



JUN 23 2011

Jerry Frost
Vintage Production California, LLC
9000 Ming Avenue, Suite 300
Bakersfield, CA 93311

RE: Notice of Final Action - Authority to Construct
Project Number: S-1110750

Dear Mr. Frost:

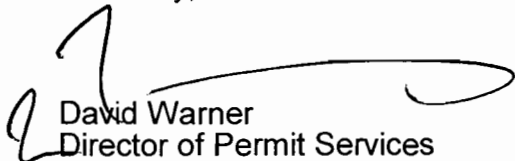
The Air Pollution Control Officer has issued Authority to Construct permits to Vintage Production California, LLC for 5 new 85 MMBtu/hr steam generators, at the heavy oil production stationary source in the Kern County fields. Enclosed are copies of the Authority to Construct permits and a copy of the 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 this Authority to Construct was published on May 20, 2011. The District's analysis of the proposal was also sent to CARB on May 16, 2011. 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 revision of the PM10 source test requirement to allow results on an existing identical unit to serve as representative of the new units, limitation of the location to only quarter section, township, and range, and not areas within quarter sections, and clarification of the wording of the Best Performance Standard (BPS) condition. Please note that the comments and District response to the comments are included in the Attachment. 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.

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:rue/st

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



HEALTHY AIR LIVING™

JUN 23 2011

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

**RE: Notice of Final Action - Authority to Construct
Project Number: S-1110750**

Dear Mr. Tollstrup:

The Air Pollution Control Officer has issued Authority to Construct permits to Vintage Production California, LLC for 5 new 85 MMBtu/hr steam generators, at the heavy oil production stationary source in the Kern County fields. Enclosed are copies of 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.

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Bakersfield Californian

**NOTICE OF FINAL ACTION
FOR THE ISSUANCE OF AUTHORITY
TO CONSTRUCT PERMITS**

NOTICE IS HEREBY GIVEN that the Air Pollution Control Officer has issued Authority to Construct permits to Vintage Production California, LLC for 5 new 85 MMBtu/hr steam generators , at the heavy oil production stationary source in the Kern County fields.

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 revision of the PM10 source test requirement to allow results on an existing identical unit to serve as representative of the new units, limitation of the location to only quarter section, township, and range, and not areas within quarter sections, and clarification of the wording of the Best Performance Standard (BPS) condition. Please note that the comments and District response to the comments are included in the Attachment.. 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 application review for Project #S-1110750 is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the **SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.**

ATTACHMENT

Source Comment # 1

Removal of PM10 source test requirements from ATC S-1327-141-0. PM10 emission compliance has been previously demonstrated by an identical representative testing at this facility.

District Response

The District approves this request based on the fact that gas combusted by the existing representative unit and new units has essentially the same chemical composition and low NOx burners for the new and representative unit are identical. On June 9, 2011 applicant submitted 2009 source test results for representative unit S-1327-130 demonstrating compliance with the PM10 emissions limit of 0.0035 lb/MMBtu.

Condition # 19 of ATC S-1327-141-0 will be revised as follows:

ATC S-1327-141-0

19. Source testing to measure fuel combustion NOx and CO and PM10 emissions from this unit shall be conducted within 60 days of initial start-up. ~~Source test shall be conducted using a gas mixture including PUC quality natural gas and the expected amounts of tank vapor recovery (TVR) gas and thermally enhanced oil recovery (TEOR) gas for PM10 emissions testing. [District Rules 2201, 4305, 4306, and 4320] N~~

Conditions #30 and 31 were deleted.

~~30. Source testing to measure PM10 shall be conducted using either: EPA Method 201 or 201A, and 202; or CARB Method 5 in combination with 501. Should the applicant decided to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 2201] N~~

~~31. In lieu of performing a source test for PM10, the results of the total particulate test may be used for compliance with the PM10 emissions limit provided the results include both the filterable and condensable (back half) particulate, and that all particulate matter is assumed to be PM10. Source testing to measure concentrations of total particulate emissions shall be conducted using EPA method 5. [District Rule 2201] N~~

Source Comment # 2

Modification (revision) of Condition #9 of all ATCs to list only the quarter section, section, township and range for each permitted location. The proposed condition would read "This steam generator shall be located at the NE1/4 of Section 11, T26S, R20E, or the NW1/4 of Section 2, T26S, R20E."

District Response

The request is approved. The draft condition was revised as follows:

ATC S-1327-141-0 through -145-0

9. This steam generator shall be located at ~~SW1/4 of the SE1/4~~ of the NE1/4 of Section 11, T26S, R20E, or the NW 1/4 of Section 2, T26S, R20E. [District Rule 2201] N

Source Comment # 3

Modification (revision) of Condition #16 of all ATCs to remove the higher heating value analysis as a weekly requirement as there is no permit limit that would allow for the demonstration of compliance and the testing frequency to change to quarterly. Vintage requests that the following condition be added to the ATC to allow for quarterly demonstration of higher heating value: "The higher heating value of the gaseous fuel being burned in the unit shall be determined on a quarterly basis."

District Response

In considering the request to delete weekly testing of higher heating value (hhv) in Condition # 16, it appears that VPC may have misinterpreted the sulfur testing requirements. Weekly testing for sulfur is only required for 8 consecutive weeks if a unit is in compliance and thereafter quarterly analysis for sulfur is required. VPC may have interpreted Conditions # 16 and # 34 (below) as a requirement for continuous weekly or monthly sampling. Please note that Condition #34 does demonstrate compliance with a change in testing frequency. The first two monthly records (required by Condition #34) would include 8 weeks of sulfur and hhv testing. The subsequent quarterly records required by Condition #16 (and #34) would indicate that a transition from weekly to quarterly fuel testing frequency had taken place (if unit is in compliance). This request was not approved.

16. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320] N
34. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320] N

Source Comment # 4

Modification (revision) of Condition #1 of all ATCs to clarify that the variable frequency drive electrical motors are required in addition to either the convection

section heat transfer surface area or overall thermal efficiency requirements. The proposed condition would read "Steam generator shall be equipped with variable frequency electrical motors driving the blower and water pump and either 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%."

District Response

The draft conditions were revised as requested to indicate that the variable frequency drive electric motors driving the blower and water pump are mandatory regardless of the heat transfer option (235 ft of surface area or thermal efficiency rating of 88%) as follows (new words underlined, deleted words in strikeout):

Condition #1 of the ATCs will be revised as follows:

1. Steam generator shall be equipped with equipped 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% ~~and variable frequency drive electrical motors driving the blower and water pump~~. [Public Resources Code 21000-21177: California Environmental Quality Act] N



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1327-141-0

ISSUANCE DATE: 06/22/2011

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

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: 2&11 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT)

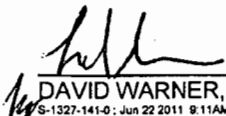
CONDITIONS

1. 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]
2. 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]
3. 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]
4. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]
5. 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]

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-1327-141-0; Jun 22 2011 9:11AM - EDGEHILR : Joint Inspection NOT Required

6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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]
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
9. This steam generator shall be located at the NE1/4 of Section 11, T26S, R20E, or the NW 1/4 of Section 2, T26S, R20E. [District Rule 2201]
10. Permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201]
11. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320]
12. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201]
13. Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201]
14. Heat input to this unit shall not exceed 647,802 MMBtu in any one calendar year. [District Rule 2201]
15. Emission rates shall not exceed: PM10: 0.0035 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320]
16. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320]
17. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320]
18. 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]
19. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320]
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 2201, 4305, 4306, and 4320]
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 2201, 4305, 4306, and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320]
23. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 2201, 4305, 4306, and 4320]
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 2201, 4305, 4306, and 4320]
25. Source testing to measure NO_x 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 2201, 4305, 4306, and 4320]
26. 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]
27. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320]
28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320]
29. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320]
30. 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 2201, 4305, 4306, and 4320]
31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
32. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320]
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, 2201, 4305, 4306, and 4320]
34. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NO_x: 327 lb/quarter; and PM₁₀: 251/quarter. Offset shall be provided at the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 12/18/08). PM₁₀ may be offset using SO_x at an interpollutant offset ratio of 1.0 tons SO_x/ton PM₁₀. [District Rule 2201]
35. ERC Certificate Numbers (or a certificate split from this certificate) 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]
36. ATC shall be implemented concurrently with or subsequent to ATCs S-1327-155-1 through '-158-1. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1327-142-0

ISSUANCE DATE: 06/22/2011

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC

MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: 2&11 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

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1. 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]
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12. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201]
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17. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320]
18. 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]
19. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. Source test shall be conducted using a gas mixture including PUC-quality natural gas and the expected amounts of tank vapor recovery (TVR) gas and thermally enhanced oil recovery (TEOR) gas for PM10 emissions testing. [District Rules 2201, 4305, 4306, and 4320]
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 2201, 4305, 4306, and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

21. If either the NO_x 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 2201, 4305, 4306, and 4320]
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320]
23. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 2201, 4305, 4306, and 4320]
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 2201, 4305, 4306, and 4320]
25. Source testing to measure NO_x 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 2201, 4305, 4306, and 4320]
26. 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]
27. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320]
28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320]
29. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320]
30. 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 2201, 4305, 4306, and 4320]
31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
32. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320]
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, 2201, 4305, 4306, and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

34. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 327 lb/quarter; and PM10: 251/quarter. Offset shall be provided at the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 12/18/08). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201]
35. ERC Certificate Numbers S-3585-2, S-3588-2, N-949-5 and S-3593-5 (or a certificate split from this certificate) 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]
36. ATC shall be implemented concurrently with or subsequent to ATCs S-1327-155-1 through '-158-1. [District Rule 2201]
37. PTOs S-1327-107-0, '-111-0, '-115-0, '-116-0, '-120-0, '-137-0, and '-138-0 shall be canceled upon implementation of this ATC. [District Rule 2201]



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1327-143-0

ISSUANCE DATE: 06/22/2011

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

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: 2&11 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT)

CONDITIONS

1. 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]
2. 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]
3. 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]
4. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]
5. 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]

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-1327-143-0; Jun 22 2011 9:11AM - EDGEHILR : Joint Inspection NOT Required

6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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]
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
9. This steam generator shall be located at the NE1/4 of Section 11, T26S, R20E, or the NW 1/4 of Section 2, T26S, R20E. [District Rule 2201]
10. Permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201]
11. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320]
12. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201]
13. Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201]
14. Heat input to this unit shall not exceed 647,802 MMBtu in any one calendar year. [District Rule 2201]
15. Emission rates shall not exceed: PM10: 0.0035 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320]
16. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320]
17. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320]
18. 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]
19. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. Source test shall be conducted using a gas mixture including PUC-quality natural gas and the expected amounts of tank vapor recovery (TVR) gas and thermally enhanced oil recovery (TEOR) gas for PM10 emissions testing. [District Rules 2201, 4305, 4306, and 4320]
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 2201, 4305, 4306, and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

21. If either the NO_x 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 2201, 4305, 4306, and 4320]
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320]
23. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 2201, 4305, 4306, and 4320]
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 2201, 4305, 4306, and 4320]
25. Source testing to measure NO_x 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 2201, 4305, 4306, and 4320]
26. 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]
27. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320]
28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320]
29. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320]
30. 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 2201, 4305, 4306, and 4320]
31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
32. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320]
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, 2201, 4305, 4306, and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

34. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 327 lb/quarter; and PM10: 251/quarter. Offset shall be provided at the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 12/18/08). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201]
35. ERC Certificate Numbers S-3585-2, S-3588-2, N-949-5 and S-3593-5 (or a certificate split from this certificate) 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]
36. ATC shall be implemented concurrently with or subsequent to ATCs S-1327-155-1 through '-158-1. [District Rule 2201]
37. PTOs S-1327-107-0, '-111-0, '-115-0, '-116-0, '-120-0, '-137-0, and '-138-0 shall be canceled upon implementation of this ATC. [District Rule 2201]



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1327-144-0

ISSUANCE DATE: 06/22/2011

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC

MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: 2&11 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT)

CONDITIONS

1. 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]
2. 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]
3. 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]
4. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]
5. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

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6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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]
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
9. This steam generator shall be located at the NE 1/4 of Section 11, T26S, R20E, or the NW 1/4 of Section 2, T26S, R20E. [District Rule 2201]
10. Permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201]
11. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320]
12. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201]
13. Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201]
14. Heat input to this unit shall not exceed 647,802 MMBtu in any one calendar year. [District Rule 2201]
15. Emission rates shall not exceed: PM10: 0.0035 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320]
16. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320]
17. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320]
18. 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]
19. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. Source test shall be conducted using a gas mixture including PUC-quality natural gas and the expected amounts of tank vapor recovery (TVR) gas and thermally enhanced oil recovery (TEOR) gas for PM10 emissions testing. [District Rules 2201, 4305, 4306, and 4320]
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 2201, 4305, 4306, and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

21. If either the NO_x 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 2201, 4305, 4306, and 4320]
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320]
23. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 2201, 4305, 4306, and 4320]
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 2201, 4305, 4306, and 4320]
25. Source testing to measure NO_x 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 2201, 4305, 4306, and 4320]
26. 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]
27. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320]
28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320]
29. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320]
30. 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 2201, 4305, 4306, and 4320]
31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
32. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320]
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, 2201, 4305, 4306, and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

34. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 327 lb/quarter; and PM10: 251/quarter. Offset shall be provided at the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 12/18/08). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201]
35. ERC Certificate Numbers S-3585-2, S-3588-2, N-949-5 and S-3593-5 (or a certificate split from this certificate) 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]
36. ATC shall be implemented concurrently with or subsequent to ATCs S-1327-155-1 through '-158-1. [District Rule 2201]
37. PTOs S-1327-107-0, '-111-0, '-115-0, '-116-0, '-120-0, '-137-0, and '-138-0 shall be canceled upon implementation of this ATC. [District Rule 2201]



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1327-145-0

ISSUANCE DATE: 06/22/2011

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC

MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: 2&11 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT)

CONDITIONS

1. 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]
2. 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]
3. 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]
4. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]
5. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO



DAVID WARNER, Director of Permit Services

S-1327-145-0: Jun 22 2011 9:11AM - EDGEHLR : Joint Inspection NOT Required

6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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]
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
9. This steam generator shall be located at the NE1/4 of Section 11, T26S, R20E, or the NW 1/4 of Section 2, T26S, R20E. [District Rule 2201]
10. Permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201]
11. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320]
12. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201]
13. Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201]
14. Heat input to this unit shall not exceed 647,802 MMBtu in any one calendar year. [District Rule 2201]
15. Emission rates shall not exceed: PM10: 0.0035 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320]
16. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320]
17. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320]
18. 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]
19. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. Source test shall be conducted using a gas mixture including PUC-quality natural gas and the expected amounts of tank vapor recovery (TVR) gas and thermally enhanced oil recovery (TEOR) gas for PM10 emissions testing. [District Rules 2201, 4305, 4306, and 4320]
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 2201, 4305, 4306, and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

21. If either the NO_x 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 2201, 4305, 4306, and 4320]
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320]
23. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 2201, 4305, 4306, and 4320]
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 2201, 4305, 4306, and 4320]
25. Source testing to measure NO_x 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 2201, 4305, 4306, and 4320]
26. 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]
27. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320]
28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320]
29. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320]
30. 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 2201, 4305, 4306, and 4320]
31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
32. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320]
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, 2201, 4305, 4306, and 4320]

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34. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 327 lb/quarter; and PM10: 251/quarter. Offset shall be provided at the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 12/18/08). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201]
35. ERC Certificate Numbers S-3585-2, S-3588-2, N-949-5 and S-3593-5 (or a certificate split from this certificate) 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]
36. ATC shall be implemented concurrently with or subsequent to ATCs S-1327-155-1 through '-158-1. [District Rule 2201]
37. PTOs S-1327-107-0, '-111-0, '-115-0, '-116-0, '-120-0, '-137-0, and '-138-0 shall be canceled upon implementation of this ATC. [District Rule 2201]