td>
<td>Units</td>
<td>Test Method Required</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-------</td>
<td>------------------------------------------</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:

- The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351]

**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:

**S-1326-420 through S-425 (new units only):**

- A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320]

**All Units:**

- Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 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 J. Therefore, compliance with District Rule 4320 requirements is expected.

Rule 4351  Boilers, Steam Generators and Process Heaters – Phase 1

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 steam generators in this project are all located east of Interstate 5 in Fresno, Kings, or Kern counties; therefore this rule is applicable.

In addition, these units are 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 4351 requirements, compliance with District Rule 4320 requirements will satisfy the requirements of District Rule 4306.

The following condition will ensure compliance with District Rule 4351:

- Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmv NOx @ 3% O2, or CO: XX ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351]

Rule 4401  Steam-Enhanced Crude Oil Production Wells

The purpose of this rule is to limit the VOC emissions from steam-enhanced crude oil production well vents. This rule is applicable to all steam-enhanced crude oil production wells and any associated vapor collection and control systems.

The following condition will ensure compliance with this rule's leak definition:

- Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401]

Section 4.1 exempts any steam-enhanced crude oil production well from this rule when undergoing service or repair during the time the well is not producing. The following condition will ensure compliance with this exemption:

- During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended June 16, 2011). [District Rule 4401]

Section 4.7 states that the requirements of Section 5.4.1 through Section 5.4.7 of this rule shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of
ten percent by weight or less (≤ 10 wt.%), as determined by the test methods in Section 6.3.4. This casing gas collection system handles vapor with a VOC content of ten percent by weight or less; therefore the following condition will be listed on the permit to ensure compliance:

- VOC content of gas collected by the CVR system shall not exceed 10% by weight. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. Permittee may use test results obtained from S-1326-283 to demonstrate compliance. [District Rules 2201 and 4401]

Section 5.1 prohibits an operator from operating a steam-enhanced crude oil production well unless either of the following two conditions are met: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids is connected to a VOC collection and control system as defined in Section 3.0 of this Rule, or 2) the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system that has a VOC collection and control system as defined in Section 3.0 of this Rule.

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

Section 5.2 states that an operator shall be in violation of this rule if any District inspection or operator inspection conducted pursuant to Section 5.4 demonstrates that one or more of the following conditions exist at the facility:

- Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; or,
- Existence of a component with a major liquid leak as defined in Section 3.0; or,
- Existence of a component with a gas leak greater than 50,000 ppmv; or,
- Existence of a component leak described in Section 5.2.2.4.1 through Section 5.2.2.4.3 in excess of the allowable number of leaks specified in Table 2.

The following conditions will ensure compliance with this section:

- An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401]
• An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401]

Section 5.3 requires operators to comply with the following requirements:
• An operator shall not use any component with a leak as defined in Section 3.0, or that is found to be in violation of the provisions of Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of this rule; or,
• Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere; or,
• An operator shall comply with the requirements of Section 6.7 if there is any change in the description of major components or critical components.

The following conditions will ensure compliance with this section:
• An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401]

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

• An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401]

Section 5.4 requires an operator to perform all component inspections and gas leak measurements pursuant to the requirements of Section 6.3.3.

Section 4.7 states that requirements of Section 5.4.1 through Section 5.4.7 of this rule shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight or less (<10 wt.%), as determined by the test methods in Section 6.3.4. Therefore, the requirements of these sections are not applicable.

Section 5.5 outlines leak repair requirements as follows:
• An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak. An operator shall include the following information on the tag:
  • The date and time of leak detection.
  • The date and time of leak measurement.
  • For a gaseous leak, the leak concentration in ppmv.
  • For a liquid leak, whether it is a major liquid leak or a minor liquid leak.
• Whether the component is an essential component, an unsafe-to-monitor component, or a critical component.

• An operator shall keep the tag affixed to the component until an operator has met all of the following conditions:
  • Repaired or replaced the leaking component, and
  • Re-inspected the component using the test method in Section 6.3.3, and
  • The component is found to be in compliance with the requirements of this rule.

• An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak.

• Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0, an operator shall comply with at least one of the following requirements as soon as practicable, but not later than the time period specified in Table 3:
  • Repair or replace the leaking component; or
  • Vent the leaking component to a VOC collection and control system as defined in Section 3.0; or
  • Remove the leaking component from operation

• The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3.

• Time of the initial leak detection shall be the start of the repair period specified in Table 3.

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

The following conditions will ensure compliance with this section:

• Permittee shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak. The following information shall be included on the tag: 1) the date and time of leak detection; 2) the date and time of leak measurement; 3) leak concentration in ppmv for a gaseous leak; 4) description of whether it is a major liquid leak or a minor liquid leak; and 5) whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401]

• Permittee shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of Rule 4401. [District Rule 4401]

• Permittee shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401]
• Except for leaking critical components or leaking essential components, if the operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 4 of Rule 4401: 1) repair or replace the leaking component; 2) vent the leaking component to a VOC collection and control system; or 3) remove the leaking component from operation. [District Rule 4401]

• The leak rate, measured after leak minimization has been performed, shall be used to determine the applicable repair period specified in Table 3 of Rule 4401 and the time of initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401]

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

• Flanges shall be monitored with a portable hydrocarbon detection instrument along the entire circumference of the flange-gasket interface. Threaded connections, tubing fittings, and other types of non-permanent joints shall be monitored along the entire circumference of joint interface. [District Rule 2201]

• Valves shall be monitored with a portable hydrocarbon detection instrument where the stem comes through the packing gland, and at any attached or connected body flange(s), bonnet flange(s), or plug(s). [District Rule 2201]

• All other components such as diaphragms, dump arms, instruments, meters shall be monitored at all points of possible emissions. [District Rule 2201]

Section 6.1 requires operators to maintain records required by Section 6.1 and Section 6.2 for a period of five (5) years. These records shall be made available to the APCO, California Air Resources Board (ARB), and EPA upon request. The following records shall be maintained:

• The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs.

• A small producer shall maintain monthly records of county-specific crude oil production. For the purpose of this rule, the monthly crude oil production records required by the California Division of Oil, Gas, and Geothermal Resources may be used to satisfy Section 6.1.2.

• An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0.

• The inspection log maintained pursuant to Section 6.4.

• Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration.

• An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5.
• An operator shall keep a copy of the APCO-approved Operator Management Plan at the facility.
• An operator shall keep a list of all gauge tanks, as defined in Section 3.0. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment.
• The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing.
• An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year.

The following conditions will ensure compliance with this section:

• The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401]

• The control efficiency of the vapor collection and control system used to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on most stringent of a source test, USEPA approved emission factors, or Air Pollution (AP)-42 emission factors for components and number of components; and the efficiency of destruction devices determined by USEPA Method 25, 25a, or 25b as applicable. [District Rule 4401]

• In lieu of conducting annual source tests of all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC, all uncondensed VOC emissions collected by a vapor collection and control system shall be incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare. [District Rule 4401]

• An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.0 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank, the TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 5.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401]

• Permittee shall maintain a current list of all steam enhanced wells authorized by this permit and shall update the list whenever a well is added, replaced, or deleted. [District Rule 2201]

• All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4401]

Section 6.2 requires source testing to meet the following requirements:
• An operator shall source test annually all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements.
• If approved by the APCO, a VOC collection and control system is not subject to Section 6.2.1 if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following requirements:
  • An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines – Phase 2); or
  • A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters – 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters – 0.075 MMBtu/hr to 2.0 MMBtu/hr); or
  • A unit subject to District Rule 4311 (Flares).

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

The following conditions will ensure compliance with this section:

• The control efficiency of the vapor collection and control system used to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on most stringent of a source test, USEPA approved emission factors, or Air Pollution (AP)-42 emission factors for components and number of components; and the efficiency of destruction devices determined by USEPA Method 25, 25a, or 25b as applicable. [District Rule 4401]

• In lieu of conducting annual source tests of all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC, all uncondensed VOC emissions collected by a vapor collection and control system shall be incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare. [District Rule 4401]

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

Section 6.3 lists test methods that may be used to show compliance. The following conditions will ensure compliance with this section:

• The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 4401]
Section 6.4 requires operators to maintain an inspection log that records, at a minimum, all of the following information for each inspection performed:

- The total number of components inspected, and the total number and percentage of leaking components found by component type.
- The location, type, and name or description of each leaking component and description of any unit where the leaking component is found.
- The date of leak detection and the method of leak detection.
- For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak.
- The date of repair, replacement, or removal from operation of leaking components.
- The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier.
- The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier.
- The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced.
- The inspector's name, business mailing address, and business telephone number.
- The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log.

Section 6.5 requires operators to establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. The following condition will ensure compliance with this section:

- Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Permittee shall maintain at the facility the copies of the training records of the training program. [District Rules 4401]

Section 6.6 requires an operator to prepare and submit an Operator Management Plan for approval by the APCO. An operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required by Section 6.6.4 through Section 6.6.7.

Section 6.7 requires that by January 30 of each year, an operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to an existing Operator Management Plan.

The following condition will ensure compliance with these sections:

- By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401]

Rule 4406 Sulfur Compounds From Oil-Field Steam Generators – Kern County

This rule limits sulfur compound emissions to 0.11 lb/MMBtu for existing steam generators located in Kern County. An existing steam generator is defined as one that had an ATC or
PTO prior to September 12, 1979. This project involves new steam generators and steam generators installed after September 12, 1979 only. Therefore, this rule is not applicable.

**Rule 4623  Storage of Organic Liquids**

The purpose of this rule is to limit volatile organic compound (VOC) emissions from the storage of organic liquids. This rule applies to any tank with a design capacity of 1,100 gallons or greater used to store organic liquid with a true vapor pressure (TVP) of 0.5 psia or greater.

This rule was last amended on May 19, 2005. The existing tank, unit S-2010-142, was previously evaluated through project S-1064773 (in the year 2006) after the last amendment of this rule. Therefore, continued compliance with Rule 4623 is expected for this unit and no changes are proposed. The following discussion applies to the new storage tank only.

Section 5.1.1 requires that an operator shall not place, hold, or store organic liquid in any tank unless such tank is equipped with a VOC control system identified in Table 1.

<table>
<thead>
<tr>
<th>Tank Capacity (gal)</th>
<th>True Vapor Pressure (TVP) of Organic Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.5 psia to &lt; 1.5 psia</td>
</tr>
<tr>
<td>(Group A) 1,100 to 19,800</td>
<td>Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system</td>
</tr>
<tr>
<td>(Group B) &gt;19,800 to 36,000</td>
<td>Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system</td>
</tr>
<tr>
<td>(Group C) &gt;39,600</td>
<td>Internal floating roof, or external floating roof, or vapor recovery system</td>
</tr>
</tbody>
</table>

A vapor recovery system satisfies the general VOC control system requirements listed in Table 1. As stated in Section I of this application review, these tanks are fixed roof vessels connected to the vapor recovery system listed on permit unit S-1326-263. Section 5.6 lists the specifications for vapor control systems.

Section 5.6.1 requires that fixed roof tanks shall be fully enclosed and shall be maintained in a leak-free condition. An APCO-approved vapor recovery system shall consist of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition.
The VOC control device shall be one of the following:

- A condensation or vapor return system that connects to one of the following: a gas processing plant, a field gas pipeline, a pipeline distributing Public Utility Commission quality gas for sale, an injection well for disposal of vapors as approved by the California Department of Conservation, Division of Oil Gas, and Geothermal Resources, or:

- A VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6.

The collected vapors will be sent to the vapor control system listed on unit S-1326-263, which will be equipped with a control device which reduces VOC emissions by at least 95%. Therefore, either the following condition will be listed on the ATC or the equipment description will list tank S-1326-263 as the recipient of tank vapors to ensure compliance:

- Tank shall vent only to vapor control system listed on S-1326-263. [District Rule 2201]

Section 5.6.2 requires that any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. Therefore, the following condition will be listed on the ATC to ensure compliance:

- Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201]

Section 5.6.3 requires that all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. Therefore, the following condition will be listed on the ATC to ensure compliance:

- All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201]

Section 5.7 allows Voluntary Tank Preventive Inspection and Maintenance, and Tank Interior Cleaning.

Operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4.

The following conditions will be listed on the ATC to ensure compliance with this allowance:

- Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201]
• This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080]

• Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080]

• Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

• Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080]

• Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080]

• The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080]

• Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080]

• Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080]

• Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080]

Section 6.1 applies to floating roof tanks. Since this is a fixed roof tank, the requirements of Section 6.1 are not applicable.

Section 6.2 applies to uncontrolled fixed roof tanks. Since this tank is controlled by a vapor recovery system, the requirements of Section 6.2 are not applicable.

Section 6.3.1 requires an operator whose tanks are subject to the requirements of this rule to keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. However, this requirement does not apply to fixed tanks
equipped with a vapor recovery system that meet the requirements of this rule. Therefore, the requirements of Section 6.3.1 are not applicable.

Section 6.4.8 requires that a gas-leak concentration shall be determined by EPA Method 21. Therefore, the following previously proposed condition will be listed on the ATC to ensure compliance:

- A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201]

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 steam generators are 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:

- The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320, and 4801]

California Health & Safety Code 42301.6  (School Notice)

The District has verified that these sites are 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.

• 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

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) 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.

To ensure the project achieves the required GHG emission reductions, the following permit condition will be made a condition of project approval:

• Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer’s overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act]

District CEQA Findings

The District determined that no other agency has broader discretionary approval power over the project and that the District is the first agency to act on the project, therefore establishing the District as the Lead Agency for the project (CCR §15051(b). The District’s engineering evaluation of the project (this document) determined that compliance with District rules and permit conditions would reduce and mitigate the project’s potential air quality impacts to less than significant. The following permit conditions will be made a condition of project approval:

• Prior to operating equipment under this Authority to Construct, Permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter – 2,234 lb, 2nd quarter - 2,234 lb, 3rd quarter - 2,234 lb, and fourth quarter - 2,234 lb. [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act]

• Prior to operating equipment under this Authority to Construct, Permittee shall surrender SOx emission reduction credits for the following quantity of emissions: 1st quarter – 838 lb, 2nd quarter - 838 lb, 3rd quarter - 838 lb, and fourth quarter – 838 lb. [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act]

• Prior to operating equipment under this Authority to Construct, Permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter – 1,536 lb, 2nd quarter - 1,536 lb, 3rd quarter - 1,536 lb, and fourth quarter - 1,536 lb. [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act]
To ensure that the project will have a less than significant impact on all other environmental resources, the following permit conditions will be made a condition of project approval:

**Biological Species**

- A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

- During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

- Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

- During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

- All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

- All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

- No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]
• No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

• Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (USEPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

• Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

• An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

• Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to “temporary” disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

• In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

• Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]
• The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is provided below.

  CDFW: Ms. Reagen O'Leary, Environmental Scientist  
  1234 E. Shaw Avenue  
  Fresno, CA  93710  
  Phone: (559) 243-4014

  CDFW: Mr. Paul Hoffman, Wildlife Biologist  
  1701 Nimbus Road, Suite A  
  Rancho Cordova, CA  95670  
  (530) 934-9309

  USFWS: Chief of the Division of Endangered Species  
  2800 Cottage Way, Suite W2605  
  Sacramento, CA  95825-1846  
  (916) 414-6620 or (916) 414-6600.

• New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA  95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

Cultural Resources

• In the event that archaeological/paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed project, all work within 100 feet of the find shall cease. Permittee will notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. Permittee shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the project site once the evaluation of the find is complete by the qualified archaeologist/paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

• In the event that human remains are discovered during construction of the project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Permittee shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]
Hazardous Materials

- Prior to ground disturbance activities, Permittee shall provide the District documentation identifying all wells in the vicinity of the project site have been submitted to the Department of Oil, Gas and Geothermal Resources (DOGGR) for compliance with DOGGR's "Well Review Program." [Public Resources Code 21000-21177: California Environmental Quality Act]

- Permittee shall retain written records on-site and notify DOGGR in the event unknown, unrecorded, abandoned or damaged wells are discovered. [Public Resources Code 21000-21177: California Environmental Quality Act]

- Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

- Permittee shall comply with all applicable Department of Toxic Substances Control (DTSC) regulations and, if necessary, submit all necessary biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials. In addition, Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

Hydrology and Water Quality

- Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

- Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

The District prepared an Initial Study which demonstrates that through a combination of project design elements, and permit conditions, project specific environmental impacts will be less than significant. A Mitigated Negative declaration and Notice of Intent to Adopt will be prepared and circulated for public review and comment pursuant to CCR §15072 et seq. The issuance of the Authority to Construct (ATC) constitutes the final decision to approve the project and will not be issued until the District has approved the final environmental document. Pursuant to CCR §15075 a Notice of Determination will be filed within five (5) days of the issuance of the ATC.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue Authorities to Construct S-1326-405-1, ‘-406-1, ‘-407-1, ‘-417-1, ‘-418-1, ‘-419-1, and ‘-420-0 through ‘-425-0 subject to the permit conditions on the attached draft Authorities to Construct in Appendix J.
X. Billing Information

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Appendices

A: Base Documents
B: BACT Guideline
C: BACT Analyses
D: Health Risk Assessment and Ambient Air Quality Analysis
E: CEQA GHG: BPS Guideline and Installer Guarantee
F: Statewide Compliance Statement and Title V Compliance Certification Form
G: Interpollutant Offset Ratio Explanation
H: SSPE1
I: SSPE2
J: Draft Authorities to Construct
K: PSD Affected Entities
L: EPA Comments/District Response
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-263-17  ISSUANCE DATE: 08/31/2011

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: SW23  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 3,000 BBL FIXED ROOF CRUDE OIL WASH TANK SERVED BY SECTION 23 TANK VAPOR
RECOVERY (TVR) SYSTEM INCLUDING TWO COMPRESSORS ROUTING VAPORS EITHER TO DOGGR APPROVED
VAPOR DISPOSAL WELL OR TO FIELD FUEL GAS SYSTEM VIA HYDROGEN SULFIDE SCRUBBER(S) (SECTION 23
FACILITY): CONNECT 8 NEW TANKS TO EXISTING VAPOR RECOVERY SYSTEM

CONDITIONS

1. Tank vapor recovery (TVR) system includes vapor piping shared between wellhead casing vent recovery (CVR)
   through -415, two compressors routing vapor either to DOGGR approved vapor disposal well or to sulfur scrubber(s),
   field fuel gas system (Section 23 facility), or steam generators S-1326-9, -294, -314, -337, and -338. [District NSR
   Rule] Federally Enforceable Through Title V Permit

2. Operator shall ensure the vapor control system is functional and operating as designed at all times, except during
   periods of routine maintenance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The tank shall be equipped with a vapor loss prevention system capable of collecting all VOC emissions and
   preventing their emissions to the atmosphere at an efficiency of at least 99% by weight. [District Rule 2520, 9.3.2]
   Federally Enforceable Through Title V Permit

4. The true vapor pressure of the liquids stored in this tank shall not exceed 0.5 psia. [District Rules 4623, 2.0 and NSR]
   Federally Enforceable Through Title V Permit

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-1326-263-17  Fax: (661) 392-5500  Bakersfield, CA 93308

Southern Regional Office  34946 Flyover Court  Bakersfield, CA 93308  (661) 392-5500  Fax (661) 392-5585
5. Connections between this TVR system and the wellhead casing vent recovery (CVR) system listed on S-1326-287 shall be made upstream of the hydrogen sulfide removal system included in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Prior to injecting collected TVR (and S-1326-287 CVR) vapors into field fuel gas system, the collected vapors shall be treated by a hydrogen sulfide removal system which reduces the hydrogen sulfide concentration in the collected vapors by at least 95%. The sulfur content of the treated vapors may not exceed 1.0 grains S/100 scf gas. The treated TVR (and CVR) vapors injected into the field fuel gas line shall not be greater than five percent by weight hydrocarbons heavier than butane as determined by test method ASTM D-1945 or equivalent test method with prior District approval. [District Rules 2020 and 2201] Federally Enforceable Through Title V Permit

7. The vapor control system compressor shall activate when the tank internal pressure exceeds 1.5 in. w.c. and deactivate when the tank internal pressure falls to 0.5 in. w.c. [District NSR Rule] Federally Enforceable Through Title V Permit

8. The tank pressure relief valves shall not open unless the tank internal pressure exceeds 2.0 oz. or falls below 0.5 oz. vacuum. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

10. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

11. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \[ t = \frac{2.3}{V/Q} \] where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

12. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
17. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District NSR Rule] Federally Enforceable Through Title V Permit

18. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

19. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

20. The permittee shall keep accurate records of VOC content of vapors, liquids stored and true vapor pressure of such liquids for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

22. ATC shall be implemented concurrently with or subsequent to ATC S-1326-263-16. [District Rule 2201] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-287-10
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

EQUIPMENT DESCRIPTION:
MODIFICATION OF THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 305 STEAM ENHANCED
PRODUCTION WELLS CONNECTED TO WELL HEAD CASING VENT VAPOR RECOVERY SYSTEM (CVR) VENTING
VAPORS TO SECTION 23 TANK VAPOR RECOVERY SYSTEM (S-1326-283). REMOVE RULE 4401 INSPECTION
CONDITIONS, ADD 780 WELLS AND EXPAND TEOR OPERATION TO INCLUDE THE FOLLOWING LOCATIONS:
SECTION 24, 25 AND 26, TOWNSHIP: 28S, RANGE: 27E

CONDITIONS

1. 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. 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. The TEOR operation shall be located within Sections: 23, 24, 25 and 26, Township: 28S, Range: 27E [District Rule
2201] Federally Enforceable Through Title V Permit

4. Well casing vents shall remain closed, connected to well produced fluids lines, or connected to a well vent VOC
collection and control system at all times except during periods of actual service or repair when wells are not
producing. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit

5. Collected CVR vapor shall be piped to tank vapor recovery system (TVR) serving S-1326-263. [District NSR Rule]
Federally Enforceable Through Title V Permit

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 Sadreddin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1326-287-10  Feb 13 2013 11:46AM - R0903B - Joint Inspection NOT Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. VOC content of gas collected by the CVR system shall not exceed 10% by weight. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. Permittee may use test results obtained from S-1326-263 to demonstrate compliance. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit

7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201 and 4401] Federally Enforceable Through Title V Permit

8. Fluids produced from these steam enhanced wells shall be introduced only to tanks listed on permit S-1326-263 that are vented to an approved vapor collection and control system achieving 99% control. [District NSR Rule] Federally Enforceable Through Title V Permit

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

10. Steam enhanced production wells covered by this permit shall each have a visible identification number. Field personnel shall be provided with written instructions concerning proper operation and maintenance of these wells. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407] Federally Enforceable Through Title V Permit

12. Total combined fugitive emissions from all components associated with this TEOR operation shall not exceed 0.0 lb VOC/day. [District NSR Rule] Federally Enforceable Through Title V Permit

13. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended June 16, 2011). [District Rule 4401] Federally Enforceable Through Title V Permit

14. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit

15. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule] Federally Enforceable Through Title V Permit

16. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv as methane; and 2) A minor gas leak is a detection of 400 to 10,000 ppmv as methane for pressure relief devices (PRDs) and 2,000 to 10,000 for components other than PRDs. [District Rule 4401] Federally Enforceable Through Title V Permit

17. A liquid leak is defined as the dripping of VOC-containing liquid. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak that is not a major liquid leak and drips liquid at a rate of more than three drips per minute, except for seal lubricant. [District Rule 4401] Federally Enforceable Through Title V Permit

18. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401] Federally Enforceable Through Title V Permit
19. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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

21. An operator shall be in violation of this rule if any District inspection demonstrates that the following conditions in Section 5.2.2 exist at the facility: Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines. [District Rule 4401] Federally Enforceable Through Title V Permit

22. An operator shall be in violation of this rule if any District inspection demonstrates that one or more of the following conditions exist at the facility: existence of a component with any of the following: a major liquid leak, a gas leak greater than 50,000 ppmv, a minor liquid leak or a minor gas leak in excess of the allowable number of leaks allowed by Table 3 of Rule 4401, or a gas leak greater than 10,000 ppmv up to 50,000 ppmv in excess of the allowable number of leaks allowed by Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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

24. Permittee shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak. The following information shall be included on the tag: 1) the date and time of leak detection; 2) the date and time of leak measurement; 3) leak concentration in ppmv for a gaseous leak; 4) description of whether it is a major liquid leak or a minor liquid leak; and 5) whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit

25. Permittee shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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

27. Except for leaking critical components or leaking essential components, if the operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 4 of Rule 4401: 1) repair or replace the leaking component; 2) vent the leaking component to a VOC collection and control system; or 3) remove the leaking component from operation. [District Rule 4401] Federally Enforceable Through Title V Permit

28. The leak rate, measured after leak minimization has been performed, shall be used to determine the applicable repair period specified in Table 4 of Rule 4401 and the time of initial leak detection shall be the start of the repair period specified in Table 4 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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

30. Flanges shall be monitored with a portable hydrocarbon detection instrument along the entire circumference of the flange-gasket interface. Threaded connections, tubing fittings, and other types of non-permanent joints shall be monitored along the entire circumference of joint interface. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
31. Valves shall be monitored with a portable hydrocarbon detection instrument where the stem comes through the packing gland, and at any attached or connected body flange(s), bonnet flange(s), or plug(s). [District NSR Rule] Federally Enforceable Through Title V Permit

32. All other components such as diaphragms, dump arms, instruments, meters shall be monitored at all points of possible emissions. [District NSR Rule] Federally Enforceable Through Title V Permit

33. In lieu of conducting annual source tests of all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC, all uncondensed VOC emissions collected by a vapor collection and control system shall be incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare. [District Rule 4401] Federally Enforceable Through Title V Permit

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

35. The control efficiency of the vapor collection and control system used to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on most stringent of a source test, USEPA approved emission factors, or Air Pollution (AP)-42 emission factors for components and number of components; and the efficiency of destruction devices determined by USEPA Method 25, 25a, or 25b as applicable. [District Rule 4401] Federally Enforceable Through Title V Permit

36. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 301-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

38. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended January 15, 1998), excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

39. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520] Federally Enforceable Through Title V Permit

40. Permittee shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit

41. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit

42. Permittee shall maintain a current list of all steam enhanced wells authorized by this permit and shall update the list whenever a well is added, replaced, or deleted. [District NSR Rule] Federally Enforceable Through Title V Permit

43. Permittee shall maintain an accurate component count for the well vent collection and control system serving this operation, in accordance with CAPCOA’s "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
44. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-405-0

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: NE 23 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:
85.0 MMBTU/HR NATURAL GAS - FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. 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. 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. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5503 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
6-1326-405-0 / Fax 661-392-5585 / SICODEX - AIA Document Prepared with DODEXCI

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

7. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act] Federally Enforceable Through Title V Permit

9. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 2233 lb/quarter, PM10: 726 lb/quarter, and VOC: 1536 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpolulant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201] Federally Enforceable Through Title V Permit

10. ERC Certificate Numbers S-3523-2, S-3065-1, S-3061-5 (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

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

12. 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

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

14. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

16. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 10 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

18. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

19. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

21. 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

22. 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

23. 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

24. 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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100; NOX (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOX - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

26. 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

27. 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

28. 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

29. All NOx, CO, and O2 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
30. 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

31. 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

32. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

33. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

34. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

35. 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] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-406-0
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: NE23  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
85.0 MMBTU/HR NATURAL GAS -FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. 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. 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. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

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-1326-406-0  Feb 12 2013  11:46AM  RICKSON  John  Inspection Required with EXCE3141
Southern Regional Office  •  34946 Flyover Court  •  Bakersfield, CA 93308  •  (661) 392-5500  •  Fax (661) 392-5585
6. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

7. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act] Federally Enforceable Through Title V Permit

9. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 2233 lb/quarter; PM10: 726 lb/quarter, and VOC: 1536 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201] Federally Enforceable Through Title V Permit

10. ERC Certificate Numbers S-3523-2, S-3065-1, S-3061-5 (or certificates split from theses 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

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

12. 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

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

14. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

16. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.005 lb/MMBtu, NOx (as NO2): 7 ppmv @ 3% O2, or CO: 10 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

18. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

19. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

21. 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

22. 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

23. 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

24. 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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

26. 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

27. 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

28. 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

29. All NOx, CO, and O2 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

CONDITIONS CONTINUE ON NEXT PAGE
30. 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

31. 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

32. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

33. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

34. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

35. 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] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO:  S-1326-407-0  
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: NE 23  TOWNSHIP: 28S  RANGE: 27E  
EQUIPMENT DESCRIPTION:  85.0 MMBTU/HR NATURAL GAS -FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM  

CONDITIONS

1. 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. 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. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]  

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit  

5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit  

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  
8:15 AM 9/27/2011  
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

7. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act] Federally Enforceable Through Title V Permit

9. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 2233 lb/quarter; PM10: 726 lb/quarter, and VOC: 1536 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201] Federally Enforceable Through Title V Permit

10. ERC Certificate Numbers S-3523-2, S-3065-1, S-3061-5 (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

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

12. 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, Ringeimann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

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

14. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

16. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 10 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

18. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

19. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
Conditions for S-1326-407-0 (continued)

20. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

21. 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

22. 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

23. 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

24. 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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hvv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

26. 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

27. 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

28. 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

29. All NOx, CO, and O2 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

CONDITIONS CONTINUE ON NEXT PAGE
30. 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

31. 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

32. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

33. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

34. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

35. 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] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-408-0
ISSUANCE DATE: 08/31/2011

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

EQUIPMENT DESCRIPTION:
20,000 BBL FWKO VESSEL SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. FWKO vapors shall be vented only to vapor control system listed on tank permit S-1326-263. [District NSR Rule] Federally Enforceable Through Title V Permit

3. This FWKO shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201]

5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17, and 3.18] Federally Enforceable Through Title V Permit

7. Any tank gauging or sampling device on a vessel vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

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
5-1224049-1; Sep 12 2013 11:46 AM - ROKOS8 : Joint issuance NOT Required
8. Operator shall visually inspect vessel shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated vessel for structural integrity annually. [District Rule 2210] Federally Enforceable Through Title V Permit

9. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2210] Federally Enforceable Through Title V Permit

10. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 9 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rule 2201] Federally Enforceable Through Title V Permit

11. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

13. If a component type for the vessel is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

16. This permit authorizes FWKO cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Permittee shall conduct FWKO cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. FWKO may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

19. Permittee shall notify the APCO in writing at least three (3) days prior to performing FWKO degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the FWKO being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the FWKO, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Prior to opening the FWKO to allow FWKO cleaning, one of the following procedures must be followed: 1) Prior to venting the FWKO to the atmosphere, operate the FWKO vapor recovery system/vapor control device for at least 24 hours such that it collects the FWKO vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil FWKO by restricting the outflow of water, such that 90% of the FWKO volume is displaced; or 3) Vent the FWKO to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the FWKO to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \times V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

21. The FWKO shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The FWKO sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

23. Prior to reintroducing crude oil/water to the FWKO, the FWKO shall be filled to the maximum possible level with water, the FWKO vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Within 48 hours after refilling the FWKO with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular FWKO maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Permitee shall maintain records of each period of cleaning and maintenance when the FWKO is disconnected or isolated from the vapor control system. Records shall include the date that FWKO cleaning was initiated, the date FWKO cleaning was completed, the procedure used to vent FWKO vapors prior to opening, the method of FWKO cleaning used, and a description of internal and external FWKO repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

27. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

28. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. ATC shall be implemented concurrently with ATC S-1326-263-17. [District Rule 2201] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-409-0
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

EQUIPMENT DESCRIPTION:
20,000 BBL FWKO VESSEL SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. This FWKO shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

3. The true vapor pressure of the liquids handled by FWKO shall not exceed 0.5 psia. [40 CFR 60 Subpart Kb and District Rule 4623] Federally Enforceable Through Title V Permit

4. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201]

5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17, and 3.18] Federally Enforceable Through Title V Permit

7. Any tank gauging or sampling device on a vessel vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadreedin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-3226-436-5, Feb 12, 2013 11:44AM - ROCKMIX 1 Last Inspection NOT Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
8. Operator shall visually inspect vessel shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated vessel for structural integrity annually. [District Rule 2210] Federally Enforceable Through Title V Permit

9. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2210] Federally Enforceable Through Title V Permit

10. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

13. If a component type for the vessel is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

16. This permit authorizes FWKO cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Permittee shall conduct FWKO cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. FWKO may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

19. Permittee shall notify the APCO in writing at least three (3) days prior to performing FWKO degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the FWKO being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the FWKO, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Prior to opening the FWKO to allow FWKO cleaning, one of the following procedures must be followed: 1) Prior to venting the FWKO to the atmosphere, operate the FWKO vapor recovery system/vapor control device for at least 24 hours such that it collects the FWKO vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil FWKO by restricting the outflow of water, such that 90% of the FWKO volume is displaced; or 3) Vent the FWKO to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the FWKO to the vapor control system for a length of time determined by the following relationship: \( t = \frac{3}{2.3} V/Q \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

21. The FWKO shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The FWKO sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

23. Prior to reintroducing crude oil/water to the FWKO, the FWKO shall be filled to the maximum possible level with water, the FWKO vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Within 48 hours after refilling the FWKO with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular FWKO maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of each period of cleaning and maintenance when the FWKO is disconnected or isolated from the vapor control system. Records shall include the date that FWKO cleaning was initiated, the date FWKO cleaning was completed, the procedure used to vent FWKO vapors prior to opening, the method of FWKO cleaning used, and a description of internal and external FWKO repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

27. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

28. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. ATC shall be implemented concurrently with ATC S-1326-263-17. [District Rule 2201] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-410-0

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 23   TOWNSHIP: 28S   RANGE: 27E

ISSUANCE DATE: 08/31/2011

EQUIPMENT DESCRIPTION:
5,000 BBL FIXED ROOF CRUDE OIL WASH TANK SERVED BY VAPORECOVERY SYSTEM LISTED IN S-1326-263

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. Tank shall vent only to vapor control system listed on S-1326-263. [District Rule 2201] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

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-1326-410-0: Fax 661-392-5500
Southern Regional Office · 34946 Flyover Court · Bakersfield, CA 93308 · (661) 392-5500 · Fax (661) 392-5585
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Operator shall visually inspect tank shell, hatchets, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rule 2201] Federally Enforceable Through Title V Permit

11. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

13. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

16. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

17. Permitee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]
19. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t = \) time, \( V = \) tank volume (cubic feet), and \( Q = \) flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

21. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302°F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

23. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Operator shall conduct quarterly gas sampling (prior to connection to any other vapor control system) and at either the first line tank or any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

26. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. ATC shall be implemented concurrently with ATC S-1326-263-17. [District Rule 2201] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-411-0  ISSUANCE DATE: 08/31/2011

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 23  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
5,000 BBL FIXED ROOF CRUDE OIL LACT TANK SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. Tank shall vent only to vapor control system listed on S-1326-263. [District Rule 2201] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadrelin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

13. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

16. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

17. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]
19. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = \frac{2.3}{V/Q}$, where $t = \text{time}$, $V = \text{tank volume (cubic feet)}$, and $Q = \text{flow rate to the vapor control system as determined using appropriate engineering calculations}$. [District Rule 2080] Federally Enforceable Through Title V Permit

21. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

23. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

26. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. ATC shall be implemented concurrently with ATC S-1326-263-17. [District Rule 2201] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-412-0
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 23 TOWNSHIP: 28S RANGE: 27E
EQUIPMENT DESCRIPTION:
3,400 BBL FIXED ROOF CRUDE OIL DRAIN TANK SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. Tank shall vent only to vapor control system listed on S-1326-263. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall not store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
4. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppm, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

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
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7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rule 2201] Federally Enforceable Through Title V Permit

11. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

13. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

16. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

17. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]
19. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \[ t = 2.3 \frac{V}{Q} \text{, where } t = \text{time, } V = \text{tank volume (cubic feet)}, \text{and } Q = \text{flow rate to the vapor control system as determined using appropriate engineering calculations.} \] [District Rule 2080] Federally Enforceable Through Title V Permit

21. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

23. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

26. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. ATC shall be implemented concurrently with ATC S-1326-263-17. [District Rule 2201] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-413-0
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 23  TOWNSHIP: 28S  RANGE: 27E
EQUIPMENT DESCRIPTION:
5,000 BBL FIXED ROOF CRUDE OIL REJECT TANK SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. Tank shall vent only to vapor control system listed on S-1326-263. [District Rule 2201] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadrelin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1326-413-0  Feb 12 2013 11:56AM  -RSD-2013-01-13-cm
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93306 • (661) 392-5500 • Fax (661) 392-5565
Conditions for S-1328-413-D (continued)

7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rule 2201] Federally Enforceable Through Title V Permit

11. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

13. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

16. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

17. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]
19. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \cdot V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

21. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 5 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

23. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

26. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. ATC shall be implemented concurrently with ATC S-1326-263-17. [District Rule 2201] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-414-0

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: 5W 23 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:
3,400 BBL FIXED ROOF CRUDE OIL LACT TANK SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. Tank shall vent only to vapor control system listed on S-1326-263. [District Rule 2201] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detector instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadreain, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1325-414-0  Fax (661) 392-5500  Facsimile (661) 392-5585
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500  Fax (661) 392-5585
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

13. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

16. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

17. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]
19. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

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21. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

23. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

26. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. ATC shall be implemented concurrently with ATC S-1326-263-17. [District Rule 2201] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-415-0

ISSUANCE DATE: 08/31/2011

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9800 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
KERN COUNTY, CA

SECTION: SW 23 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:
3,400 BBL FIXED ROOF CRUDE OIL LACT TANK SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. Tank shall vent only to vapor control system listed on S-1326-263. [District Rule 2201] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

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-1326-415-0 - Feb 12 2013 11:30AM - REVISED: 1st Revision NOT Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93306 • (661) 392-5500 • Fax (661) 392-5585
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rule 2201] Federally Enforceable Through Title V Permit

11. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

13. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

16. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

17. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]
19. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3}{V/Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

21. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

23. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

26. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. ATC shall be implemented concurrently with ATC S-1326-263-17. [District Rule 2201] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-417-0
ISSUANCE DATE: 06/05/2012

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

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. 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. 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. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District’s determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

5. The permittee’s request for approval of equivalent equipment shall include the make, model, manufacturer’s maximum rating, manufacturer’s guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

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
7. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act] Federally Enforceable Through Title V Permit

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

10. 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

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

12. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr/S/100scf. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

14. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 1 ppmv, NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

16. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

17. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. 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

20. 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

21. 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

22. Fer 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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

24. 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

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 NOx, CO, and O2 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. 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

30. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

31. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

32. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. 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] Federally Enforceable Through Title V Permit

34. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 2234 lb/quarter and VOC: 1536 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201] Federally Enforceable Through Title V Permit

35. ERC Certificate Numbers S-3697-2 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

36. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of PM10 emissions: 775 lb/quarter (1st qtr), 838 lb/qtr (2nd qtr), 811 lb/qtr (3rd qtr), and 803 lb/qtr (4th qtr). Offsets include the applicable offset ratios specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201] Federally Enforceable Through Title V Permit

37. ERC Certificate Numbers S-3731-5 applied at a distance offset ratio (DOR) = 1.2:1 and N-1015-5 applied at DOR = 1.5:1 (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
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-418-0
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

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. 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. 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. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1326-418-0, Issuance Date 06/05/2012
Southern Regional Office • 34948 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act] Federally Enforceable Through Title V Permit

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

10. 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

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

12. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

14. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, CO: 25 ppm @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

16. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

17. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. 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

20. 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

21. 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

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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

24. 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

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 NOX, CO, and O2 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. 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

30. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

31. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

32. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. 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] Federally Enforceable Through Title V Permit

34. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 2234 lb/quarter and VOC: 1536 lb/qrt. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201] Federally Enforceable Through Title V Permit

35. ERC Certificate Numbers S-3697-2 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

36. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of PM10 emissions: 775 lb/quarter (1st qtr), 838 lb/qrt (2nd qtr), 811 lb/qrt (3rd qtr), and 803 lb/qrt (4th qtr). Offsets include the applicable offset ratios specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201] Federally Enforceable Through Title V Permit

37. ERC Certificate Numbers S-3731-5 applied at a distance offset ratio (DOR) = 1.2:1 and N-1015-5 applied at DOR = 1.5:1 (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
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-419-0
LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9800 MING AVE, SUITE 300
                  BAKERSFIELD, CA 93311
LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
          KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. 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. 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. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District’s determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

5. The permittee’s request for approval of equivalent equipment shall include the make, model, manufacturer’s maximum rating, manufacturer’s guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-6500 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 Sadedin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
5-1326-419-0 - Feb 13 2012 11:58 AM - RGKDX: Joint Inspection NOT Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act] Federally Enforceable Through Title V Permit

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

10. 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

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

12. The unit shall only be fired on PUO-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

14. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmv NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

16. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

17. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. 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

20. 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

21. Source testing shall be conducted using 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

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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel lHV (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351]
Federally Enforceable Through Title V Permit

24. 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

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 NOx, CO, and O2 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. 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

30. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320]
Federally Enforceable Through Title V Permit

31. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320]
Federally Enforceable Through Title V Permit

32. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320]
Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. 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] Federally Enforceable Through Title V Permit

34. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 2234 lb/quarter and VOC: 1536 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201] Federally Enforceable Through Title V Permit

35. ERC Certificate Numbers S-3697-2 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

36. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of PM10 emissions: 775 lb/quarter (1st qtr), 838 lb/qtr (2nd qtr), 811 lb/qtr (3rd qtr), and 803 lb/qtr (4th qtr). Offsets include the applicable offset ratios specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201] Federally Enforceable Through Title V Permit

37. ERC Certificate Numbers S-3731-5 applied at a distance offset ratio (DOR) = 1.2:1 and N-1015-5 applied at DOR = 1.5:1 (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
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-420-0
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

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. (1830) 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 2201] Federally Enforceable Through Title V Permit

3. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 2,234 lb, 2nd quarter - 2,234 lb, 3rd quarter - 2,234 lb, and fourth quarter - 2,234 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of emissions: 1st quarter - 838 lb, 2nd quarter - 838 lb, 3rd quarter - 838 lb, and fourth quarter - 838 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,536 lb, 2nd quarter - 1,536 lb, 3rd quarter - 1,536 lb, and fourth quarter - 1,536 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadreedin, Executive Director, APCO

DRAFT

David Warner, Director of Permit Services

Southern Regional Office • 34946 Floyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. ERC Certificate Numbers C-1190-1, C-1190-2, C-1190-5, N-1066-1, S-3929-1, and S-3943-1 (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 reassigned, 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

7. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act]

8. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

15. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]
16. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (USEPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphate shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

18. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

19. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at 916-445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

22. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014; CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309; and, USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]
24. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed project, all work within 100 feet of the find shall cease. Permittee will notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. Permittee shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the project site once the evaluation of the find is complete by the qualified archaeologist/paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. In the event that human remains are discovered during construction of the project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believe to be the nearest descendants of the remains for recommendations. Permittee shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Prior to the start of construction activities, Permittee shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

27. During construction activities, if unknown, unrecorded or abandoned wells are discovered or if any wells are damaged, Permittee shall immediately notify DOGGR. Permittee shall retain records of such discoveries onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. Permittee shall comply with all applicable Department of Toxic Substances Control (DTSC) regulations and, if necessary submit all necessary biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials. In addition, Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

30. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

31. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

32. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

33. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
36. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

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

38. 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

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

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

41. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rule 4320] Federally Enforceable Through Title V Permit

42. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmvd @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

44. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

45. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. 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 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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
51. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 101; stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel lHV (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

52. 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

53. 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

54. 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

55. All NOx, CO, and O2 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

56. 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

57. 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

58. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

59. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

60. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
61. 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] Federally Enforceable Through Title V Permit
APPENDIX B

BACT Guideline
**Best Available Control Technology (BACT) Guideline 1.2.1**  
**Last Update: 3/11/2005**

**Steam Generator (> or = 5 MMBtu/hr, Oil Field)**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Achieved in Practice or in the SIP</th>
<th>Technologically Feasible</th>
<th>Alternate Basic Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>50 ppmvd @ 3% O2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOx</td>
<td>14 ppmvd @ 3% O2</td>
<td>7 ppmvd @ 3% O2 with SCR</td>
<td>9 ppmvd @ 3% O2</td>
</tr>
<tr>
<td>PM10</td>
<td>Natural gas, LPG; waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 g per 100 scf, or use of a continuously operating SO2 scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO2 at stack O2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOx</td>
<td>Natural gas, LPG; waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 g per 100 scf, or use of a continuously operating SO2 scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO2 at stack O2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOC</td>
<td>Gaseous fuel</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.
GHG BACT Analysis for the Tank Vapor Recovery System Expansion listed on S-1326-263 and New Tanks and Vessels listed on S-1326-408 through 4-15
BACT Analysis for GHG Emissions

GHG emissions, primarily methane (CH₄) are emitted due to the increased number of components required for the connection of expansion of the existing tank vapor control system trunk line and connection of the new tanks to it.

The USEPA's PSD program issues permits to sources for attainment pollutants and includes GHG as a regulated pollutant. Since the USEPA has not established a national ambient air quality standard for GHG, it is not considered a nonattainment pollutant and is, therefore, considered an attainment pollutant and regulated under the PSD program. Since GHG is regulated under the PSD program the BACT process will follow the steps outlined in the Clean Air Act (CAA) discussed in this section.

The CAA § 169(3) defines BACT as:

...an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under the Clean Air Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant...

Pursuant to USEPA's "PSD and Title V Permitting Guidance for Greenhouse Gases" the "Top-Down BACT Process" consists of these five basic steps:

1. Identify all available control technologies;
2. Eliminate all technically infeasible options;
3. Rank remaining control technologies by control effectiveness;
4. Evaluate most effective controls and document results;
   a. The energy, environmental, and economic impacts are evaluated starting with the top ranked option.
5. Select BACT based on economic, environmental, and/or energy impacts.
   a. The highest ranked option not eliminated from step 4 is selected as BACT.

Since greenhouse gas is comprised of multiple gases, the objective of this analysis will be to identify control technologies with the lowest emission of a CO₂ equivalent (CO₂e) using the Global Warming Potentials (GWP) identified for the Intergovernmental Panel on Climate Change (IPCC) in the 1996 Second Assessment Report³. With a GWP factor of 21, the CH₄ content in fugitive emissions from this collection system will have a much larger impact than the trace CO₂ content.

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³ The Kyoto Protocol fixed the use of GWP values published by the IPCC in 1996 in its SAR, which remains the internationally recognized values today and are used to calculate GHG reductions in the SJVAPCD Best Performance Standards for oilfield steam generators.
Step 1 - Identify All Possible Control Technologies

The control of VOC emissions, which will indiscriminately control all constituent gasses comprising the fugitive emissions, is assumed to capture and control an identical percentage of GHG emissions using the following methods:

- PV-vent to within 10% of maximum allowable pressure
- 99% GHG Control by recovering waste gas and incinerating non-condensable vapors in equipment that creates useful work and inspection and maintenance program
- 99% GHG Control by recovering waste gas and incinerating non-condensable vapors in a flare or thermal oxidizer and inspection and maintenance program
- 99% GHG Control by recovering waste gas and treating non-condensable vapors by carbon adsorption and inspection and maintenance program
- 99% GHG Control by recovering waste gas and transferring non-condensable gas to pipeline and inspection and maintenance program
- 99% GHG Control by recovering waste gas and reinjecting non-condensable vapors back to formation and inspection and maintenance program

Step 2 - Eliminate Technologically Infeasible Options

- 99% VOC Control by recovering waste gas and treating by carbon adsorption

  Methane, which has a high potential CO₂ equivalency, being a light hydrocarbon is very poorly adsorbed by carbon⁴. Due to carbon's poor ability to adsorb methane, the ability of this control technology to capture this GHG is virtually zero and cannot be recognized as a feasible control technology.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Since routing captured gas and incinerating in equipment that provide useful work (i.e. process heaters, steam generators, etc.) will displace gas consumption that would otherwise be consumed from a gas pipeline, this method is considered equivalent to transferring the gas to a gas sales line. Likewise, by reinjecting recovered gas to formation, more gas from a pipeline will be consumed to power equipment; therefore, incinerating gas in equipment that provides useful work, transferring to a gas sales line, and reinjecting all provide the same GHG reduction.

- 99% VOC Control by recovering waste gas and incinerating in equipment that creates useful work, transferring gas to pipelines, or reinjecting back to formation
- 99% VOC Control by recovering waste gas and incinerating in a flare or thermal oxidizer
- PV-vent to within 10% of maximum allowable pressure

⁴ Annual EnviroExpo, Boston Massachusetts – May 2001
Step 4 – Evaluate Controls

The most effective control technology in the ranking list from Step 3 has been achieved in practice. Therefore, an evaluation of controls is not required.

Step 5 - Select BACT

BACT for GHG emissions from the TEOR wells and tanks/vessels is a vapor capture and control system that transfers non-condensable vapors to equipment that creates useful work, transferring gas to pipelines, or reinjecting back to formation.

The vapor control system listed on S-1326-263, for which all new tanks and the casing vapor collection system are connected to, routes vapor to either DOGGR approved disposal wells, steam generators, or to the Section 23 hydrogen sulfide scrubber station; therefore BACT for GHG emissions is satisfied.
GHG BACT Analysis for all Steam Generators
BACT Analysis for GHG Emissions

Though it is recognized that reductions in GHG from fossil fuel fired equipment will result in reductions of other criteria pollutants, as the products of combustion, evaluation of GHG control measures will not include the affect on other criteria pollutants except in cases where an increase in criteria pollutants may be expected as a consequence of the proposed measure (e.g. elimination of FGR which would reduce the fuel demand for a steam generator but with the consequence of increasing NO\textsubscript{X} emissions, that is a precursor to ozone, which the SJVAPCD is in extreme non-attainment for).

Step 1 - Identify All Possible Control Technologies

When fired on >50% PUC-quality natural gas, commercial propane, and/or LPG:

- A convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by the manufacturer) or a manufacturer's overall thermal efficiency rating of 86% – Achieved in Practice

- Variable frequency drive high efficiency electrical motors driving the blower and water pump – Achieved in Practice

- Additional economizer – Technologically Feasible

- Reduced FGR rate and SCR – Technologically Feasible

Step 2 - Eliminate Technologically Infeasible Options

- Additional Economizer – Technologically Feasible

Additional waste-heat can be transferred from the exhaust gasses to the steam by installing an extra economizer, further increasing the thermal efficiency of the steam generator.

Economizers are useful in steam generators that produce a higher quality and lower volume steam. With purified, de-ionized highly filtered water, high quality steam is possible. In oilfield operations neither clean nor de-ionized water is available nor is high quality steam used or useful.

An additional economizer will lower the exhaust gas temperature by transferring the heat energy from exhaust gas to produced steam to increase the quality. However, exhaust gas temperatures must be maintained sufficiently high enough to minimize condensation that can result in exhaust stack corrosion; therefore, adding an economizer to a steam generator is technologically infeasible for oilfield applications.

- Reduced FGR Rate and SCR – Technologically Feasible

Flue gas recirculation mixes a portion of the exhaust gas with the oxygen-rich incoming air in the burner's combustion zone. The added exhaust gas absorbs heat from the combustion process, lowering the peak combustion temperature below the threshold where excessive NO\textsubscript{X} is formed. Proven FGR technology has been used in steam generators for years to meet the District's standards for low NO\textsubscript{X} emissions.
While FGR clearly lowers NO\textsubscript{X} levels, additional fuel is required to produce the same amount of steam, which reduces the overall thermal efficiency of the unit and creates more GHG emissions per unit of steam output. Therefore, limiting the FGR rate might be a means of reducing GHG emissions.

While reducing the FGR rate on a steam generator will decrease GHG emissions, it will also increase NO\textsubscript{X} emissions. Since maintaining reductions in criteria pollutants, and specifically NO\textsubscript{X} for which the SJVAPCD is in extreme non-attainment, the reduction of GHG will not be considered for an increase in NO\textsubscript{X} emissions. Any increase in NO\textsubscript{X} emissions must be mitigated.

The only alternative method for reducing NO\textsubscript{X} emissions might be SCR, which could make a reduction in the FGR rate feasible. SCR reduces NO\textsubscript{X} emissions without the need for such extensive FGR. However, the SCR system itself results in higher exhaust stack resistance and electric power to operate ammonia or urea injection pumps that offset the energy efficiency gains attributed to the reduced FGR requirement. Therefore, this equipment is not technologically feasible.

**Step 3 - Rank Remaining Control Technologies by Control Effectiveness**

Since an oilfield steam generator can operate simultaneously with a minimum convection section heat transfer area requirement (or thermal efficiency rating) and variable frequency drive, high efficiency, electric motors driving the blower and water pump, these options will be combined and listed as follows:

- Variable frequency drive high efficiency electrical motors driving the blower and water pump; and, a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer’s overall thermal efficiency rating of 88%.

Since there is only one option remaining for each type of fuel burned, ranking the control technologies isn’t necessary.

**Step 4 - Evaluate Controls**

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, an evaluation of controls is not required.

**Step 5 - Select BACT**

BACT for GHG emissions from a steam generators when burning PUC quality natural gas is variable frequency drive high efficiency electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer’s overall thermal efficiency rating of 88%.

The steam generators are all equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer); therefore BACT for GHG emissions is satisfied.
Top Down BACT Analysis for the Steam Generators
1. BACT Analysis for NO\textsubscript{X} Emissions:

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

a. Step 1 - Identify all control technologies

The District adopted District Rule 4320 on October 16, 2008. The NO\textsubscript{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 oilfield steam generators with heat input ratings greater than 20 MMBtu/hr to 7 ppm @ 3% O\textsubscript{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\textsubscript{X} emission limit requirement is 5 ppmv @ 3% O\textsubscript{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 1.2.1 has been rescinded. Therefore a new BACT analysis is required. The following are possible control technologies:

1) 5 ppmvd @ 3% O\textsubscript{2} with SCR or tuning of existing or new burner – Tech Feas.
2) 7 ppmvd @ 3% O\textsubscript{2} – Achieved in Practice

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) 5 ppmvd @ 3% O\textsubscript{2}
2) 7 ppmvd @ 3% O\textsubscript{2}

d. Step 4 - Cost Effectiveness Analysis

The cost effectiveness (annual cost per ton of pollutant reduced) for a given technologically feasible control option is equal to the annual cost divided by the calculated emission reduction. Annual costs are equal to annualized cost of utilizing technologically feasible BACT controls on an emission unit that already meets District standard emissions. Annual costs do not include costs necessary to meet District standard emissions.

The least costly scenario would be a steam generator that is either new or is equipped with a burner that is capable of being tuned to 5 ppmvd NO\textsubscript{X} @ 3% O\textsubscript{2}.

7 ppm NO\textsubscript{X} emissions = 85 MMBtu/hr(0.008 lb/MMBtu)8,760 hrs/year = 5,957 lb/yr
5 ppm NO\textsubscript{X} emissions = 85 MMBtu/hr(0.0062 lb/MMBtu)8,760 hrs/year = 4,617 lb/yr
A capital cost of $105,000 provided by Esys for equipment (new blower, new blower VFD, upgrade to 480 VAC, upgrade fuel and air metering, upgrade control panel and software, center fuel control system, and new radiant pressure transmitter), not including shipping or labor required to upgrade an existing burner from 7 ppm to 5 ppm has been provided.

For the purposes of this calculation it will be assumed that no additional maintenance is required to maintain these additional and upgraded components.

Total Estimated Capital Cost: $105,000

Equivalent Annual Capital Cost (Capital Recovery)

\[ A = \frac{P \cdot i(1+i)^n}{(1+i)^n - 1} \]

where;

- \( A \) = Equivalent Annual Control Equipment Capital Cost
- \( P \) = Present value of the control equipment, including installation cost
- \( i \) = interest rate (use 10%, or demonstrate why alternate is more representative of the specific operation).
- \( n \) = equipment life (assume 10 years or demonstrate why alternate is more representative of the specific operation)

Where,

- \( P = $105,000 \)
- \( i = 10\% \)
- \( n = 10 \) years
- \( A = $17,088 \)

**NOx Reduction due to Tuning of New or Existing Burners:**

Total reduction = Emissions\(_{7 \text{ ppm}}\) - Emissions\(_{5 \text{ ppm}}\)
Total reduction = 5,957 lb/year - 4,617 lb/year
Total reduction = 1,340 lb/year = 0.67 ton NOx per year

**Cost effectiveness:**

\[ \text{Cost effectiveness} = \frac{\text{Cost}}{\text{Benefit}} \]

Cost effectiveness = $17,088/0.67 tpy
Cost effectiveness = $25,504/ton

The cost effectiveness is greater than the $24,500/ton cost effectiveness threshold of the District BACT policy. Therefore tuning of new or existing burners is not cost effective and is not required as BACT.

**e. Step 5 - Select BACT**

BACT for NOx emissions from this oil field steam generator is a NOx limit of 7 ppmvd @ 3% O2. The applicant has proposed to install an oil field steam generator with a NOx limit of 7 ppmvd @ 3% O2; therefore BACT for NOx emissions is satisfied.
2. **BACT Analysis for SO\(_x\) Emissions:**

Oxides of sulfur (SO\(_x\)) emissions occur from the combustion of the sulfur, which is present in the fuel.

**a. Step 1 - Identify all control technologies**

The SJVUAPCD BACT Clearinghouse guideline 1.2.1, 1\(^{st}\) quarter 2005, identifies for achieved in practice BACT for SO\(_x\) emissions from oil field steam generators ≥5 MMBtu/hr as follows:

1) Natural gas, LPG, waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf, or use of a continuously operating SO\(_2\) scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO\(_2\) at stack O\(_2\).

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

**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, LPG, waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf, or use of a continuously operating SO\(_2\) scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO\(_2\) at stack O\(_2\).

**d. Step 4 - Cost Effectiveness Analysis**

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 11/9/99) Section IX.D.2, the cost effectiveness analysis is not required.

**e. Step 5 - Select BACT**

The applicant has proposed to combust natural gas with a fuel sulfur content not exceed 1 gr-S/100 dscf; therefore BACT for SO\(_x\) emissions is satisfied.
3. BACT Analysis for PM\textsubscript{10} Emissions:

Particulate matter (PM\textsubscript{10}) emissions result from the incomplete combustion of various elements in the fuel.

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 1.2.1, 1\textsuperscript{st} quarter 2005, identifies for achieved in practice BACT for SO\textsubscript{x} emissions from oil field steam generators ≥5 MMBtu/hr as follows:

1) Natural gas, LPG, waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf, or use of a continuously operating SO\textsubscript{2} scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO\textsubscript{2} at stack O\textsubscript{2}

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

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, LPG, waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf, or use of a continuously operating SO\textsubscript{2} scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO\textsubscript{2} at stack O\textsubscript{2}

d. Step 4 - Cost Effectiveness Analysis

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 11/9/99) Section IX.D.2, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

The applicant has proposed to combust natural gas with a fuel sulfur content not to exceed 1 gr-S/100 dscf; therefore BACT for PM\textsubscript{10} emissions is satisfied.
4. **BACT Analysis for CO Emissions:**

Carbon monoxide (CO) emissions are generated from the incomplete combustion of air and fuel.

**a. Step 1 - Identify all control technologies**

The SJVUAPCD BACT Clearinghouse guideline 1.2.1, 1st quarter 2005, identifies for achieved in practice BACT for CO emissions from oil field steam generators ≥5 MMBtu/hr as follows:

1) 50 ppmvd @ 3% O₂

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

**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) 50 ppmvd @ 3% O₂

**d. Step 4 - Cost Effectiveness Analysis**

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, per the District’s BACT Policy (dated 11/9/99) Section IX.D.2, the cost effectiveness analysis is not required.

**e. Step 5 - Select BACT**

BACT for CO emissions from an oil field steam generator is a CO limit of 50 ppmvd @ 3% O₂. The applicant has proposed to install oil field steam generators with a CO limit of 25 ppmvd @ 3% O₂; therefore BACT for CO emissions is satisfied.
5. BACT Analysis for VOC Emissions:

Volatile organic compounds (VOC) emissions are generated from the incomplete combustion of the fuel.

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 1.2.1, 1st quarter 2005, identifies for achieved in practice BACT for VOC emissions from oil field steam generators ≥5 MMBtu/hr as follows:

1) Gaseous fuel

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

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) Gaseous fuel

d. Step 4 - Cost effectiveness analysis

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, per the District’s BACT Policy (dated 11/9/99) Section IX.D.2, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for VOC emissions from an oil field steam generator is gaseous fuel. The applicant has proposed to install oil field steam generators fired on gaseous fuel; therefore BACT for VOC emissions is satisfied.
APPENDIX D

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

To: Kristopher Rickards, AQE – Permit Services
From: Joe Aguayo, AQS – Technical Services
Date: October 25, 2012
Facility Name: Vintage Production California, LLC
Location: Various Locations within Vintage’s HOC
Application #(s): S-1326-420-0 thru 425-0
Project #: S-1123499

A. RMR SUMMARY

<table>
<thead>
<tr>
<th>Categories</th>
<th>Each of Six NG Steam Generators (Unit 420-0 thru 425-0)</th>
<th>Project Totals</th>
<th>Facility Totals</th>
</tr>
</thead>
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<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/A&lt;sup&gt;1&lt;/sup&gt;</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Chronic Hazard Index</td>
<td>N/A&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>N/A</td>
</tr>
<tr>
<td>Maximum Individual Cancer Risk (10^-6)</td>
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<tr>
<td>T-BACT Required?</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Special Permit Conditions?</td>
<td>No</td>
<td></td>
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</table>

<sup>1</sup>Acute 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:

Units # 420-0 thru 425-0

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on October 2, 2012, to perform an Ambient Air Quality Analysis and a Risk Management Review for six 85 MMBtu/hr natural gas-fired steam generators.
II. Analysis

Toxic emissions for this proposed unit were calculated using emission factors for external combustion of natural gas. 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 total prioritization score for the proposed units 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>Units 420-0 thru 425-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throughput (MMscf/yr)</td>
<td>744.6</td>
</tr>
<tr>
<td>Max Hours per Year</td>
<td>8760</td>
</tr>
<tr>
<td>Closest Receptor (m)</td>
<td>731</td>
</tr>
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</table>

Technical Services performed modeling for criteria pollutants CO, NOx, SOx and PM_{10}; as well as a RMR. The emission rates (per unit) used for criteria pollutant modeling were 36.72 lb/hr CO, 16.32 lb/hr NOx, 5.76 lb/hr SOx, and 6.24 lb/hr PM_{10}. The engineer supplied the maximum fuel rate for the IC engine used during the analysis.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results

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<tr>
<th>Diesel ICE</th>
<th>1 Hour</th>
<th>3 Hours</th>
<th>8 Hours</th>
<th>24 Hours</th>
<th>Annual</th>
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</thead>
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<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>NO_{x}</td>
<td>Pass</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Pass</td>
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</tr>
<tr>
<td>PM_{10}</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Pass¹</td>
<td>Pass</td>
</tr>
<tr>
<td>PM_{2.5}</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Pass²</td>
<td>Pass²</td>
</tr>
</tbody>
</table>

¹Results were taken from the attached PSD spreadsheet.
²The project was compared to the 1-hour NO2 National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.
³The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

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).

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

A. RMR request from the project engineer
B. Additional information from the applicant/project engineer
C. Toxic emissions summary
D. Prioritization score
E. Facility Summary
APPENDIX E

CEQA GHG: BPS Guideline and Installer Guarantee
San Joaquin Valley  
Unified Air Pollution Control District  
Best Performance Standard (BPS) x.x.xx

Date: 6/24/10

<table>
<thead>
<tr>
<th>Class</th>
<th>Steam Generators</th>
<th>Oilfield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td>Very High Efficiency Steam Generator Design With:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. A convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>And</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Variable frequency drive high efficiency electrical motors driving the blower and water pump.</td>
<td></td>
</tr>
</tbody>
</table>

| Percentage Achieved GHG Emission Reduction Relative to Baseline Emissions | 13.0% |

<table>
<thead>
<tr>
<th>District Project Number</th>
<th>C-1100391</th>
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</thead>
<tbody>
<tr>
<td>Evaluating Engineer</td>
<td>Steve Roeder</td>
</tr>
<tr>
<td>Lead Engineer</td>
<td>Arnaud Marjollet</td>
</tr>
<tr>
<td>Initial Public Notice Date</td>
<td>April 28, 2010</td>
</tr>
<tr>
<td>Final Public Notice Date</td>
<td>May 28, 2010</td>
</tr>
<tr>
<td>Determination Effective Date</td>
<td>June 24, 2010</td>
</tr>
</tbody>
</table>
September 17, 2012

Vintage Production CA
9600 Ming Ave., Suite 300
Bakersfield, CA 93311

Attention: Jerry Frost - HES

Reference: Kern Front 85MM BTU/hr Steam Generators

Dear Mr. Frost,

This letter serves as verification that our 85MM Btu/Hr Steam Generators sold to Vintage Kern Front lease is designed to meet or exceed the San Joaquin Valley Air Pollution Control District’s Best Performance Standards (BPS).

Reference:
Steam Generator #12 (APCD Permit #S-1326-405)
Steam Generator #13 (APCD Permit #S-1326-406)
Steam Generator #14 (APCD Permit #S-1326-407)
Steam Generator #15 (APCD Permit #S-1326-417)
Steam Generator #16 (APCD Permit #S-1326-418)
Steam Generator #17 (APCD Permit #S-1326-419)
Steam Generator #18 (APCD Permit #S-1326-TBD)
Steam Generator #19 (APCD Permit #S-1326-TBD)
Steam Generator #20 (APCD Permit #S-1326-TBD)
Steam Generator #21 (APCD Permit #S-1326-TBD)
Steam Generator #22 (APCD Permit #S-1326-TBD)
Steam Generator #23 (APCD Permit #S-1326-TBD)

The Steam Generators are equipped with a horizontal convection section that exceeds 235 square feet of surface area per MMBtu/Hr of heat input.

The Steam Generators are equipped with variable frequency drives (VFD) with premium efficiency electrical motors driving the blower and water pump.
Sincerely,

Daniel Gálvez
PCL Industrial Services, Inc.
1500 South Union Ave
Bakersfield, Ca. 93307
(661)340-6675 cell
(661)835-4446 direct line
(661)832-3995 main office
E-mail dgalvez@pcl.com
APPENDIX F

Statewide Compliance Statement and Title V Compliance Certification Form
February 5, 2013

Mr. Leonard Scandura
Permit Services Manager
San Joaquin Valley Unified
Air Pollution Control District
34946 Flyover Ct.
Bakersfield, CA 93308

Subject: Facility ID S-1326
Federal Major Modification Compliance Certification

Dear Mr. Scandura:

I hereby certify that all major Stationary Sources owned or operated by such person (or by any entity controlling, controlled by, or under common control with such person) in California, which are subject to emission limitations, are in compliance or on a schedule for compliance with all applicable emission limitations and standards.

Signature:  

Name: Shawn M. Kerns

Title: President and General Manager
San Joaquin Valley  
Unified Air Pollution Control District  

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM  

1. TYPE OF PERMIT ACTION (Check appropriate box)  
   
   [X] SIGNIFICANT PERMIT MODIFICATION [ ] ADMINISTRATIVE AMENDMENT  
   [ ] MINOR PERMIT MODIFICATION  

<table>
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<tr>
<th>COMPANY NAME: VINTAGE PRODUCTION CALIFORNIA LLC</th>
<th>FACILITY ID: S - 1326</th>
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<tbody>
<tr>
<td>1. Type of Organization: [X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility</td>
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<tr>
<td>2. Owner's Name:</td>
<td></td>
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<tr>
<td>3. Agent to the Owner:</td>
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</table>

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

☑ Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s), other than any disclosed administrative permit requirement(s) that will be resolved by issuance of the NSR/PSD Project Permit for Facility ID S-1326 requested in the attached application.  

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

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

☑ 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 foregoing is correct and true:  

[Signature of Responsible Official]  

Date: 10/23/202_  

Alan E. White  

Name of Responsible Official (please print)  

Operations Manager  

Title of Responsible Official (please print)  

Mailing Address: Central Regional Office * 1990 E. Gettysburg Avenue * Fresno, California 93726-0244 * (559) 230-5900 * FAX (559) 230-6061  

TVFORM-009  

Rev 7/28/94
APPENDIX G

Interpollutant Offset Ratio Explanation
Interpollutant Offset Ratio Explanation

The Air District's Rule 2201, "New and Modified Source Review", requires facilities to supply "emissions offsets" when a permittee requests new or modified permits that allow emissions of air contaminants above certain annual emission offset thresholds. In addition, Rule 2201 allows interpollutant trading of offsets amongst criteria pollutants and their precursors upon the appropriate scientific demonstration of an adequate trading ratio, herein referred to as the interpollutant ratio. A technical analysis is required to determine the interpollutant offset ratio that is justified by evaluation of atmospheric chemistry. This evaluation has been conducted using the most recent modeling analysis available for the San Joaquin Valley. The results of the analysis are designed to be protective of health for the entire Valley for the entire year, by applying the most stringent interpollutant ratio throughout the Valley.

It is appropriate for District particulate offset requirements to be achieved by either a reduction of directly emitted particulate or by reduction of the gases, called particulate precursors, which become particulates from chemical and physical processes in the atmosphere. The District interpollutant offset relationship quantifies precursor gas reductions sufficient to serve as a substitute for a required direct particulate emissions reduction. Emission control measures that reduce gas precursor emissions at the facility may be used to provide the offset reductions. Alternatively, emission credits for precursor reductions may be used in accordance with District regulations.

The amount of particulate formed by the gaseous emissions must be evaluated to determine how much credit should be given for the gaseous reductions. Gases combine and merge with other material adding molecular weight when forming into particles. Some of the gases do not become particulate matter and remain a gas. Both the extent of conversion into particles and resulting weight of the particles are considered to establish mass equivalency between direct particulate emissions and particulate formed from gas precursors. The Interpollutant offset ratio is expressed as a per-ton equivalency.

The District interpollutant analysis uses the most recent and comprehensive modeling of San Joaquin Valley particulate formation from sulfur oxides (SOx) and nitrogen oxides (NOx). Modeling compares industrial directly emitted particulate to particulate matter from precursor emissions. The interpollutant modeling procedure, assumptions and uncertainties are documented in an extensive analysis file. Additional documentation of the modeling procedure for the San Joaquin Valley is contained in the 2008 PM2.5 Plan and its appendices. The 2008 PM2.5 Plan provides evaluation of the atmospheric relationships for direct particulate emissions and precursor gases when they are highest during the fourth quarter of the year. The southern portion of the Valley is evaluated by both receptor modeling and regional modeling of chemical relationships for precursor particulate formation. Regional modeling was conducted for the entire Valley through 2014. The two modeling approaches are combined to determine interpollutant offset ratios applicable to, and protective of, the entire Valley (SOx for PM 1:1 and NOx for PM 2.629:1).
<table>
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<th>Permit #</th>
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<th>SOx</th>
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<th>CO</th>
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APPENDIX J

Draft Authorities to Construct
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-263-20
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: SW23 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 3,000 BBL FIXED ROOF WASH TANK SERVED BY TANK VAPOR CONTROL SYSTEM SHARED WITH CASING VENT RECOVERY (CVR) SYSTEM LISTED ON S-1326-287 AND VARIOUS CRUDE OIL STORAGE TANKS (SECTION 23 FACILITY): ADD RULE 2410 CONDITIONS

CONDITIONS

1. {1830} 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. Authority to Construct (ATC) S-1326-263-17 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank vapor recovery (TVR) system includes vapor piping shared between wellhead casing vent recovery (CVR) system on S-1326-287 and storage tanks S-1326-263, -279, -280, -281, -283, -285, -315, -394, -395, -396, -408 through -415, two compressors routing vapor either to DOGGIR approved vapor disposal well or to sulfur scrubber(s), field fuel gas system (Section 23 facility), or steam generators S-1326-9, -294, -314, -337, and -338. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

5. Operator shall ensure the vapor control system is functional and operating as designed at all times, except during periods of routine maintenance. [District Rules 2410 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

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-1326-263-10 - Feb 20 2013 - 5:23AM - PRINTED - Joint Inspection MR7 Regional
Southern Regional Office • 34846 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. The tank shall be equipped with a vapor loss prevention system capable of collecting all VOC emissions and preventing their emissions to the atmosphere at an efficiency of at least 99% by weight. [District Rules 2410 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The true vapor pressure of the liquids stored in this tank shall not exceed 0.5 psia. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

8. Connections between this TVR system and the wellhead casing vent recovery (CVR) system listed on S-1326-287 shall be made upstream of the hydrogen sulfide removal system included in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Prior to injecting collected TVR (and S-1326-287 CVR) vapors into field fuel gas system, the collected vapors shall be treated by a hydrogen sulfide removal system which reduces the hydrogen sulfide concentration in the collected vapors by at least 95%. The sulfur content of the treated vapors may not exceed 1.0 grains S/100 scf gas. The treated TVR (and CVR) vapors injected into the field fuel gas line shall not be greater than five percent by weight hydrocarbons heavier than butane as determined by test method ASTM D-1945 or equivalent test method with prior District approval. [District Rules 2020 and 2201] Federally Enforceable Through Title V Permit

10. The vapor control system compressor shall activate when the tank internal pressure exceeds 1.5 in. w.c. and deactivate when the tank internal pressure falls to 0.5 in. w.c. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

11. The tank pressure relief valves shall not open unless the tank internal pressure exceeds 2.0 oz. or falls below 0.5 oz. vacuum. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

13. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{3.2}{V/Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

15. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
19. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

21. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

22. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

23. The permittee shall keep accurate records of VOC content of vapors, liquids stored and true vapor pressure of such liquids for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-287-11
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: SW23  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 1085 STEAM ENHANCED
PRODUCTION WELLS CONNECTED TO WELL HEAD CASING VENT VAPOR RECOVERY SYSTEM (CVR) VENTING
VAPORS TO SECTION 23 TANK VAPOR RECOVERY SYSTEM (S-1326-263): ADD RULE 2410 CONDITIONS

CONDITIONS

1. {1830} 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. Authority to Construct (ATC) S-1326-287-10 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit


5. Well casing vents shall remain closed, connected to well produced fluids lines, or connected to a well vent VOC collection and control system at all times except during periods of actual service or repair when wells are not producing. [District Rules 2201, 2410, and 4401] Federally Enforceable Through Title V Permit

6. Collected CVR vapor shall be piped to tank vapor recovery system (TVR) serving S-1326-263. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

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
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. VOC content of gas collected by the CVR system shall not exceed 10% by weight. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. Permittee may use test results obtained from S-1326-263 to demonstrate compliance. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit

8. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit

9. Fluids produced from these steam enhanced wells shall be introduced only to tanks listed on permit S-1326-263 that are vented to an approved vapor collection and control system achieving 99% control. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

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

11. Steam enhanced production wells covered by this permit shall each have a visible identification number. Field personnel shall be provided with written instructions concerning proper operation and maintenance of these wells. [District Rule 2201] Federally Enforceable Through Title V Permit

12. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407] Federally Enforceable Through Title V Permit

13. Total combined fugitive emissions from all components associated with this TEOR operation shall not exceed 0.0 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit

14. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended June 16, 2011). [District Rule 4401] Federally Enforceable Through Title V Permit

15. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

16. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv as methane; and 2) A minor gas leak is a detection of 400 to 10,000 ppmv as methane for pressure relief devices (PRDs) and 2,000 to 10,000 for components other than PRDs. [District Rule 4401] Federally Enforceable Through Title V Permit

17. A liquid leak is defined as the dripping of VOC-containing liquid. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak that is not a major liquid leak and drips liquid at a rate of more than three drops per minute, except for seal lubricant. [District Rule 4401] Federally Enforceable Through Title V Permit

18. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401] Federally Enforceable Through Title V Permit

19. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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

21. An operator shall be in violation of this rule if any District inspection demonstrates that the following conditions in Section 5.2.2 exist at the facility: Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines. [District Rule 4401] Federally Enforceable Through Title V Permit

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

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

24. Permittee shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak. The following information shall be included on the tag: 1) the date and time of leak detection; 2) the date and time of leak measurement; 3) leak concentration in ppmv for a gaseous leak; 4) description of whether it is a major liquid leak or a minor liquid leak; and 5) whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit

25. Permittee shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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

27. Except for leaking critical components or leaking essential components, if the operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 4 of Rule 4401: 1) repair or replace the leaking component; 2) vent the leaking component to a VOC collection and control system; or 3) remove the leaking component from operation. [District Rule 4401] Federally Enforceable Through Title V Permit

28. The leak rate, measured after Leak minimization has been performed, shall be used to determine the applicable repair period specified in Table 4 of Rule 4401 and the time of initial leak detection shall be the start of the repair period specified in Table 4 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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

30. Flanges shall be monitored with a portable hydrocarbon detection instrument along the entire circumference of the flange-gasket interface. Threaded connections, tubing fittings, and other types of non-permanent joints shall be monitored along the entire circumference of joint interface. [District Rule 2201] Federally Enforceable Through Title V Permit

31. Valves shall be monitored with a portable hydrocarbon detection instrument where the stem comes through the packing gland, and at any attached or connected body flange(s), bonnet flange(s), or plug(s). [District Rule 2201] Federally Enforceable Through Title V Permit

32. All other components such as diaphragms, diaphragm instruments, meters shall be monitored at all points of possible emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. In lieu of conducting annual source tests of all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC, all uncondensed VOC emissions collected by a vapor collection and control system shall be incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare. [District Rule 4401] Federally Enforceable Through Title V Permit

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

35. The control efficiency of the vapor collection and control system used to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on most stringent of a source test, USEPA approved emission factors, or Air Pollution (AP)-42 emission factors for components and number of components; and the efficiency of destruction devices determined by USEPA Method 25, 25a, or 25b as applicable. [District Rule 4401] Federally Enforceable Through Title V Permit

36. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit

37. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

38. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended January 15, 1998), excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

39. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520] Federally Enforceable Through Title V Permit

40. Permittee shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit

41. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit

42. Permittee shall maintain a current list of all steam enhanced well authorized by this permit and shall update the list whenever a well is added, replaced, or deleted. [District Rule 2201] Federally Enforceable Through Title V Permit

43. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit

44. Permittee shall maintain an accurate component count for the well vent collection and control system serving this operation, in accordance with CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit

45. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-405-1

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9800 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE 23 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 85.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85
GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM: ADD RULE 2410 CONDITIONS

CONDITIONS

1. {1830} 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. Authority to Construct (ATC) S-1326-405-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

5. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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
61-708-4051 • Fax 61-904-4001 • EWACOM • District Inspection NOT Required
Southern Regional Office • 34948 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5555
7. 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

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

9. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 4801, and 4320] Federally Enforceable Through Title V Permit

10. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VGC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 10 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

13. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

14. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

15. 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

16. 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

17. 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

18. 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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

19. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, Nox (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4357] Federally Enforceable Through Title V Permit

20. 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 restoring the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
21. 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

22. All NOx, CO, and O2 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

23. 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

24. 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

25. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit


27. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-406-1
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: NE 23  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 85.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85
GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM: ADD RULE 2410 CONDITIONS

CONDITIONS

1. (1830) 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. Authority to Construct (ATC) S-1326-406-0 shall be implemented prior to or concurrently with this ATC. [District
   Rule 2201] Federally Enforceable Through Title V Permit

4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper
   ok), roof overhang, or any other obstruction. [District Rule 4102]

5. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump
   and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated
   heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources
   Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through
   Title V Permit

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

   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

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. 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

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

9. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 4801, and 4320] Federally Enforceable Through Title V Permit

10. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed: PM10: 0.003 lb/MBMbtu, VOC: 0.0055 lb/MBMbtu, NOx (as NO2): 7 ppmv NOx @ 3% O2, or CO: 10 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

13. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

14. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

15. 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

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

17. 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

18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of these runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

19. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MBMbtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MBMbtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

20. 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
21. 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 performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. All NOx, CO, and O2 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

23. 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

24. 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

25. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit


27. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-407-1
LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9800 MING AVE, SUITE 300
BAKERSFIELD, CA 93311
LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
KERN COUNTY, CA
SECTION: NE 23   TOWNSHIP: 28S   RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 85.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM: ADD RULE 2410 CONDITIONS

CONDITIONS

1. (1830) 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. Authority to Construct (ATC) S-1326-407-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

5. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

6. (98) No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director TAPCO

DAVID WARNER, Director of Permit Services
0-1326-407-1, Jul 20 2013 8:24:12 AM - RICHARD - doc inspection NOT required
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7. 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

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

9. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 4801, and 4320] Federally Enforceable Through Title V Permit

10. Permitee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmv NOx @ 3% O2, or CO: 10 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

13. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

14. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

15. 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

16. 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

17. 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

18. 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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

19. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

20. 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

CONDITIONS CONTINUE ON NEXT PAGE
21. 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

22. All NOx, CO, and O2 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

23. 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

24. 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

25. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit


27. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-408-2

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 23  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 20,000 BBL FWKO VESSEL SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263:
ADD RULE 2410 CONDITIONS

CONDITIONS

1. {1830} 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. Authority to Construct (ATC) S-1326-408-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. FWKO vapors shall be vented only to vapor control system listed on tank permit: S-1326-263. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

5. This FWKO shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadreddin, Executive Director, APCO

DAVID WARNER, Director of Permit Services
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7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2261 and 2410] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17, and 3.18] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a vessel vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall visually inspect vessel shell, hatches, seats, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated vessel for structural integrity annually. [District Rule 2210] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2210] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) Eliminate the leak within 8 hours after detection; or 2) If the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

15. If a component type for the vessel is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

18. This permit authorizes FWKO cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall conduct FWKO cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. FWKO may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permittee shall notify the APCO in writing at least three (3) days prior to performing FWKO degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the FWKO being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the FWKO, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the FWKO to allow FWKO cleaning, one of the following procedures must be followed: 1) Prior to venting the FWKO to the atmosphere, operate the FWKO vapor recovery system/vapor control device for at least 24 hours such that it collects the FWKO vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil FWKO by restricting the outflow of water, such that 90% of the FWKO volume is displaced; or 3) Vent the FWKO to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the FWKO to the vapor control system for at least 6 hours determined by the following relationship: t = 2.3 V/Q, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

23. The FWKO shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The FWKO sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the FWKO, the FWKO shall be filled to the maximum possible level with water, the FWKO vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the FWKO with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular FWKO maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the FWKO is disconnected or isolated from the vapor control system. Records shall include the date that FWKO cleaning was initiated, the date FWKO cleaning was completed, the procedure used to vent FWKO vapors prior to opening, the method of FWKO cleaning used, and a description of internal and external FWKO repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

29. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-409-2
LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9800 MING AVE, SUITE 300
BAKERSFIELD, CA 93311
LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
KERN COUNTY, CA
SECTION: SW 23 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 20,000 BBL FWKO VESSEL SERVED BY VAPOR RECOVERY SYSTEM LISTED IN S-1326-263:
ADD RULE 2410 CONDITIONS

CONDITIONS

1. \{1830\} 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 79.6(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. Authority to Construct (ATC) S-1326-409-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall vent only to vapor control system listed on S-1326-263. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

5. This FWKO shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [40 CFR 60 Subpart Kb and District Rule 4623] Federally Enforceable Through Title V Permit

6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201]

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-1326-409-2 / 01 Feb 2013 11:40AM - ROSG1000 / Auto Inspection NOT Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17, and 3.18] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a vessel vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall visually inspect vessel shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated vessel for structural integrity annually. [District Rule 2210] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2210] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

15. If a component type for the vessel is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

18. This permit authorizes FWKO cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall conduct FWKO cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. FWKO may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permittee shall notify the APCO in writing at least three (3) days prior to performing FWKO degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the FWKO being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the FWKO, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the FWKO to allow FWKO cleaning, one of the following procedures must be followed: 1) Prior to venting the FWKO to the atmosphere, operate the FWKO vapor recovery system/vapor control device for at least 24 hours such that it collects the FWKO vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil FWKO by restricting the outflow of water, such that 90% of the FWKO volume is displaced; or 3) Vent the FWKO to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the FWKO to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

23. The FWKO shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302°F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The FWKO sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the FWKO, the FWKO shall be filled to the maximum possible level with water, the FWKO vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the FWKO with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular FWKO maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the FWKO is disconnected or isolated from the vapor control system. Records shall include the date that FWKO cleaning was initiated, the date FWKO cleaning was completed, the procedure used to vent FWKO vapors prior to opening, the method of FWKO cleaning used, and a description of internal and external FWKO repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

29. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-410-2

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 23  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 5,000 BBL FIXED ROOF CRUDE OIL WASH TANK SERVED BY VAPOR RECOVERY SYSTEM
LISTED IN S-1326-263: ADD RULE 2410 CONDITIONS

CONDITIONS

1. {1830} 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 220] 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. Authority to Construct (ATC) S-1326-410-0 shall be implemented prior to or concurrently with this ATC. [District Rule 220] Federally Enforceable Through Title V Permit

4. Tank shall vent only to vapor control system listed on S-1326-263. [District Rules 220 and 2410] Federally Enforceable Through Title V Permit

5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 220] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DAVID WARNER - Director of Permit Services
S-1326-410-2 - Feb 16 2017 - 11:46 AM - R1000 - JMD - JUST INSPECTION NOT REQUIRED

Southern Regional Office • 34945 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall visually inspect tank shell, hatches, seals, scams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

15. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

18. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

19. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

23. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

28. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-411-2
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 23  TOWNSHIP: 28S  RANGE: 27E
EQUIPMENT DESCRIPTION:
MODIFICATION OF 5,000 BBL FIXED ROOF CRUDE OIL LACT TANK SERVED BY VAPOR RECOVERY SYSTEM
LISTED IN S-1326-263: ADD RULE 2410 CONDITIONS

CONDITIONS

1. {1830} 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. Authority to Construct (ATC) S-1326-411-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall vent only to vapor control system listed on S-1326-263. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadreddin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

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15. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

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18. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

19. Permits shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V/Q, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

23. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

28. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-412-2

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: SW23  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 3,400 BBL FIXED ROOF CRUDE OIL DRAIN TANK SERVED BY VAPOUR RECOVERY SYSTEM
LISTED IN S-1326-263: ADD RULE 2410 CONDITIONS

CONDITIONS

1. {1830} 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. Authority to Construct (ATC) S-1326-412-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall vent only to vapor control system listed on S-1326-263. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

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

David Warner, Director of Permit Services

Southern Regional Office • 34846 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rule 2201] Federally Enforceable Through Title V Permit

13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

15. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

18. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

19. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{3.3 V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

23. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302°F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

28. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-413-2
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 23     TOWNSHIP: 28S     RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 5,000 BBL FIXED ROOF CRUDE OIL REJECT TANK SERVED BY VAPOR RECOVERY SYSTEM
LISTED IN S-1326-263: ADD RULE 2410 CONDITIONS

CONDITIONS

1. (1830) 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. Authority to Construct (ATC) S-1326-413-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall vent only to vapor control system listed on S-1326-263. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

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 AIPCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best management practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rule 2201] Federally Enforceable Through Title V Permit

13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

15. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

18. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

19. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water; such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \times V/Q}{V} \), where \( t = \) time, \( V = \) tank volume (cubic feet), and \( Q\) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

23. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

28. VOC content of gas shall be measured using ASTM D-7945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-414-2

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 23  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 3,400 BBL FIXED ROOF CRUDE OIL LACT TANK SERVED BY VAPOUR RECOVERY SYSTEM
LISTED IN S-1326-263: ADD RULE 2410 CONDITIONS

CONDITIONS

1. (1830) 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. Authority to Construct (ATC) S-1326-414-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall vent only to vapor control system listed on S-1326-263. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

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
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection [District Rule 2201] Federally Enforceable Through Title V Permit

13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

15. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

18. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

19. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
Conditions for S-1326-414-2 (continued)

20. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \[ t = \frac{2.3 V}{Q} \], where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

23. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

28. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

DRAFT
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-415-2
LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9800 MING AVE, SUITE 300
BAKERSFIELD, CA 93311
LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
KERN COUNTY, CA
SECTION: SW 23  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 3,400 BBL FIXED ROOF CRUDE OIL LACT TANK SERVED BY VAPOR RECOVERY SYSTEM
LISTED IN S-1326-263: ADD RULE 2410 CONDITIONS

CONDITIONS

1. {1830} 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. Authority to Construct (ATC) S-1326-415-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Tank shall vent only to vapor control system listed on S-1326-263. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit
5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
6. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

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
G-1326-415-2; Feb 15, 2013 / RCCO; RECODE; Jail Inspection NOT Required
Southern Regional Office • 34846 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shell and roof of the uninsulated tank for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 2201] Federally Enforceable Through Title V Permit

15. If a component type for the tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

18. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

19. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080]

21. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 24 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

23. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit

28. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-417-1

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9800 MING AVE, SUITE 300
                BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
            KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
MODIFICATION OF 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85
GAS BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM: ADD RULE 2410 CONDITIONS

CONDITIONS

1. {1830} 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. Authority to Construct (ATC) S-1326-417-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

5. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177; California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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.

Sayed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
S-1326-417-1, Feb 26 2019 5:08:22 PM - NO CREATION - Need Improvement NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. 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

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

9. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 4801, and 4320] Federally Enforceable Through Title V Permit

10. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmv NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

13. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

14. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

15. 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

16. 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

17. 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

18. 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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

19. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

20. 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

CONDITIONS CONTINUE ON NEXT PAGE
21. 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 performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. All NOx, CO, and O2 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

23. 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

24. 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

25. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit


27. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-418-1
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

EQUIPMENT DESCRIPTION:
MODIFICATION OF 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85
GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM: ADD RULE 2410 CONDITIONS

CONDITIONS

1. (1830) 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. Authority to Construct (ATC) S-1326-418-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

5. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer’s overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

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

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-1326-418-1, Feb 2012 02:34AM - H005500, Job inspection NOT Required

Southern Regional Office • 34948 Flyover Court • Bakersfield, CA 93306 • (661) 392-5500 • Fax (661) 392-5585
7. 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

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

9. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 4801, and 4320] Federally Enforceable Through Title V Permit

10. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4984, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmv @ O2, CO: 25 ppmv @ O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

13. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

14. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

15. 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

16. 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

17. 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

18. 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

19. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

20. 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

 CONDITIONS CONTINUE ON NEXT PAGE
21. 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

22. All NOx, CO, and O2 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

23. 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

24. 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

25. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit


27. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-419-1
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

EQUIPMENT DESCRIPTION:
MODIFICATION OF 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85
GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM: ADD RULE 2410 CONDITIONS

CONDITIONS

1. {1830} 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. Authority to Construct (ATC) S-1326-419-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

5. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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
Southern Regional Office • 34848 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. 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

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

9. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201 4801, and 4320] Federally Enforceable Through Title V Permit

10. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.005 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

13. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested no 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 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

14. 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 of District Rule 4320. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

15. 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

16. 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

17. 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

18. 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, 5.5.5, 4306, 5.5.5, and 4320] Federally Enforceable Through Title V Permit

19. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

20. 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

CONDITIONS CONTINUE ON NEXT PAGE
21. 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

22. All NOx, CO, and O2 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

23. 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

24. 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

25. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit


27. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-420-0
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

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. {1830} 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. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 2,234 lb, 2nd quarter - 2,234 lb, 3rd quarter - 2,234 lb, and fourth quarter - 2,234 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of PM10 emissions: 1st quarter - 838 lb, 2nd quarter - 838 lb, 3rd quarter - 838 lb, and fourth quarter - 838 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,536 lb, 2nd quarter - 1,536 lb, 3rd quarter - 1,536 lb, and fourth quarter - 1,536 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

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-1326-420-0 / Feb 15 2013 11:41AM - REDACTED - Final Inspection NOT Finished
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. ERC Certificate Numbers C-1190-1, C-1190-2, C-1190-5, N-1066-1, S-3929-1, and S-3943-1 (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

7. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

8. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

15. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]
16. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (USEPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

18. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

19. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a sitespecific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

22. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is: CDFW: Ms. Reagen O’Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014; CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309; and, USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]
24. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed project, all work within 100 feet of the find shall cease. Permittee will notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. Permittee shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the project site once the evaluation of the find is complete by the qualified archaeologist/paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. In the event that human remains are discovered during construction of the project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Permittee shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Prior to the start of construction activities, Permittee shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

27. During construction activities, if unknown, unrecorded or abandoned wells are discovered or if any wells are damaged, Permittee shall immediately notify DOGGR. Permittee shall retain records of such discoveries onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. Permittee shall comply with all applicable Department of Toxic Substances Control (DTSC) regulations and, if necessary submit all necessary biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials. In addition, Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

30. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

31. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

32. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

33. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
36. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

37. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

38. 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

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

40. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320, and 4801] Federally Enforceable Through Title V Permit

41. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rule 4320] Federally Enforceable Through Title V Permit

42. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.005 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

44. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

45. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. 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 3.6 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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
51. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

52. 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

53. 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

54. All NOx, CO, and O2 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

55. 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

56. 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

57. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

58. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

59. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

60. 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] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-421-0

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

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. {1830} 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. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 2,234 lb, 2nd quarter - 2,234 lb, 3rd quarter - 2,234 lb, and fourth quarter - 2,234 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of PM10 emissions: 1st quarter - 838 lb, 2nd quarter - 838 lb, 3rd quarter - 838 lb, and fourth quarter - 838 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,536 lb, 2nd quarter - 1,536 lb, 3rd quarter - 1,536 lb, and fourth quarter - 1,536 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

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-1326-421-0: Feb 18 2013 11:49AM - RICKMOR - Draft Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. ERC Certificate Numbers C-1190-1, C-1190-2, C-1190-5, N-1066-1, S-3929-1, and S-3943-1 (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

7. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

8. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

15. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]
16. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (USEPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

18. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

19. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

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21. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

22. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014; CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309; and, USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

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29. Permittee shall comply with all applicable Department of Toxic Substances Control (DTSC) regulations and, if necessary submit all necessary biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials. In addition, Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

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32. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

33. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

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36. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

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

38. 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

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

40. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320, and 4801] Federally Enforceable Through Title V Permit

41. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rule 4320] Federally Enforceable Through Title V Permit

42. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

44. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

45. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. 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 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

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51. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

52. 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

53. 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 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

54. All NOx, CO, and O2 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

55. 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

56. 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

57. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

58. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

59. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

60. 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 1076, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-422-0

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

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. (1830) 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. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 2,234 lb, 2nd quarter - 2,234 lb, 3rd quarter - 2,234 lb, and fourth quarter - 2,234 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of PM10 emissions: 1st quarter - 838 lb, 2nd quarter - 838 lb, 3rd quarter - 838 lb, and fourth quarter - 838 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,536 lb, 2nd quarter - 1,536 lb, 3rd quarter - 1,536 lb, and fourth quarter - 1,536 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

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
8-1326-422-0: Feb 12, 2013 14:44 PM - RDKKXK - JDistt Inspection Not Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. ERC Certificate Numbers C-1190-1, C-1190-2, C-1190-5, N-1066-1, S-3929-1, and S-3943-1 (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

7. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

8. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

15. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]
16. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (USEPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

18. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

19. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

22. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014; CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309; and, USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]
24. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed project, all work within 100 feet of the find shall cease. Permittee will notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. Permittee shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the project site once the evaluation of the find is complete by the qualified archaeologist/paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. In the event that human remains are discovered during construction of the project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Permittee shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Prior to the start of construction activities, Permittee shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR’s "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

27. During construction activities, if unknown, unrecorded or abandoned wells are discovered or if any wells are damaged, Permittee shall immediately notify DOGGR. Permittee shall retain records of such discoveries onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. Permittee shall comply with all applicable Department of Toxic Substances Control (DTSC) regulations and, if necessary submit all necessary biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials. In addition, Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

30. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any permits deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

31. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

32. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

33. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
36. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

37. [98] No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

38. 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

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

40. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320, and 4801] Federally Enforceable Through Title V Permit

41. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rule 4320] Federally Enforceable Through Title V Permit

42. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

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50. 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
51. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

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53. 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

54. All NOx, CO, and O2 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

55. 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

56. 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

57. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

58. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

59. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

60. 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] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1328-423-0
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

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. \{1830\} 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. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 2,234 lb, 2nd quarter - 2,234 lb, 3rd quarter - 2,234 lb, and fourth quarter - 2,234 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of PM10 emissions: 1st quarter - 838 lb, 2nd quarter - 838 lb, 3rd quarter - 838 lb, and fourth quarter - 838 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,536 lb, 2nd quarter - 1,536 lb, 3rd quarter - 1,536 lb, and fourth quarter - 1,536 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadreddin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
G:\1328-423-0 - Feb 15 2013 1:45PM - RC\APCO - Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. ERC Certificate Numbers C-1190-1, C-1190-2, C-1190-5, N-1066-1, S-3929-1, and S-3943-1 (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

7. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

8. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permitee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

15. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]
16. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (USEPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177; California Environmental Quality Act]

17. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177; California Environmental Quality Act]

18. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177; California Environmental Quality Act]

19. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177; California Environmental Quality Act]

20. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177; California Environmental Quality Act]

21. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15. [Public Resources Code 21000-21177; California Environmental Quality Act]

22. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014; CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309; and, USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177; California Environmental Quality Act]

23. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177; California Environmental Quality Act]
24. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed project, all work within 100 feet of the find shall cease. Permittee will notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. Permittee shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the project site once the evaluation of the find is complete by the qualified archaeologist/paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. In the event that human remains are discovered during construction of the project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believe to be the nearest descendants of the remains for recommendations. Permittee shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Prior to the start of construction activities, Permittee shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

27. During construction activities, if unknown, unrecorded or abandoned wells are discovered or if any wells are damaged, Permittee shall immediately notify DOGGR. Permittee shall retain records of such discoveries onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. Permittee shall comply with all applicable Department of Toxic Substances Control (DTSC) regulations and, if necessary, submit all necessary biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials. In addition, Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

30. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

31. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

32. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

33. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
36. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

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

38. 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

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

40. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320, and 4801] Federally Enforceable Through Title V Permit

41. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rule 4320] Federally Enforceable Through Title V Permit

42. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed: PM10: 0.003 lb/MMMBtu, VOC: 0.0055 lb/MMMBtu, NOx (as NO2): 7 ppmv; NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

44. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

45. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. 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 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. 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

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

49. 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

50. 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
51. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

52. 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

53. 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 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

54. All NOx, CO, and O2 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

55. 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

56. 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

57. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

58. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

59. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

60. 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] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-424-0
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

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. {1830} 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. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 2,234 lb, 2nd quarter - 2,234 lb, 3rd quarter - 2,234 lb, and fourth quarter - 2,234 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of PM10 emissions: 1st quarter - 838 lb, 2nd quarter - 838 lb, 3rd quarter - 838 lb, and fourth quarter - 838 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,536 lb, 2nd quarter - 1,536 lb, 3rd quarter - 1,536 lb, and fourth quarter - 1,536 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services
S-1326-424-0, Fax 6/4/15 LEAD PA - NOWOOD, Joint Preapplication Review Available

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. ERC Certificate Numbers C-1190-1, C-1190-2, C-1190-5, N-1066-1, S-3929-1, and S-3943-1 (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

7. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and a convection section with at least 235 square feet of heat transfer surface area per MBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 2410] Federally Enforceable Through Title V Permit

8. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts to sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

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11. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE
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17. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

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19. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

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22. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014; CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309; and, USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]
24. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed project, all work within 100 feet of the find shall cease. Permittee will notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. Permittee shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the project site once the evaluation of the find is complete by the qualified archaeologist/paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. In the event that human remains are discovered during construction of the project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Permittee shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Prior to the start of construction activities, Permittee shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

27. During construction activities, if unknown, unrecorded or abandoned wells are discovered or if any wells are damaged, Permittee shall immediately notify DOGGR. Permittee shall retain records of such discoveries onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. Permittee shall comply with all applicable Department of Toxic Substances Control (DTSC) regulations and, if necessary submit all necessary biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials. In addition, Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

30. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

31. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

32. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

33. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
36. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

37. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

38. 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

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

40. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320, and 4801] Federally Enforceable Through Title V Permit

41. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rule 4320] Federally Enforceable Through Title V Permit

42. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

44. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

45. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. 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 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

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CONDITIONS CONTINUE ON NEXT PAGE
51. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

52. 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

53. 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

54. All NOx, CO, and O2 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

55. 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

56. 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

57. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

58. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

59. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

60. 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] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1326-425-0

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

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS- FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. (1830) 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. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 2,234 lb, 2nd quarter - 2,234 lb, 3rd quarter - 2,234 lb, and fourth quarter - 2,234 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOx emission reduction credits for the following quantity of PM10 emissions: 1st quarter - 838 lb, 2nd quarter - 838 lb, 3rd quarter - 838 lb, and fourth quarter - 838 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,536 lb, 2nd quarter - 1,536 lb, 3rd quarter - 1,536 lb, and fourth quarter - 1,536 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

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

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
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20. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

22. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is: CDFW: Ms. Reagan O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710, Phone: (559) 243-4014; CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309; and, USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]
24. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed project, all work within 100 feet of the find shall cease. Permittee will notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. Permittee shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the project site once the evaluation of the find is complete by the qualified archaeologist/paleontologist. [Public Resources Code 21000-21177; California Environmental Quality Act]

25. In the event that human remains are discovered during construction of the project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Permittee shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177; California Environmental Quality Act]

26. Prior to the start of construction activities, Permittee shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR’s "Well Review Program". [Public Resources Code 21000-21177; California Environmental Quality Act]

27. During construction activities, if unknown, unrecorded or abandoned wells are discovered or if any wells are damaged, Permittee shall immediately notify DOGGR. Permittee shall retain records of such discoveries onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177; California Environmental Quality Act]

28. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177; California Environmental Quality Act]

29. Permittee shall comply with all applicable Department of Toxic Substances Control (DTSC) regulations and, if necessary submit all necessary biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials. In addition, Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177; California Environmental Quality Act]

30. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177; California Environmental Quality Act]

31. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177; California Environmental Quality Act]

32. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

33. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District’s determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

Conditions continue on next page
36. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

37. [98] No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

38. 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

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

40. The unit shall only be fired on PUC-quality natural gas with a maximum sulfur content of 1.0 gr S/100scf. [District Rules 2201, 4320, and 4801] Federally Enforceable Through Title V Permit

41. Permittee shall test annually the sulfur content of the fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rule 4320] Federally Enforceable Through Title V Permit

42. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

44. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

45. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. 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 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. 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 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

- Conditions continue on next page
51. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

52. 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

53. 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. If 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

54. All NOx, CO, and O2 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

55. 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

56. 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

57. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

58. Permittee shall maintain records of fuel gas sulfur compound measurements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

59. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

60. 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] Federally Enforceable Through Title V Permit
APPENDIX K

PSD Affected Entities
Distribution list

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

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

Lorelei H. Oviatt, AICP
County of Kern
2700 "M" Street, Suite 100
Bakersfield, CA 933301

Neil Peyron
The Tule River Tribe Main Building
340 N Reservation Rd
Porterville, CA 93257

Trent Procter
US Forest Service Land Management
Sequoia National Forest
1839 South Newcomb Street
Porterville, CA 93257-2035

Dave Van Mullem
Santa Barbara County APCD
260 N. San Antonio Rd, Suite A
Santa Barbara, CA 93110-1315

Mike Villegas
Ventura County APCD
669 County Square Dr., 2nd Fl.
Ventura, CA 93003

Glen Stephens
Eastern Kern County APCD
2700 "M" Street, Suite 302
Bakersfield, CA 93301

Eldon Heaston
Antelope Valley AQMD
43301 Division Street, Suite 206
Lancaster, CA 93536

Larry Allen
San Luis Obispo APCD
3233 Roberto Court
San Luis Obispo, CA 93401

Barry Wallerstein
South Coast AQMD
21865 E. Copley Dr.
Diamond Bar, CA 91765
EPA Comments for Proposed Title V Permit Modification for Vintage Production
California, LLC, Facility ID S-1326, Project # S-1123499

EPA Comment 1:
On page 4 of the evaluation, under Section VII. General Calculations, the District discusses the fact that the previously installed units are not subject to Rule 2201, which is correct, but it does not explain that all of units (previously installed and the new proposed units) are subject to Rule 2410. This is a somewhat unique permitting situation; therefore EPA believes it would be helpful to clarify this issue in the evaluation.

District Response: This is discussed on the first page, second paragraph, under “Proposal”.

EPA Comment 2:
A table is provided on page 8 which summarizes the Rule 2201 Major Source Determination. EPA notes that PM2.5 is not one of the listed pollutants, even though the District is classified as non-attainment for PM2.5. While it is acceptable to assume all the calculated PM10 is PM2.5, and base your PM2.5 major source determination based on this assumption, the evaluation must state this assumption and/or evaluate PM2.5 emissions.

District Response: Inserted the last sentence on the paragraph below this table on page 8.

EPA Comment 3:
On page 11, under Section 9, the evaluation states “Rule 2410 applies to pollutants for which the District is in attainment or for unclassified, pollutants.” And then lists those pollutants. This is incorrect. Rule 2410 applies to all regulated NSR pollutants, as defined in 40 CFR 52.21, except those pollutants for which the District has been classified as non-attainment. Therefore the District’s list in the evaluation should include other pollutants such as lead, fluorides, sulfuric acid mist, hydrogen sulfide, total reduced sulfur and reduced sulfur compounds. Rather than list all of the regulated NSR pollutants which are subject to the PSD program, EPA suggests revising the wording in this portion of the evaluation to state that PSD applies to all regulated NSR pollutants, except for those which the District has been classified as non-attainment, and that of those pollutants, the ones emitted from the subject emission units are listed below. This will allow the evaluation to leave off the list any pollutants, such as fluorides or lead that are not emitted from the proposed project. EPA also suggests calling the pollutants that will be evaluated “subject PSD pollutants”, rather than the phrase used now of “Attainment/Unclassified Pollutant.” See also the table on page 12, which only lists some of the regulated NSR pollutants. We note that this table does not list the PSD Significance rate for PM2.5, which at 10 tpy is less than the thresholds for PM or PM10. While the calculated increase of PM10 is less than the PM2.5 threshold of 10 tpy, the table should clearly make this comparison. EPA requests that the District take note of this issue for all future PSD evaluations and correct the evaluation form accordingly.

District Response: Replaced language in the eval on pg 11 as suggested above (first sentence under “9. Rule 2410...”) and changed all references of “Attainment/Unclassified Pollutants” to “Subject PSD Pollutants”.

Since we are non-attainment for PM2.5 the addition of this pollutant was not added but it was specifically identified as a pollutant for which we are classified as non-attainment for in the first paragraph under section VII.9.
EPA Comment 4:
The table in the middle of page 12 of the evaluation shows that the PTE for all PSD pollutants, except CO2e, is below the significant increase thresholds. As stated above in the evaluation, the PTE, rather than the actual emission increase is calculated to use as a screening tool. The basis of the screen is that for any pollutant with a PTE that is less than the significant increase threshold, the emission increase must also be less than the significant increase threshold, and therefore detailed emission calculations are not required. The text under the table incorrectly states that “because the project has a total potential to emit from all new and modified emission units greater than PSD significant emission increase thresholds, further analysis is required to determine if the project has an emission increase greater than the PSD significant emission increase thresholds, see step below.” As shown by the data in the table, this statement should have been limited to CO2e, and the next step, under section b, could have been limited to evaluating CO2e emissions. Please revise the quoted text above, since it is not accurate. There is no need to revise the table, as it simply provides additional information. While this comment does not change the actual terms of the permit, EPA requests that the District take note of this comment to ensure future evaluations correctly use the PTE screening analysis.

District Response: Identified that CO2e was the only pollutant that exceeded the threshold in the paragraph under the table on pg 12.

EPA Comment 5:
The first table on page 13 lists the units in the header as tons per year, however the values are actually listed in pounds per year, with only the Total row values being reported in tons per year, as labeled next to the word “Total”. EPA requests that the District take note of this error and ensure it is properly stated on future evaluations.

District Response: Changed all values to tons/year on the first table on page 13.

EPA Comment 6:
Under section c on page 13 of the evaluation, the District states “Since this project is for new units only, the net emissions increase is assumed to continue to exceed the threshold for CO2e.” This is an inaccurate summary of a net emission increase analysis. The phrase “net emissions increase” is defined in 52.21 (b)(3) as “the amount by which the sum of the following exceeds zero,” and the subsections then list what increases and decreases are to be included in this calculation. Subparagraph (a) refers to the emission increases from the project being evaluated. Subparagraph (b) refers to any other increases and decreases in actual emissions… that are contemporaneous with the particular change and are otherwise creditable. Typically this second applicability test is used to determine if a source can “net” out of PSD applicability by utilizing emission decreases which have occurred during the last 5 years to “offset” the emission increases from the project and any other creditable increases, such that a “significant net emission increase” does not occur, meaning the project is not a PSD major modification. If a source is not claiming any emission reductions to net against the emission increases from the project, then the applicant is stipulating that the project is a PSD major modification. Please revise the evaluation to correctly summarize the application of the PSD regulations for determining Net Emission Increases, and ensure future evaluations also properly characterize Net Emission Increase evaluations.

District Response: Rewrote first paragraph under Section VII.9.II.c (second sentence) to clarify that no attempt at offsetting the significant emissions increase of GHG was proposed by applicant.