



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT  
FEB 20 2014



HEALTHY AIR LIVING™

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

**Re Final - Authority to Construct / COC (Significant Mod)**  
**District Facility # S-1738**  
**Project # S-1134181**

Dear Mr. Barulich

The Air Pollution Control Officer has issued Authorities to Construct (S-1738-470-0 through -484-0) with Certificates of Conformity to Vintage Production California, LLC. This project involves operating fifteen gas-fired IC engines powering crude oil well pumps at various unspecified locations within Vintage Production California's Light Oil Western Stationary Source in Kern County California. Enclosed are the Authorities to Construct 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 permit was published on December 26, 2013. The District's analysis of the proposal was also sent to CARB and US EPA Region IX on December 23, 2013. No comments were received following the District's preliminary decision on this project.

Prior to operating with modifications authorized by the Authority to Construct, you must submit an application to modify the Title V permit as an administrative amendment in accordance with District Rule 2520, Section 11.5.

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

Sincerely,

David Warner  
Director of Permit Services

DW KR/st

Enclosures

cc Mike Tollstrup, CARB (w/enclosure) via email  
cc Gerardo C. Rios, EPA (w/enclosure) via email

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™**

## AUTHORITY TO CONSTRUCT

**PERMIT NO** S-1738-470-0

**ISSUANCE DATE** 02/12/2014

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

**LOCATION** LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

### EQUIPMENT DESCRIPTION

233 BHP WAUKESHA MODEL F 1905 (OR EQUIVALENT) PUC GAS/PRODUCED GAS/LPG FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER (OPERATED AT VARIOUS UNSPECIFIED LOCATIONS WITHIN STATIONARY SOURCE S-1738)

## 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 - 103 lb, 2nd quarter - 103 lb, 3rd quarter - 103 lb, and fourth quarter - 103 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 ERC Certificate Number N-1148-2 (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] 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-1738-470-0 Feb 12 2014 8:55AM RICKARDK Job Inspection NOT Required

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

- 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 - 179 lb, 2nd quarter - 179 lb, 3rd quarter - 179 lb, and fourth quarter - 179 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
- 6 ERC Certificate Numbers N-1139-1 and N-1140-1 (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 This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative [District Rule 4702] Federally Enforceable Through Title V Permit
- 8 This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District [District Rule 4702] Federally Enforceable Through Title V Permit
- 9 The operator shall collect data through the I&M plan in a form approved by the APCO [District Rule 4702] Federally Enforceable Through Title V Permit
- 10 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]
- 11 The exhaust stack height shall be at least 12 feet [District Rule 4102]
- 12 Two of the 15 engines (S-1738-470 through '484) shall always operate at least 500 feet away from any receptor and the remaining 13 engines shall always operate at least 1,500 feet away from any receptor [District Rule 4102]
- 13 Unit shall not be operated within 1,000 feet of any K-12 school [CH&SC 42301.6]
- 14 Emissions rates shall not exceed any of the following PM<sub>10</sub> 0.01 g/bhp-hr; NO<sub>x</sub> (as NO<sub>2</sub>) 5 ppmvd @15% O<sub>2</sub>, VOC (as CH<sub>4</sub>) 25 ppmvd @15% O<sub>2</sub>, CO 50 ppmvd @15% O<sub>2</sub>, or SO<sub>x</sub> (as SO<sub>2</sub>) 0.0438 g/bhp-hr Emission limits are on a 15 minute average [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
- 15 Sulfur content of fuel shall not exceed any of the following limits produced natural gas 5.2 grains/100 dscf and LPG 5.4 grains/100 dscf [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit
- ~~16 The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, and O<sub>2</sub> at least once every calendar quarter using a portable emission monitor that meets District specifications Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring Monitoring shall be performed within 1 day of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule or within the last quarter if on a quarterly monitoring schedule Records must be maintained of the dates of non-operation to validate extended monitoring frequencies [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit~~
- 17 If the NO<sub>x</sub> and/or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the permitted emission concentration the permittee shall return the emissions to within the acceptable range as soon as possible but no longer than 8 hours after detection If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 4701 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 18 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 Rule 4702] Federally Enforceable Through Title V Permit
- 19 The permittee shall maintain records of (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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 4701 and 4702] Federally Enforceable Through Title V Permit
- 20 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
- 21 Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start up. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 22 Source testing to measure natural gas-combustion NO<sub>x</sub>, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 23 Compliance with NO<sub>x</sub>, CO, and VOC emission limits may be demonstrated by submission of annual source test results from one or more representative IC engines as approved by the APCO. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 24 For representative testing, an engine operating log shall be maintained for each engine in the group. The log shall include, on a monthly basis, the total hours of operation, and maintenance or modifications performed. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 25 Should any representative engines exceed the required emission limits, each engine in the group shall demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested engines being considered in violation of this rule. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- ~~26 Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit~~
- 27 Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28 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. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29 Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 30 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
- 31 The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 1081, 4701, and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 32 Permittee shall maintain records of either operating hours per day, location (e.g. well number) at which IC engine is operated, source test results, monitoring data, and other information deemed necessary by the APCO to demonstrate compliance with Rules 4701 and 4702 for a period of five years and shall make such records readily available for District inspection upon request [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 33 Portable analyzers will be maintained and calibrated according to the manufacturer's specifications in order to ensure they operate properly and their accuracy remains within specification. EPA protocol calibration gases will be utilized to ensure proper calibration. After a successful calibration, the accuracy of the analyzer may be verified by utilizing reference gases that most closely approximate the emission limit to be checked. Between calibrations, the analyzer shall be checked before each use with reference gases to ensure its sensor cells are operational and accurate [District Rule 4702] Federally Enforceable Through Title V Permit
- 34 Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO<sub>x</sub> and CO [District Rule 1081, 4701, and 4702] Federally Enforceable Through Title V Permit
- 35 The following conditions must be met for representative units to be used to test for pollutant (NO<sub>x</sub>) emissions for a group of units: 1) all units are initially source tested and emissions from each unit in the group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of rated brake horsepower, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing [District Rule 4702] Federally Enforceable Through Title V Permit
- 36 All units in a group for which representative units are annually source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative units [District Rule 4702] Federally Enforceable Through Title V Permit
- 37 The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, such that in 3 years, all units in the entire group will have been tested at least once [District Rule 4702] Federally Enforceable Through Title V Permit
- 38 Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf [District Rule 4201] Federally Enforceable Through Title V Permit
- 39 If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills [District Rule 2201] Federally Enforceable Through Title V Permit
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- 40 If the engine is not fired exclusively on PUC-regulated natural gas, then the sulfur content of the gas being fired in the IC engine shall be determined using ASTM method D1072, D3031, D4084 or D3246 [District Rule 2201] Federally Enforceable Through Title V Permit
- 41 If the engine is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested annually and whenever a change in the fuel source is made [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 42 Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures [District Rule 4702] Federally Enforceable Through Title V Permit
- 43 The acceptable catalyst temperature differential shall be established by source testing this unit or other representative units as approved by the District. The normal range/level shall be any temperature increase across the catalyst unless compliance with applicable NO<sub>x</sub> and CO emissions limits have been demonstrated through source testing at a similar temperature drop [District Rule 4702] Federally Enforceable Through Title V Permit
- 44 Permittee shall maintain records of the date and time of temperature measurements and the measured temperatures. The records shall also include a description of any corrective action taken to maintain the temperature differential at the acceptable level [District Rule 4702] Federally Enforceable Through Title V Permit
- 45 If the catalyst temperature differential is outside of the normal range/level, the permittee shall notify the District and take corrective action (i.e. temperature differential returned to normal range/level) within one (1) hour of detection. If the catalyst temperature differential rate is not immediately corrected, the permittee shall conduct a source test within 60 days to demonstrate compliance with the applicable emissions limits at the new temperature differential [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 46 The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 47 Permittee shall maintain an engine operating log, on a monthly basis, which includes the following information, total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
- 48 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 Rule 4702] Federally Enforceable Through Title V Permit



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT

  
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## AUTHORITY TO CONSTRUCT

**PERMIT NO** S-1738-471-0

**ISSUANCE DATE** 02/12/2014

**LEGAL OWNER OR OPERATOR** VINTAGE PRODUCTION CALIFORNIA LLC

**MAILING ADDRESS** 9600 MING AVE SUITE 300  
BAKERSFIELD CA 93311

**LOCATION** LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

### EQUIPMENT DESCRIPTION

233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) PUC GAS/PRODUCED GAS/LPG FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER (OPERATED AT VARIOUS UNSPECIFIED LOCATIONS WITHIN STATIONARY SOURCE S-1738)

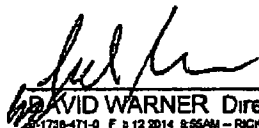
## CONDITIONS

- 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
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- 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 - 103 lb, 2nd quarter - 103 lb, 3rd quarter - 103 lb, and fourth quarter - 103 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
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Seyed Sadredin, Executive Director / APCO



DAVID WARNER, Director of Permit Services

S-1738-471-0 F 12 2014 8:55AM - RICKARDK Joint in photo NOT Required

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- 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 - 179 lb, 2nd quarter - 179 lb, 3rd quarter - 179 lb, and fourth quarter - 179 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
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- 7 This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative [District Rule 4702] Federally Enforceable Through Title V Permit
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- 10 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]
- 11 The exhaust stack height shall be at least 12 feet [District Rule 4102]
- 12 Two of the 15 engines (S-1738-470 through -484) shall always operate at least 500 feet away from any receptor and the remaining 13 engines shall always operate at least 1,500 feet away from any receptor [District Rule 4102]
- 13 Unit shall not be operated within 1,000 feet of any K-12 school [CH&SC 42301.6]
- 14 Emissions rates shall not exceed any of the following PM<sub>10</sub> 0.01 g/bhp-hr; NO<sub>x</sub> (as NO<sub>2</sub>) 5 ppmvd @15% O<sub>2</sub>, VOC (as CH<sub>4</sub>) 25 ppmvd @15% O<sub>2</sub>, CO 50 ppmvd @15% O<sub>2</sub>, or SO<sub>x</sub> (as SO<sub>2</sub>) 0.0438 g/bhp-hr Emission limits are on a 15 minute average [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
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- 17 If the NO<sub>x</sub> and/or CO concentrations corrected to 15% O<sub>2</sub> as measured by the portable analyzer exceed the permitted emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 4701 and 4702] Federally Enforceable Through Title V Permit

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- 19 The permittee shall maintain records of (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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 4701 and 4702] Federally Enforceable Through Title V Permit
- 20 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
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- 28 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. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen [District Rule 4702] Federally Enforceable Through Title V Permit
- 29 Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing [District Rule 1081] Federally Enforceable Through Title V Permit
- 30 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
- 31 The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane [District Rules 1081, 4701, and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 32 Permittee shall maintain records of either operating hours per day, location (e.g. well number) at which IC engine is operated, source test results, monitoring data, and other information deemed necessary by the APCO to demonstrate compliance with Rules 4701 and 4702 for a period of five years and shall make such records readily available for District inspection upon request. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 33 Portable analyzers will be maintained and calibrated according to the manufacturer's specifications in order to ensure they operate properly and their accuracy remains within specification. EPA protocol calibration gases will be utilized to ensure proper calibration. After a successful calibration, the accuracy of the analyzer may be verified by utilizing reference gases that most closely approximate the emission limit to be checked. Between calibrations, the analyzer shall be checked before each use with reference gases to ensure its sensor cells are operational and accurate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 34 Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO<sub>x</sub> and CO. [District Rule 1081, 4701, and 4702] Federally Enforceable Through Title V Permit
- 35 The following conditions must be met for representative units to be used to test for pollutant (NO<sub>x</sub>) emissions for a group of units: 1) all units are initially source tested and emissions from each unit in the group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of rated brake horsepower, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing. [District Rule 4702] Federally Enforceable Through Title V Permit
- 36 All units in a group for which representative units are annually source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative units. [District Rule 4702] Federally Enforceable Through Title V Permit
- 37 The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, such that in 3 years, all units in the entire group will have been tested at least once. [District Rule 4702] Federally Enforceable Through Title V Permit
- 38 Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf. [District Rule 4201] Federally Enforceable Through Title V Permit
- 39 If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
- 
- 40 If the engine is not fired exclusively on PUC-regulated natural gas, then the sulfur content of the gas being fired in the IC engine shall be determined using ASTM method D1072, D3031, D4084 or D3246. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41 If the engine is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested annually and whenever a change in the fuel source is made. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 42 Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures. [District Rule 4702] Federally Enforceable Through Title V Permit
- 43 The acceptable catalyst temperature differential shall be established by source testing this unit or other representative units as approved by the District. The normal range/level shall be any temperature increase across the catalyst unless compliance with applicable NO<sub>x</sub> and CO emissions limits have been demonstrated through source testing at a similar temperature drop. [District Rule 4702] Federally Enforceable Through Title V Permit
- 44 Permittee shall maintain records of the date and time of temperature measurements and the measured temperatures. The records shall also include a description of any corrective action taken to maintain the temperature differential at the acceptable level. [District Rule 4702] Federally Enforceable Through Title V Permit
- 45 If the catalyst temperature differential is outside of the normal range/level, the permittee shall notify the District and take corrective action (i.e. temperature differential returned to normal range/level) within one (1) hour of detection. If the catalyst temperature differential rate is not immediately corrected, the permittee shall conduct a source test within 60 days, to demonstrate compliance with the applicable emissions limits at the new temperature differential. [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 46 The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 47 Permittee shall maintain an engine operating log, on a monthly basis, which includes the following information, total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
- 48 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 Rule 4702] Federally Enforceable Through Title V Permit



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT

  
**HEALTHY AIR LIVING™**

## AUTHORITY TO CONSTRUCT

**PERMIT NO** S-1738-472-0

**ISSUANCE DATE** 02/12/2014

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

**LOCATION** LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

### EQUIPMENT DESCRIPTION

233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) PUC GAS/PRODUCED GAS/LPG FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER (OPERATED AT VARIOUS UNSPECIFIED LOCATIONS WITHIN STATIONARY SOURCE S-1738)

## 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 - 103 lb, 2nd quarter - 103 lb, 3rd quarter - 103 lb, and fourth quarter - 103 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 ERC Certificate Number N-1148-2 (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] 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-1738-472-0 Feb 12 2014 9:55AM - RICKARDK Joint Inspection NOT Required

- 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 - 179 lb, 2nd quarter - 179 lb, 3rd quarter - 179 lb, and fourth quarter - 179 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
- 6 ERC Certificate Numbers N-1139-1 and N-1140-1 (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 This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative [District Rule 4702] Federally Enforceable Through Title V Permit
- 8 This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
- 9 The operator shall collect data through the I&M plan in a form approved by the APCO [District Rule 4702] Federally Enforceable Through Title V Permit
- 10 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]
- 11 The exhaust stack height shall be at least 12 feet [District Rule 4102]
- 12 Two of the 15 engines (S-1738-470 through S-484) shall always operate at least 500 feet away from any receptor and the remaining 13 engines shall always operate at least 1,500 feet away from any receptor [District Rule 4102]
- 13 Unit shall not be operated within 1,000 feet of any K-12 school [CH&SC 42301.6]
- 14 Emissions rates shall not exceed any of the following PM<sub>10</sub> 0.01 g/bhp-hr, NO<sub>x</sub> (as NO<sub>2</sub>) 5 ppmvd @15% O<sub>2</sub>, VOC (as CH<sub>4</sub>) 25 ppmvd @15% O<sub>2</sub>, CO 50 ppmvd @15% O<sub>2</sub> or SO<sub>x</sub> (as SO<sub>2</sub>) 0.0438 g/bhp-hr Emission limits are on a 15 minute average [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
- 15 Sulfur content of fuel shall not exceed any of the following limits produced natural gas 5.2 grains/100 dscf and LPG 5.4 grains/100 dscf [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit
- 16 The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, and O<sub>2</sub> at least once every calendar quarter using a portable emission monitor that meets District specifications Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring Monitoring shall be performed within 1 day of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule or within the last quarter if on a quarterly monitoring schedule Records must be maintained of the dates of non-operation to validate extended monitoring frequencies [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 17 If the NO<sub>x</sub> and/or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the permitted emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible but no longer than 8 hours after detection If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 4701 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 18 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 Rule 4702] Federally Enforceable Through Title V Permit
- 19 The permittee shall maintain records of (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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 4701 and 4702] Federally Enforceable Through Title V Permit
- 20 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
- 21 Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start up. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 22 Source testing to measure natural gas-combustion NO<sub>x</sub>, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 23 Compliance with NO<sub>x</sub>, CO, and VOC emission limits may be demonstrated by submission of annual source test results from one or more representative IC engines as approved by the APCO. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 24 For representative testing, an engine operating log shall be maintained for each engine in the group. The log shall include, on a monthly basis, the total hours of operation, and maintenance or modifications performed. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 25 Should any representative engines exceed the required emission limits, each engine in the group shall demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested engines being considered in violation of this rule. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- ~~26 Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit~~
- 27 Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28 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. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29 Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 30 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
- 31 The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 1081, 4701, and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 32 Permittee shall maintain records of either operating hours per day, location (e.g. well number) at which IC engine is operated, source test results, monitoring data, and other information deemed necessary by the APCO to demonstrate compliance with Rules 4701 and 4702 for a period of five years and shall make such records readily available for District inspection upon request [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 33 Portable analyzers will be maintained and calibrated according to the manufacturer's specifications in order to ensure they operate properly and their accuracy remains within specification. EPA protocol calibration gases will be utilized to ensure proper calibration. After a successful calibration, the accuracy of the analyzer may be verified by utilizing reference gases that most closely approximate the emission limit to be checked. Between calibrations, the analyzer shall be checked before each use with reference gases to ensure its sensor cells are operational and accurate [District Rule 4702] Federally Enforceable Through Title V Permit
- 34 Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO<sub>x</sub> and CO [District Rule 1081, 4701, and 4702] Federally Enforceable Through Title V Permit
- 35 The following conditions must be met for representative units to be used to test for pollutant (NO<sub>x</sub>) emissions for a group of units: 1) all units are initially source tested and emissions from each unit in the group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of rated brake horsepower, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing [District Rule 4702] Federally Enforceable Through Title V Permit
- 36 All units in a group for which representative units are annually source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative units [District Rule 4702] Federally Enforceable Through Title V Permit
- 37 The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, such that in 3 years, all units in the entire group will have been tested at least once [District Rule 4702] Federally Enforceable Through Title V Permit
- 38 Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf [District Rule 4201] Federally Enforceable Through Title V Permit
- 39 If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills [District Rule 2201] Federally Enforceable Through Title V Permit
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- 40 If the engine is not fired exclusively on PUC-regulated natural gas, then the sulfur content of the gas being fired in the IC engine shall be determined using ASTM method D1072, D3031, D4084 or D3246 [District Rule 2201] Federally Enforceable Through Title V Permit
- 41 If the engine is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested annually and whenever a change in the fuel source is made [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 42 Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures [District Rule 4702] Federally Enforceable Through Title V Permit
- 43 The acceptable catalyst temperature differential shall be established by source testing this unit or other representative units as approved by the District. The normal range/level shall be any temperature increase across the catalyst unless compliance with applicable NO<sub>x</sub> and CO emissions limits have been demonstrated through source testing at a similar temperature drop [District Rule 4702] Federally Enforceable Through Title V Permit
- 44 Permittee shall maintain records of the date and time of temperature measurements and the measured temperatures. The records shall also include a description of any corrective action taken to maintain the temperature differential at the acceptable level [District Rule 4702] Federally Enforceable Through Title V Permit
- 45 If the catalyst temperature differential is outside of the normal range/level, the permittee shall notify the District and take corrective action (i.e. temperature differential returned to normal range/level) within one (1) hour of detection. If the catalyst temperature differential rate is not immediately corrected, the permittee shall conduct a source test within 60 days, to demonstrate compliance with the applicable emissions limits at the new temperature differential [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 46 The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 47 Permittee shall maintain an engine operating log, on a monthly basis, which includes the following information, total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
- 48 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 Rule 4702] Federally Enforceable Through Title V Permit





**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT

  
**HEALTHY AIR LIVING™**

## AUTHORITY TO CONSTRUCT

**PERMIT NO** S-1738-473-0

**ISSUANCE DATE** 02/12/2014

**LEGAL OWNER OR OPERATOR** VINTAGE PRODUCTION CALIFORNIA LLC

**MAILING ADDRESS** 9600 MING AVE SUITE 300  
BAKERSFIELD CA 93311

**LOCATION** LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

### EQUIPMENT DESCRIPTION

233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) PUC GAS/PRODUCED GAS/LPG FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER (OPERATED AT VARIOUS UNSPECIFIED LOCATIONS WITHIN STATIONARY SOURCE S-1738)

## 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 - 103 lb, 2nd quarter - 103 lb, 3rd quarter - 103 lb, and fourth quarter - 103 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 ERC Certificate Number N-1148-2 (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] 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-1738-473-0 Feb 12 2014 9:55AM - R CKARDK Joint Inspection NOT Required

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

- 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 - 179 lb, 2nd quarter - 179 lb, 3rd quarter - 179 lb, and fourth quarter - 179 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
- 6 ERC Certificate Numbers N 1139-1 and N-1140 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 This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative [District Rule 4702] Federally Enforceable Through Title V Permit
- 8 This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District [District Rule 4702] Federally Enforceable Through Title V Permit
- 9 The operator shall collect data through the I&M plan in a form approved by the APCO [District Rule 4702] Federally Enforceable Through Title V Permit
- 10 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]
- 11 The exhaust stack height shall be at least 12 feet [District Rule 4102]
- 12 Two of the 15 engines (S 1738-470 through '484) shall always operate at least 500 feet away from any receptor and the remaining 13 engines shall always operate at least 1,500 feet away from any receptor [District Rule 4102]
- 13 Unit shall not be operated within 1 000 feet of any K-12 school [CH&SC 42301 6]
- 14 Emissions rates shall not exceed any of the following PM<sub>10</sub> 0.01 g/bhp-hr, NO<sub>x</sub> (as NO<sub>2</sub>) 5 ppmvd @15% O<sub>2</sub>, VOC (as CH<sub>4</sub>) 25 ppmvd @15% O<sub>2</sub>, CO 50 ppmvd @15% O<sub>2</sub>, or SO<sub>x</sub> (as SO<sub>2</sub>) 0.0438 g/bhp-hr Emission limits are on a 15 minute average [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
- 15 Sulfur content of fuel shall not exceed any of the following limits produced natural gas 5.2 grains/100 dscf and LPG 5.4 grains/100 dscf [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit
- 16 The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, and O<sub>2</sub> at least once every calendar quarter using a portable emission monitor that meets District specifications Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring Monitoring shall be performed within 1 day of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule Records must be maintained of the dates of non-operation to validate extended monitoring frequencies [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 17 If the NO<sub>x</sub> and/or CO concentrations corrected to 15% O<sub>2</sub> as measured by the portable analyzer exceed the permitted emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 4701 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 18 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 Rule 4702] Federally Enforceable Through Title V Permit
- 19 The permittee shall maintain records of (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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 4701 and 4702] Federally Enforceable Through Title V Permit
- 20 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
- 21 Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 22 Source testing to measure natural gas-combustion NO<sub>x</sub>, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 23 Compliance with NO<sub>x</sub>, CO, and VOC emission limits may be demonstrated by submission of annual source test results from one or more representative IC engines as approved by the APCO. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 24 For representative testing, an engine operating log shall be maintained for each engine in the group. The log shall include, on a monthly basis, the total hours of operation, and maintenance or modifications performed. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 25 Should any representative engines exceed the required emission limits, each engine in the group shall demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested engines being considered in violation of this rule. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- ~~26 Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit~~
- 27 Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28 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. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29 Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 30 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
- 31 The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 1081, 4701, and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 32 Permittee shall maintain records of either operating hours per day, location (e g well number) at which IC engine is operated, source test results, monitoring data, and other information deemed necessary by the APCO to demonstrate compliance with Rules 4701 and 4702 for a period of five years and shall make such records readily available for District inspection upon request [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 33 Portable analyzers will be maintained and calibrated according to the manufacturer's specifications in order to ensure they operate properly and their accuracy remains within specification EPA protocol calibration gases will be utilized to ensure proper calibration After a successful calibration, the accuracy of the analyzer may be verified by utilizing reference gases that most closely approximate the emission limit to be checked Between calibrations, the analyzer shall be checked before each use with reference gases to ensure its sensor cells are operational and accurate [District Rule 4702] Federally Enforceable Through Title V Permit
- 34 Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO<sub>x</sub> and CO [District Rule 1081, 4701, and 4702] Federally Enforceable Through Title V Permit
- 35 The following conditions must be met for representative units to be used to test for pollutant (NO<sub>x</sub>) emissions for a group of units 1) all units are initially source tested and emissions from each unit in the group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of rated brake horsepower, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing [District Rule 4702] Federally Enforceable Through Title V Permit
- 36 All units in a group for which representative units are annually source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative units [District Rule 4702] Federally Enforceable Through Title V Permit
- 37 The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group The units included in the 30% shall be rotated, such that in 3 years, all units in the entire group will have been tested at least once [District Rule 4702] Federally Enforceable Through Title V Permit
- 38 Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf [District Rule 4201] Federally Enforceable Through Title V Permit
- 39 If the IC engine is fired on PUC-regulated natural gas then maintain on file copies of all natural gas bills [District Rule 2201] Federally Enforceable Through Title V Permit
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- 40 If the engine is not fired exclusively on PUC-regulated natural gas, then the sulfur content of the gas being fired in the IC engine shall be determined using ASTM method D1072, D3031, D4084 or D3246 [District Rule 2201] Federally Enforceable Through Title V Permit
- 41 If the engine is not fired exclusively on PUC regulated natural gas the sulfur content of each fuel source shall be tested annually and whenever a change in the fuel source is made [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 42 Permittee shall monitor and record, on a monthly basis the catalyst inlet and outlet temperatures [District Rule 4702] Federally Enforceable Through Title V Permit
- 43 The acceptable catalyst temperature differential shall be established by source testing this unit or other representative units as approved by the District The normal range/level shall be any temperature increase across the catalyst unless compliance with applicable NO<sub>x</sub> and CO emissions limits have been demonstrated through source testing at a similar temperature drop [District Rule 4702] Federally Enforceable Through Title V Permit
- 44 Permittee shall maintain records of the date and time of temperature measurements and the measured temperatures The records shall also include a description of any corrective action taken to maintain the temperature differential at the acceptable level [District Rule 4702] Federally Enforceable Through Title V Permit
- 45 If the catalyst temperature differential is outside of the normal range/level, the permittee shall notify the District and take corrective action (i e temperature differential returned to normal range/level) with one (1) hour of detection If the catalyst temperature differential rate is not immediately corrected, the permittee shall conduct a source test within 60 days, to demonstrate compliance with the applicable emissions limits at the new temperature differential [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 46 The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 47 Permittee shall maintain an engine operating log, on a monthly basis, which includes the following information, total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
- 48 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 Rule 4702] Federally Enforceable Through Title V Permit



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT

  
**HEALTHY AIR LIVING™**

## AUTHORITY TO CONSTRUCT

**PERMIT NO** S-1738-474-0

**ISSUANCE DATE** 02/12/2014

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

**LOCATION** LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

### EQUIPMENT DESCRIPTION

233 BHP WAUKESHA MODEL F 1905 (OR EQUIVALENT) PUC GAS/PRODUCED GAS/LPG FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER (OPERATED AT VARIOUS UNSPECIFIED LOCATIONS WITHIN STATIONARY SOURCE S-1738)

## 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 - 103 lb, 2nd quarter - 103 lb, 3rd quarter - 103 lb, and fourth quarter - 103 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 ERC Certificate Number N-1148-2 (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] 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.

Sayed Sadredin Executive Director / APCO

DAVID WARNER Director of Permit Services

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- 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 - 179 lb, 2nd quarter - 179 lb, 3rd quarter - 179 lb, and fourth quarter - 179 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
- 6 ERC Certificate Numbers N-1139-1 and N-1140-1 (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 This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative [District Rule 4702] Federally Enforceable Through Title V Permit
- 8 This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District [District Rule 4702] Federally Enforceable Through Title V Permit
- 9 The operator shall collect data through the I&M plan in a form approved by the APCO [District Rule 4702] Federally Enforceable Through Title V Permit
- 10 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]
- 11 The exhaust stack height shall be at least 12 feet [District Rule 4102]
- 12 Two of the 15 engines (S-1738-470 through -484) shall always operate at least 500 feet away from any receptor and the remaining 13 engines shall always operate at least 1,500 feet away from any receptor [District Rule 4102]
- 13 Unit shall not be operated within 1,000 feet of any K-12 school [CH&SC 42301.6]
- 14 Emissions rates shall not exceed any of the following PM<sub>10</sub> 0.01 g/bhp-hr NO<sub>x</sub> (as NO<sub>2</sub>) 5 ppmvd @15% O<sub>2</sub>, VOC (as CH<sub>4</sub>) 25 ppmvd @15% O<sub>2</sub>, CO 50 ppmvd @15% O<sub>2</sub>, or SO<sub>x</sub> (as SO<sub>2</sub>) 0.0438 g/bhp-hr Emission limits are on a 15 minute average [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
- 15 Sulfur content of fuel shall not exceed any of the following limits produced natural gas 5.2 grains/100 dscf and LPG 5.4 grains/100 dscf [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
- 16 The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, and O<sub>2</sub> at least once every calendar quarter using a portable emission monitor that meets District specifications Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring Monitoring shall be performed within 1 day of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule Records must be maintained of the dates of non-operation to validate extended monitoring frequencies [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 17 If the NO<sub>x</sub> and/or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer exceed the permitted emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible but no longer than 8 hours after detection If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 4701 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 18 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 Rule 4702] Federally Enforceable Through Title V Permit
- 19 The permittee shall maintain records of (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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 4701 and 4702] Federally Enforceable Through Title V Permit
- 20 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
- 21 Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 22 Source testing to measure natural gas-combustion NO<sub>x</sub>, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 23 Compliance with NO<sub>x</sub>, CO, and VOC emission limits may be demonstrated by submission of annual source test results from one or more representative IC engines as approved by the APCO. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 24 For representative testing, an engine operating log shall be maintained for each engine in the group. The log shall include, on a monthly basis, the total hours of operation, and maintenance or modifications performed. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 25 Should any representative engines exceed the required emission limits, each engine in the group shall demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested engines being considered in violation of this rule. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 26 Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
- 27 Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28 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. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29 Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 30 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
- 31 The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 1081, 4701 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE



- 32 Permittee shall maintain records of either operating hours per day location (e.g. well number) at which IC engine is operated, source test results, monitoring data, and other information deemed necessary by the APCO to demonstrate compliance with Rules 4701 and 4702 for a period of five years and shall make such records readily available for District inspection upon request [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 33 Portable analyzers will be maintained and calibrated according to the manufacturer's specifications in order to ensure they operate properly and their accuracy remains within specification EPA protocol calibration gases will be utilized to ensure proper calibration. After a successful calibration, the accuracy of the analyzer may be verified by utilizing reference gases that most closely approximate the emission limit to be checked Between calibrations, the analyzer shall be checked before each use with reference gases to ensure its sensor cells are operational and accurate [District Rule 4702] Federally Enforceable Through Title V Permit
- 34 Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx, and CO [District Rule 1081, 4701, and 4702] Federally Enforceable Through Title V Permit
- 35 The following conditions must be met for representative units to be used to test for pollutant (NOx) emissions for a group of units 1) all units are initially source tested and emissions from each unit in the group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of rated brake horsepower, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing [District Rule 4702] Federally Enforceable Through Title V Permit
- 36 All units in a group for which representative units are annually source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative units [District Rule 4702] Federally Enforceable Through Title V Permit
- 37 The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group The units included in the 30% shall be rotated, such that in 3 years, all units in the entire group will have been tested at least once [District Rule 4702] Federally Enforceable Through Title V Permit
- 38 Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf [District Rule 4201] Federally Enforceable Through Title V Permit
- 39 If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills [District Rule 2201] Federally Enforceable Through Title V Permit
- 
- 40 If the engine is not fired exclusively on PUC-regulated natural gas then the sulfur content of the gas being fired in the IC engine shall be determined using ASTM method D1072, D3031, D4084 or D3246 [District Rule 2201] Federally Enforceable Through Title V Permit
- 41 If the engine is not fired exclusively on PUC-regulated natural gas the sulfur content of each fuel source shall be tested annually and whenever a change in the fuel source is made [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 42 Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures [District Rule 4702] Federally Enforceable Through Title V Permit
- 43 The acceptable catalyst temperature differential shall be established by source testing this unit or other representative units as approved by the District. The normal range/level shall be any temperature increase across the catalyst unless compliance with applicable NOx and CO emissions limits have been demonstrated through source testing at a similar temperature drop [District Rule 4702] Federally Enforceable Through Title V Permit
- 44 Permittee shall maintain records of the date and time of temperature measurements and the measured temperatures The records shall also include a description of any corrective action taken to maintain the temperature differential at the acceptable level [District Rule 4702] Federally Enforceable Through Title V Permit
- 45 If the catalyst temperature differential is outside of the normal range/level, the permittee shall notify the District and take corrective action (i.e. temperature differential returned to normal range/level) within one (1) hour of detection If the catalyst temperature differential rate is not immediately corrected, the permittee shall conduct a source test within 60 days, to demonstrate compliance with the applicable emissions limits at the new temperature differential [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 46 The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 47 Permittee shall maintain an engine operating log, on a monthly basis, which includes the following information, total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
- 48 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 Rule 4702] Federally Enforceable Through Title V Permit



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT

  
**HEALTHY AIR LIVING™**

## AUTHORITY TO CONSTRUCT

**PERMIT NO** S-1738-475-0

**ISSUANCE DATE** 02/12/2014

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

**LOCATION** LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

### EQUIPMENT DESCRIPTION

233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) PUC GAS/PRODUCED GAS/LPG FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER (OPERATED AT VARIOUS UNSPECIFIED LOCATIONS WITHIN STATIONARY SOURCE S-1738)

## 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 - 103 lb, 2nd quarter - 103 lb, 3rd quarter - 103 lb, and fourth quarter - 103 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 ERC Certificate Number N-1148.2 (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] 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  
S-1738-475-0 Feb 12 2014 2:55AM - RICHARDK Joint Inspection NOT Rec'd

- 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 - 179 lb, 2nd quarter - 179 lb, 3rd quarter - 179 lb, and fourth quarter - 179 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
- 6 ERC Certificate Numbers N-1139-1 and N-1140-1 (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 This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative [District Rule 4702] Federally Enforceable Through Title V Permit
- 8 This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District [District Rule 4702] Federally Enforceable Through Title V Permit
- 9 The operator shall collect data through the I&M plan in a form approved by the APCO [District Rule 4702] Federally Enforceable Through Title V Permit
- 10 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]
- 11 The exhaust stack height shall be at least 12 feet [District Rule 4102]
- 12 Two of the 15 engines (S-1738-470 through '484) shall always operate at least 500 feet away from any receptor and the remaining 13 engines shall always operate at least 1,500 feet away from any receptor [District Rule 4102]
- 13 Unit shall not be operated within 1,000 feet of any K-12 school [CH&SC 42301.6]
- 14 Emissions rates shall not exceed any of the following PM<sub>10</sub> 0.01 g/bhp-hr NO<sub>x</sub> (as NO<sub>2</sub>) 5 ppmvd @15% O<sub>2</sub> VOC (as CH<sub>4</sub>) 25 ppmvd @15% O<sub>2</sub>, CO 50 ppmvd @15% O<sub>2</sub>, or SO<sub>x</sub> (as SO<sub>2</sub>) 0.0438 g/bhp-hr Emission limits are on a 15 minute average [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
- 15 Sulfur content of fuel shall not exceed any of the following limits produced natural gas 5.2 grains/100 dscf and LPG 5.4 grains/100 dscf [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit
- 16 The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO and O<sub>2</sub> at least once every calendar quarter using a portable emission monitor that meets District specifications Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring Monitoring shall be performed within 1 day of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule Records must be maintained of the dates of non operation to validate extended monitoring frequencies [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 17 If the NO<sub>x</sub> and/or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the permitted emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible but no longer than 8 hours after detection If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 4701 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 18 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 Rule 4702] Federally Enforceable Through Title V Permit
- 19 The permittee shall maintain records of (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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 4701 and 4702] Federally Enforceable Through Title V Permit
- 20 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
- 21 Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 22 Source testing to measure natural gas-combustion NO<sub>x</sub>, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 23 Compliance with NO<sub>x</sub>, CO, and VOC emission limits may be demonstrated by submission of annual source test results from one or more representative IC engines as approved by the APCO. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 24 For representative testing, an engine operating log shall be maintained for each engine in the group. The log shall include, on a monthly basis, the total hours of operation, and maintenance or modifications performed. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 25 Should any representative engines exceed the required emission limits, each engine in the group shall demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested engines being considered in violation of this rule. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- ~~26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit~~
- 27 Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28 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. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29 Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 30 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
- 31 The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 1081, 4701, and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 32 Permittee shall maintain records of either operating hours per day, location (e.g. well number) at which IC engine is operated, source test results, monitoring data, and other information deemed necessary by the APCO to demonstrate compliance with Rules 4701 and 4702 for a period of five years and shall make such records readily available for District inspection upon request [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 33 Portable analyzers will be maintained and calibrated according to the manufacturer's specifications in order to ensure they operate properly and their accuracy remains within specification. EPA protocol calibration gases will be utilized to ensure proper calibration. After a successful calibration, the accuracy of the analyzer may be verified by utilizing reference gases that most closely approximate the emission limit to be checked. Between calibrations, the analyzer shall be checked before each use with reference gases to ensure its sensor cells are operational and accurate [District Rule 4702] Federally Enforceable Through Title V Permit
- 34 Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO<sub>x</sub> and CO [District Rule 1081, 4701, and 4702] Federally Enforceable Through Title V Permit
- 35 The following conditions must be met for representative units to be used to test for pollutant (NO<sub>x</sub>) emissions for a group of units: 1) all units are initially source tested and emissions from each unit in the group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of rated brake horsepower, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing [District Rule 4702] Federally Enforceable Through Title V Permit
- 36 All units in a group for which representative units are annually source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative units [District Rule 4702] Federally Enforceable Through Title V Permit
- 37 The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, such that in 3 years, all units in the entire group will have been tested at least once [District Rule 4702] Federally Enforceable Through Title V Permit
- 38 Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf [District Rule 4201] Federally Enforceable Through Title V Permit
- 39 If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills [District Rule 2201] Federally Enforceable Through Title V Permit
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- 40 If the engine is not fired exclusively on PUC-regulated natural gas, then the sulfur content of the gas being fired in the IC engine shall be determined using ASTM method D1072, D3031, D4084 or D3246 [District Rule 2201] Federally Enforceable Through Title V Permit
- 41 If the engine is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested annually and whenever a change in the fuel source is made [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 42 Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures [District Rule 4702] Federally Enforceable Through Title V Permit
- 43 The acceptable catalyst temperature differential shall be established by source testing this unit or other representative units as approved by the District. The normal range/level shall be any temperature increase across the catalyst unless compliance with applicable NO<sub>x</sub> and CO emissions limits have been demonstrated through source testing at a similar temperature drop [District Rule 4702] Federally Enforceable Through Title V Permit
- 44 Permittee shall maintain records of the date and time of temperature measurements and the measured temperatures. The records shall also include a description of any corrective action taken to maintain the temperature differential at the acceptable level [District Rule 4702] Federally Enforceable Through Title V Permit
- 45 If the catalyst temperature differential is outside of the normal range/level, the permittee shall notify the District and take corrective action (i.e. temperature differential returned to normal range/level) within one (1) hour of detection. If the catalyst temperature differential rate is not immediately corrected, the permittee shall conduct a source test within 60 days, to demonstrate compliance with the applicable emissions limits at the new temperature differential [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 46 The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 47 Permittee shall maintain an engine operating log, on a monthly basis, which includes the following information: total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
- 48 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 Rule 4702] Federally Enforceable Through Title V Permit



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT



**HEALTHY AIR LIVING™**

## AUTHORITY TO CONSTRUCT

**PERMIT NO** S-1738-476-0

**ISSUANCE DATE** 02/12/2014

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

**LOCATION** LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

### EQUIPMENT DESCRIPTION

233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) PUC GAS/PRODUCED GAS/LPG FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER (OPERATED AT VARIOUS UNSPECIFIED LOCATIONS WITHIN STATIONARY SOURCE S-1738)

## 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 - 103 lb, 2nd quarter - 103 lb, 3rd quarter - 103 lb and fourth quarter - 103 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 ERC Certificate Number N-1148-2 (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] 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-1738-476-0 Feb 12 2014 BSSAM - RICKARDX Joint Inspect NOT Required



- 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 - 179 lb, 2nd quarter - 179 lb, 3rd quarter - 179 lb, and fourth quarter - 179 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
- 6 ERC Certificate Numbers N-1139-1 and N-1140-1 (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 This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative [District Rule 4702] Federally Enforceable Through Title V Permit
- 8 This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District [District Rule 4702] Federally Enforceable Through Title V Permit
- 9 The operator shall collect data through the I&M plan in a form approved by the APCO [District Rule 4702] Federally Enforceable Through Title V Permit
- 10 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]
- 11 The exhaust stack height shall be at least 12 feet [District Rule 4102]
- 12 Two of the 15 engines (S-1738-470 through '484) shall always operate at least 500 feet away from any receptor and the remaining 13 engines shall always operate at least 1,500 feet away from any receptor [District Rule 4102]
- 13 Unit shall not be operated within 1,000 feet of any K-12 school [CH&SC 42301.6]
- 14 Emissions rates shall not exceed any of the following PM<sub>10</sub> 0.01 g/bhp-hr, NO<sub>x</sub> (as NO<sub>2</sub>) 5 ppmvd @15% O<sub>2</sub>, VOC (as CH<sub>4</sub>) 25 ppmvd @15% O<sub>2</sub>, CO 50 ppmvd @15% O<sub>2</sub>, or SO<sub>x</sub> (as SO<sub>2</sub>) 0.0438 g/bhp-hr Emission limits are on a 15 minute average [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
- 15 Sulfur content of fuel shall not exceed any of the following limits produced natural gas 5.2 grains/100 dscf and LPG 5.4 grains/100 dscf [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit
- 16 The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, and O<sub>2</sub> at least once every calendar quarter using a portable emission monitor that meets District specifications Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring Monitoring shall be performed within 1 day of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule or within the last quarter if on a quarterly monitoring schedule Records must be maintained of the dates of non-operation to validate extended monitoring frequencies [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 17 If the NO<sub>x</sub> and/or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the permitted emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible but no longer than 8 hours after detection If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 4701 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 18 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 Rule 4702] Federally Enforceable Through Title V Permit
- 19 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 15% 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 4701 and 4702] Federally Enforceable Through Title V Permit
- 20 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
- 21 Source testing to measure NOx, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 22 Source testing to measure natural gas-combustion NOx, CO, and VOC emissions from this unit shall be measured not less than once every 24 months [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 23 Compliance with NOx, CO, and VOC emission limits may be demonstrated by submission of annual source test results from one or more representative IC engines as approved by the APCO [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 24 For representative testing, an engine operating log shall be maintained for each engine in the group. The log shall include, on a monthly basis, the total hours of operation, and maintenance or modifications performed [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 25 Should any representative engines exceed the required emission limits, each engine in the group shall demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested engines being considered in violation of this rule [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- ~~26 Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory [District Rule 1081] Federally Enforceable Through Title V Permit~~
- 27 Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate [District Rule 4702] Federally Enforceable Through Title V Permit
- 28 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. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv corrected to 15% oxygen [District Rule 4702] Federally Enforceable Through Title V Permit
- 29 Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing [District Rule 1081] Federally Enforceable Through Title V Permit
- 30 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
- 31 The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane [District Rules 1081, 4701, and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 32 Permittee shall maintain records of either operating hours per day, location (e.g. well number) at which IC engine is operated, source test results, monitoring data, and other information deemed necessary by the APCO to demonstrate compliance with Rules 4701 and 4702 for a period of five years and shall make such records readily available for District inspection upon request [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 33 Portable analyzers will be maintained and calibrated according to the manufacturer's specifications in order to ensure they operate properly and their accuracy remains within specification. EPA protocol calibration gases will be utilized to ensure proper calibration. After a successful calibration, the accuracy of the analyzer may be verified by utilizing reference gases that most closely approximate the emission limit to be checked. Between calibrations the analyzer shall be checked before each use with reference gases to ensure its sensor cells are operational and accurate [District Rule 4702] Federally Enforceable Through Title V Permit
- 34 Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO<sub>x</sub> and CO [District Rule 1081, 4701, and 4702] Federally Enforceable Through Title V Permit
- 35 The following conditions must be met for representative units to be used to test for pollutant (NO<sub>x</sub>) emissions for a group of units: 1) all units are initially source tested and emissions from each unit in the group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of rated brake horsepower, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing [District Rule 4702] Federally Enforceable Through Title V Permit
- 36 All units in a group for which representative units are annually source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative units [District Rule 4702] Federally Enforceable Through Title V Permit
- 37 The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, such that in 3 years, all units in the entire group will have been tested at least once [District Rule 4702] Federally Enforceable Through Title V Permit
- 38 Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf [District Rule 4201] Federally Enforceable Through Title V Permit
- 39 If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills [District Rule 2201] Federally Enforceable Through Title V Permit
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- 40 If the engine is not fired exclusively on PUC-regulated natural gas, then the sulfur content of the gas being fired in the IC engine shall be determined using ASTM method D1072, D3031, D4084 or D3246 [District Rule 2201] Federally Enforceable Through Title V Permit
- 41 If the engine is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested annually and whenever a change in the fuel source is made [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 42 Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures [District Rule 4702] Federally Enforceable Through Title V Permit
- 43 The acceptable catalyst temperature differential shall be established by source testing this unit or other representative units as approved by the District. The normal range/level shall be any temperature increase across the catalyst unless compliance with applicable NO<sub>x</sub> and CO emissions limits have been demonstrated through source testing at a similar temperature drop [District Rule 4702] Federally Enforceable Through Title V Permit
- 44 Permittee shall maintain records of the date and time of temperature measurements and the measured temperatures. The records shall also include a description of any corrective action taken to maintain the temperature differential at the acceptable level [District Rule 4702] Federally Enforceable Through Title V Permit
- 45 If the catalyst temperature differential is outside of the normal range/level, the permittee shall notify the District and take corrective action (i.e. temperature differential returned to normal range/level) within one (1) hour of detection. If the catalyst temperature differential rate is not immediately corrected, the permittee shall conduct a source test within 60 days, to demonstrate compliance with the applicable emissions limits at the new temperature differential [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 46 The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 47 Permittee shall maintain an engine operating log, on a monthly basis, which includes the following information, total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
- 48 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 Rule 4702] Federally Enforceable Through Title V Permit



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT

  
**HEALTHY AIR LIVING™**

## AUTHORITY TO CONSTRUCT

**PERMIT NO** S-1738-477-0

**ISSUANCE DATE** 02/12/2014

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

**LOCATION** LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

### EQUIPMENT DESCRIPTION

233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) PUC GAS/PRODUCED GAS/LPG FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER (OPERATED AT VARIOUS UNSPECIFIED LOCATIONS WITHIN STATIONARY SOURCE S-1738)

## 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 - 103 lb, 2nd quarter - 103 lb, 3rd quarter - 103 lb, and fourth quarter - 103 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 ERC Certificate Number N 1148-2 (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] 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.

Sayed Sadredin, Executive Director / APCO



DAVID WARNER, Director of Permit Services

S-1738-477-0 Feb 12 2014 9:55AM - RICKARDK Joint Inspection NOT Required

- 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 - 179 lb, 2nd quarter - 179 lb, 3rd quarter - 179 lb, and fourth quarter - 179 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
- 6 ERC Certificate Numbers N-1139-1 and N-1140-1 (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 This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative [District Rule 4702] Federally Enforceable Through Title V Permit
- 8 This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
- 9 The operator shall collect data through the I&M plan in a form approved by the APCO [District Rule 4702] Federally Enforceable Through Title V Permit
- 10 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]
- 11 The exhaust stack height shall be at least 12 feet [District Rule 4102]
- 12 Two of the 15 engines (S-1738-470 through '484) shall always operate at least 500 feet away from any receptor and the remaining 13 engines shall always operate at least 1 500 feet away from any receptor [District Rule 4102]
- 13 Unit shall not be operated within 1,000 feet of any K-12 school [CH&SC 42301.6]
- 14 Emissions rates shall not exceed any of the following PM<sub>10</sub> 0.01 g/bhp-hr, NO<sub>x</sub> (as NO<sub>2</sub>) 5 ppmvd @15% O<sub>2</sub>, VOC (as CH<sub>4</sub>) 25 ppmvd @15% O<sub>2</sub>, CO 50 ppmvd @15% O<sub>2</sub>, or SO<sub>x</sub> (as SO<sub>2</sub>) 0.0438 g/bhp-hr Emission limits are on a 15 minute average [District Rules 2201, 4701 and 4702] Federally Enforceable Through Title V Permit
- 15 Sulfur content of fuel shall not exceed any of the following limits produced natural gas 5.2 grains/100 dscf and LPG 5.4 grains/100 dscf [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit
- 16 The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, and O<sub>2</sub> at least once every calendar quarter using a portable emission monitor that meets District specifications Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring Monitoring shall be performed within 1 day of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule Records must be maintained of the dates of non-operation to validate extended monitoring frequencies [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 17 If the NO<sub>x</sub> and/or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer exceed the permitted emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 4701 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 18 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 Rule 4702] Federally Enforceable Through Title V Permit
- 19 The permittee shall maintain records of (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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 4701 and 4702] Federally Enforceable Through Title V Permit
- 20 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
- 21 Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 22 Source testing to measure natural gas-combustion NO<sub>x</sub>, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 23 Compliance with NO<sub>x</sub>, CO, and VOC emission limits may be demonstrated by submission of annual source test results from one or more representative IC engines as approved by the APCO. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 24 For representative testing, an engine operating log shall be maintained for each engine in the group. The log shall include, on a monthly basis, the total hours of operation, and maintenance or modifications performed. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 25 Should any representative engines exceed the required emission limits, each engine in the group shall demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested engines being considered in violation of this rule. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
- 27 Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28 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. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29 Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 30 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
- 31 The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 1081, 4701, and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 32 Permittee shall maintain records of either operating hours per day, location (e.g. well number) at which IC engine is operated, source test results, monitoring data, and other information deemed necessary by the APCO to demonstrate compliance with Rules 4701 and 4702 for a period of five years and shall make such records readily available for District inspection upon request. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 33 Portable analyzers will be maintained and calibrated according to the manufacturer's specifications in order to ensure they operate properly and their accuracy remains within specification. EPA protocol calibration gases will be utilized to ensure proper calibration. After a successful calibration, the accuracy of the analyzer may be verified by utilizing reference gases that most closely approximate the emission limit to be checked. Between calibrations, the analyzer shall be checked before each use with reference gases to ensure its sensor cells are operational and accurate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 34 Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO<sub>x</sub> and CO. [District Rule 1081, 4701, and 4702] Federally Enforceable Through Title V Permit
- 35 The following conditions must be met for representative units to be used to test for pollutant (NO<sub>x</sub>) emissions for a group of units: 1) all units are initially source tested and emissions from each unit in the group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of rated brake horsepower, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing. [District Rule 4702] Federally Enforceable Through Title V Permit
- 36 All units in a group for which representative units are annually source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative units. [District Rule 4702] Federally Enforceable Through Title V Permit
- 37 The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, such that in 3 years, all units in the entire group will have been tested at least once. [District Rule 4702] Federally Enforceable Through Title V Permit
- 38 Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf. [District Rule 4201] Federally Enforceable Through Title V Permit
- 39 If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rule 2201] Federally Enforceable Through Title V Permit
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- 40 If the engine is not fired exclusively on PUC-regulated natural gas, then the sulfur content of the gas being fired in the IC engine shall be determined using ASTM method D1072, D3031, D4084 or D3246. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41 If the engine is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested annually and whenever a change in the fuel source is made. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 42 Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures. [District Rule 4702] Federally Enforceable Through Title V Permit
- 43 The acceptable catalyst temperature differential shall be established by source testing this unit or other representative units as approved by the District. The normal range/level shall be any temperature increase across the catalyst unless compliance with applicable NO<sub>x</sub> and CO emissions limits have been demonstrated through source testing at a similar temperature drop. [District Rule 4702] Federally Enforceable Through Title V Permit
- 44 Permittee shall maintain records of the date and time of temperature measurements and the measured temperatures. The records shall also include a description of any corrective action taken to maintain the temperature differential at the acceptable level. [District Rule 4702] Federally Enforceable Through Title V Permit
- 45 If the catalyst temperature differential is outside of the normal range/level, the permittee shall notify the District and take corrective action (i.e. temperature differential returned to normal range/level) within one (1) hour of detection. If the catalyst temperature differential rate is not immediately corrected, the permittee shall conduct a source test within 60 days, to demonstrate compliance with the applicable emissions limits at the new temperature differential. [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE



- 46 The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 47 Permittee shall maintain an engine operating log, on a monthly basis, which includes the following information, total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
- 48 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 Rule 4702] Federally Enforceable Through Title V Permit



## AUTHORITY TO CONSTRUCT

**PERMIT NO** S-1738-478-0

**ISSUANCE DATE** 02/12/2014

**LEGAL OWNER OR OPERATOR** VINTAGE PRODUCTION CALIFORNIA LLC

**MAILING ADDRESS** 9600 MING AVE SUITE 300  
BAKERSFIELD CA 93311

**LOCATION** LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

### EQUIPMENT DESCRIPTION

233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) PUC GAS/PRODUCED GAS/LPG FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER (OPERATED AT VARIOUS UNSPECIFIED LOCATIONS WITHIN STATIONARY SOURCE S-1738)

## 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 - 103 lb, 2nd quarter - 103 lb, 3rd quarter - 103 lb, and fourth quarter - 103 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 ERC Certificate Number N-1148-2 (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] 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-1738-478-0 Feb 12 2014 9:55AM - RICHARD J. Jol | Inspector NOT Required

- 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 - 179 lb, 2nd quarter - 179 lb, 3rd quarter - 179 lb, and fourth quarter - 179 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
- 6 ERC Certificate Numbers N-1139-1 and N-1140-1 (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 This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative [District Rule 4702] Federally Enforceable Through Title V Permit
- 8 This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
- 9 The operator shall collect data through the I&M plan in a form approved by the APCO [District Rule 4702] Federally Enforceable Through Title V Permit
- 10 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]
- 11 The exhaust stack height shall be at least 12 feet. [District Rule 4102]
- 12 Two of the 15 engines (S-1738-470 through '484) shall always operate at least 500 feet away from any receptor and the remaining 13 engines shall always operate at least 1,500 feet away from any receptor [District Rule 4102]
- 13 Unit shall not be operated within 1,000 feet of any K-12 school [CH&SC 42301.6]
- 14 Emissions rates shall not exceed any of the following: PM<sub>10</sub> 0.01 g/bhp-hr, NO<sub>x</sub> (as NO<sub>2</sub>) 5 ppmvd @15% O<sub>2</sub>, VOC (as CH<sub>4</sub>) 25 ppmvd @15% O<sub>2</sub>, CO 50 ppmvd @15% O<sub>2</sub>, or SO<sub>x</sub> (as SO<sub>2</sub>) 0.0438 g/bhp-hr. Emission limits are on a 15 minute average [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
- 15 Sulfur content of fuel shall not exceed any of the following limits: produced natural gas 5.2 grains/100 dscf and LPG 5.4 grains/100 dscf [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit
- 16 The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, and O<sub>2</sub> at least once every calendar quarter using a portable emission monitor that meets District specifications. Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 1 day of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 17 If the NO<sub>x</sub> and/or CO concentrations corrected to 15% O<sub>2</sub> as measured by the portable analyzer, exceed the permitted emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 4701 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 18 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 Rule 4702] Federally Enforceable Through Title V Permit
- 19 The permittee shall maintain records of (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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 4701 and 4702] Federally Enforceable Through Title V Permit
- 20 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
- 21 Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 22 Source testing to measure natural gas-combustion NO<sub>x</sub>, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 23 Compliance with NO<sub>x</sub>, CO, and VOC emission limits may be demonstrated by submission of annual source test results from one or more representative IC engines as approved by the APCO. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 24 For representative testing, an engine operating log shall be maintained for each engine in the group. The log shall include on a monthly basis, the total hours of operation, and maintenance or modifications performed. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 25 Should any representative engines exceed the required emission limits, each engine in the group shall demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested engines being considered in violation of this rule. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- ~~26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit~~
- 27 Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28 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. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29 Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 30 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
- 31 The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 1081, 4701, and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 32 Permittee shall maintain records of either operating hours per day, location (e.g. well number) at which IC engine is operated, source test results, monitoring data, and other information deemed necessary by the APCO to demonstrate compliance with Rules 4701 and 4702 for a period of five years and shall make such records readily available for District inspection upon request [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 33 Portable analyzers will be maintained and calibrated according to the manufacturer's specifications in order to ensure they operate properly and their accuracy remains within specification. EPA protocol calibration gases will be utilized to ensure proper calibration. After a successful calibration, the accuracy of the analyzer may be verified by utilizing reference gases that most closely approximate the emission limit to be checked. Between calibrations, the analyzer shall be checked before each use with reference gases to ensure its sensor cells are operational and accurate [District Rule 4702] Federally Enforceable Through Title V Permit
- 34 Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993) of 3 thirty-minute test runs for NO<sub>x</sub> and CO [District Rule 1081, 4701, and 4702] Federally Enforceable Through Title V Permit
- 35 The following conditions must be met for representative units to be used to test for pollutant (NO<sub>x</sub>) emissions for a group of units: 1) all units are initially source tested and emissions from each unit in the group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of rated brake horsepower, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing [District Rule 4702] Federally Enforceable Through Title V Permit
- 36 All units in a group for which representative units are annually source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune up procedures as the representative units [District Rule 4702] Federally Enforceable Through Title V Permit
- 37 The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, such that in 3 years, all units in the entire group will have been tested at least once [District Rule 4702] Federally Enforceable Through Title V Permit
- 38 Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf [District Rule 4201] Federally Enforceable Through Title V Permit
- 39 If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills [District Rule 2201] Federally Enforceable Through Title V Permit
- 
- 40 If the engine is not fired exclusively on PUC-regulated natural gas, then the sulfur content of the gas being fired in the IC engine shall be determined using ASTM method D1072, D3031, D4084 or D3246 [District Rule 2201] Federally Enforceable Through Title V Permit
- 41 If the engine is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested annually and whenever a change in the fuel source is made [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 42 Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures [District Rule 4702] Federally Enforceable Through Title V Permit
- 43 The acceptable catalyst temperature differential shall be established by source testing this unit or other representative units as approved by the District. The normal range/level shall be any temperature increase across the catalyst unless compliance with applicable NO<sub>x</sub> and CO emissions limits have been demonstrated through source testing at a similar temperature drop [District Rule 4702] Federally Enforceable Through Title V Permit
- 44 Permittee shall maintain records of the date and time of temperature measurements and the measured temperatures. The records shall also include a description of any corrective action taken to maintain the temperature differential at the acceptable level [District Rule 4702] Federally Enforceable Through Title V Permit
- 45 If the catalyst temperature differential is outside of the normal range/level, the permittee shall notify the District and take corrective action (i.e. temperature differential returned to normal range/level) within one (1) hour of detection. If the catalyst temperature differential rate is not immediately corrected, the permittee shall conduct a source test within 60 days, to demonstrate compliance with the applicable emissions limits at the new temperature differential [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 46 The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 47 Permittee shall maintain an engine operating log, on a monthly basis, which includes the following information, total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
- 48 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 Rule 4702] Federally Enforceable Through Title V Permit



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT

  
**HEALTHY AIR LIVING™**

## AUTHORITY TO CONSTRUCT

**PERMIT NO** S-1738-479-0

**ISSUANCE DATE** 02/12/2014

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

**LOCATION** LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

### EQUIPMENT DESCRIPTION

233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) PUC GAS/PRODUCED GAS/LPG FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER (OPERATED AT VARIOUS UNSPECIFIED LOCATIONS WITHIN STATIONARY SOURCE S-1738)

## 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 - 103 lb, 2nd quarter - 103 lb, 3rd quarter - 103 lb, and fourth quarter - 103 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 ERC Certificate Number N-1148-2 (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] 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-1738-479-0 Feb 12 2014 9:55AM - RICKARDOX Joint Inspection NOT Required

- 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 179 lb, 2nd quarter - 179 lb, 3rd quarter - 179 lb, and fourth quarter 179 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
- 6 ERC Certificate Numbers N-1139-1 and N-1140-1 (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 This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative [District Rule 4702] Federally Enforceable Through Title V Permit
- 8 This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
- 9 The operator shall collect data through the I&M plan in a form approved by the APCO [District Rule 4702] Federally Enforceable Through Title V Permit
- 10 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]
- 11 The exhaust stack height shall be at least 12 feet [District Rule 4102]
- 12 Two of the 15 engines (S-1738-470 through '484) shall always operate at least 500 feet away from any receptor and the remaining 13 engines shall always operate at least 1,500 feet away from any receptor [District Rule 4102]
- 13 Unit shall not be operated within 1,000 feet of any K-12 school [CH&SC 42301.6]
- 14 Emissions rates shall not exceed any of the following PM<sub>10</sub> 0.01 g/bhp-hr; NO<sub>x</sub> (as NO<sub>2</sub>) 5 ppmvd @15% O<sub>2</sub>, VOC (as CH<sub>4</sub>) 25 ppmvd @15% O<sub>2</sub>, CO 50 ppmvd @15% O<sub>2</sub>, or SO<sub>x</sub> (as SO<sub>2</sub>) 0.0438 g/bhp-hr Emission limits are on a 15 minute average [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
- 15 Sulfur content of fuel shall not exceed any of the following limits produced natural gas 5.2 grains/100 dscf and LPG 5.4 grains/100 dscf [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit
- 16 The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO and O<sub>2</sub> at least once every calendar quarter using a portable emission monitor that meets District specifications Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring Monitoring shall be performed within 1 day of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule Records must be maintained of the dates of non-operation to validate extended monitoring frequencies [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 17 If the NO<sub>x</sub> and/or CO concentrations corrected to 15% O<sub>2</sub> as measured by the portable analyzer, exceed the permitted emission concentration the permittee shall return the emissions to within the acceptable range as soon as possible but no longer than 8 hours after detection If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 4701 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE



- 18 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 Rule 4702] Federally Enforceable Through Title V Permit
- 19 The permittee shall maintain records of (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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 4701 and 4702] Federally Enforceable Through Title V Permit
- 20 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
- 21 Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 22 Source testing to measure natural gas-combustion NO<sub>x</sub>, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 23 Compliance with NO<sub>x</sub>, CO, and VOC emission limits may be demonstrated by submission of annual source test results from one or more representative IC engines as approved by the APCO. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 24 For representative testing, an engine operating log shall be maintained for each engine in the group. The log shall include, on a monthly basis, the total hours of operation, and maintenance or modifications performed. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 25 Should any representative engines exceed the required emission limits, each engine in the group shall demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested engines being considered in violation of this rule. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- ~~26 Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit~~
- 27 Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28 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. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29 Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 30 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
- 31 The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100; CO (ppmv) - EPA Method 10 or ARB Method 100; stack gas oxygen - EPA Method 3 or 3A or ARB Method 100; and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 1081, 4701 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 32 Permittee shall maintain records of either operating hours per day, location (e.g. well number) at which IC engine is operated, source test results, monitoring data, and other information deemed necessary by the APCO to demonstrate compliance with Rules 4701 and 4702 for a period of five years and shall make such records readily available for District inspection upon request [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 33 Portable analyzers will be maintained and calibrated according to the manufacturer's specifications in order to ensure they operate properly and their accuracy remains within specification. EPA protocol calibration gases will be utilized to ensure proper calibration. After a successful calibration, the accuracy of the analyzer may be verified by utilizing reference gases that most closely approximate the emission limit to be checked. Between calibrations the analyzer shall be checked before each use with reference gases to ensure its sensor cells are operational and accurate [District Rule 4702] Federally Enforceable Through Title V Permit
- 34 Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO<sub>x</sub> and CO [District Rule 1081, 4701, and 4702] Federally Enforceable Through Title V Permit
- 35 The following conditions must be met for representative units to be used to test for pollutant (NO<sub>x</sub>) emissions for a group of units: 1) all units are initially source tested and emissions from each unit in the group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of rated brake horsepower, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing [District Rule 4702] Federally Enforceable Through Title V Permit
- 36 All units in a group for which representative units are annually source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative units [District Rule 4702] Federally Enforceable Through Title V Permit
- 37 The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, such that in 3 years, all units in the entire group will have been tested at least once [District Rule 4702] Federally Enforceable Through Title V Permit
- 38 Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf [District Rule 4201] Federally Enforceable Through Title V Permit
- 39 If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills [District Rule 2201] Federally Enforceable Through Title V Permit
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- 40 If the engine is not fired exclusively on PUC-regulated natural gas, then the sulfur content of the gas being fired in the IC engine shall be determined using ASTM method D1072, D3031, D4084 or D3246 [District Rule 2201] Federally Enforceable Through Title V Permit
- 41 If the engine is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested annually and whenever a change in the fuel source is made [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 42 Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures [District Rule 4702] Federally Enforceable Through Title V Permit
- 43 The acceptable catalyst temperature differential shall be established by source testing this unit or other representative units as approved by the District. The normal range/level shall be any temperature increase across the catalyst unless compliance with applicable NO<sub>x</sub> and CO emissions limits have been demonstrated through source testing at a similar temperature drop [District Rule 4702] Federally Enforceable Through Title V Permit
- 44 Permittee shall maintain records of the date and time of temperature measurements and the measured temperatures. The records shall also include a description of any corrective action taken to maintain the temperature differential at the acceptable level [District Rule 4702] Federally Enforceable Through Title V Permit
- 45 If the catalyst temperature differential is outside of the normal range/level, the permittee shall notify the District and take corrective action (i.e. temperature differential returned to normal range/level) within one (1) hour of detection. If the catalyst temperature differential rate is not immediately corrected, the permittee shall conduct a source test within 60 days, to demonstrate compliance with the applicable emissions limits at the new temperature differential [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 46 The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 47 Permittee shall maintain an engine operating log, on a monthly basis, which includes the following information, total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
- 48 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 Rule 4702] Federally Enforceable Through Title V Permit



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT

  
**HEALTHY AIR LIVING™**

## AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-1738-480-0

**ISSUANCE DATE** 02/12/2014

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

**LOCATION** LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

### EQUIPMENT DESCRIPTION

233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) PUC GAS/PRODUCED GAS/LPG FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER (OPERATED AT VARIOUS UNSPECIFIED LOCATIONS WITHIN STATIONARY SOURCE S-1738)

## 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 - 103 lb, 2nd quarter - 103 lb, 3rd quarter - 103 lb, and fourth quarter - 103 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 ERC Certificate Number N-1148-2 (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] 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  
S-1738-480-0 F 02/12/2014 12:55AM - RICKAROK J Inspected NOT Required

- 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 - 179 lb, 2nd quarter - 179 lb, 3rd quarter - 179 lb, and fourth quarter - 179 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
- 6 ERC Certificate Numbers N-1139-1 and N-1140-1 (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 This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative [District Rule 4702] Federally Enforceable Through Title V Permit
- 8 This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District [District Rule 4702] Federally Enforceable Through Title V Permit
- 9 The operator shall collect data through the I&M plan in a form approved by the APCO [District Rule 4702] Federally Enforceable Through Title V Permit
- 10 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]
- 11 The exhaust stack height shall be at least 12 feet [District Rule 4102]
- 12 Two of the 15 engines (S-1738-470 through -484) shall always operate at least 500 feet away from any receptor and the remaining 13 engines shall always operate at least 1,500 feet away from any receptor [District Rule 4102]
- 13 Unit shall not be operated within 1,000 feet of any K-12 school [CH&SC 42301.6]
- 14 Emissions rates shall not exceed any of the following: PM<sub>10</sub> 0.01 g/bhp-hr, NO<sub>x</sub> (as NO<sub>2</sub>) 5 ppmvd @15% O<sub>2</sub>, VOC (as CH<sub>4</sub>) 25 ppmvd @15% O<sub>2</sub>, CO 50 ppmvd @15% O<sub>2</sub>, or SO<sub>x</sub> (as SO<sub>2</sub>) 0.0438 g/bhp-hr. Emission limits are on a 15 minute average [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
- 15 Sulfur content of fuel shall not exceed any of the following limits: produced natural gas 5.2 grains/100 dscf and LPG 5.4 grains/100 dscf [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit
- 16 The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, and O<sub>2</sub> at least once every calendar quarter using a portable emission monitor that meets District specifications. Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e., the engine need not be started solely to perform monitoring. Monitoring shall be performed within 1 day of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 17 If the NO<sub>x</sub> and/or CO concentrations corrected to 15% O<sub>2</sub> as measured by the portable analyzer, exceed the permitted emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 4701 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 18 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 Rule 4702] Federally Enforceable Through Title V Permit
- 19 The permittee shall maintain records of (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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 4701 and 4702] Federally Enforceable Through Title V Permit
- 20 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
- 21 Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 22 Source testing to measure natural gas-combustion NO<sub>x</sub>, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 23 Compliance with NO<sub>x</sub>, CO, and VOC emission limits may be demonstrated by submission of annual source test results from one or more representative IC engines as approved by the APCO. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 24 For representative testing, an engine operating log shall be maintained for each engine in the group. The log shall include, on a monthly basis, the total hours of operation, and maintenance or modifications performed. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 25 Should any representative engines exceed the required emission limits, each engine in the group shall demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested engines being considered in violation of this rule. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- ~~26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit~~
- 27 Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28 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. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29 Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 30 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
- 31 The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 1081, 4701, and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 32 Permittee shall maintain records of either operating hours per day, location (e g well number) at which IC engine is operated, source test results, monitoring data, and other information deemed necessary by the APCO to demonstrate compliance with Rules 4701 and 4702 for a period of five years and shall make such records readily available for District inspection upon request [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 33 Portable analyzers will be maintained and calibrated according to the manufacturer's specifications in order to ensure they operate properly and their accuracy remains within specification EPA protocol calibration gases will be utilized to ensure proper calibration After a successful calibration, the accuracy of the analyzer may be verified by utilizing reference gases that most closely approximate the emission limit to be checked Between calibrations, the analyzer shall be checked before each use with reference gases to ensure its sensor cells are operational and accurate [District Rule 4702] Federally Enforceable Through Title V Permit
- 34 Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx, and CO [District Rule 1081, 4701, and 4702] Federally Enforceable Through Title V Permit
- 35 The following conditions must be met for representative units to be used to test for pollutant (NOx) emissions for a group of units 1) all units are initially source tested and emissions from each unit in the group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of rated brake horsepower, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing [District Rule 4702] Federally Enforceable Through Title V Permit
- 36 All units in a group for which representative units are annually source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative units [District Rule 4702] Federally Enforceable Through Title V Permit
- 37 The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group The units included in the 30% shall be rotated, such that in 3 years, all units in the entire group will have been tested at least once [District Rule 4702] Federally Enforceable Through Title V Permit
- 38 Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf [District Rule 4201] Federally Enforceable Through Title V Permit
- 39 If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills [District Rule 2201] Federally Enforceable Through Title V Permit
- 
- 40 If the engine is not fired exclusively on PUC-regulated natural gas, then the sulfur content of the gas being fired in the IC engine shall be determined using ASTM method D1072, D3031, D4084 or D3246 [District Rule 2201] Federally Enforceable Through Title V Permit
- 41 If the engine is not fired exclusively on PUC-regulated natural gas the sulfur content of each fuel source shall be tested annually and whenever a change in the fuel source is made [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 42 Permittee shall monitor and record on a monthly basis, the catalyst inlet and outlet temperatures [District Rule 4702] Federally Enforceable Through Title V Permit
- 43 The acceptable catalyst temperature differential shall be established by source testing this unit or other representative units as approved by the District The normal range/level shall be any temperature increase across the catalyst unless compliance with applicable NOx and CO emissions limits have been demonstrated through source testing at a similar temperature drop [District Rule 4702] Federally Enforceable Through Title V Permit
- 44 Permittee shall maintain records of the date and time of temperature measurements and the measured temperatures The records shall also include a description of any corrective action taken to maintain the temperature differential at the acceptable level [District Rule 4702] Federally Enforceable Through Title V Permit
- 45 If the catalyst temperature differential is outside of the normal range/level, the permittee shall notify the District and take corrective action (i.e. temperature differential returned to normal range/level) within one (1) hour of detection If the catalyst temperature differential rate is not immediately corrected, the permittee shall conduct a source test within 60 days, to demonstrate compliance with the applicable emissions limits at the new temperature differential [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 46 The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 47 Permittee shall maintain an engine operating log, on a monthly basis, which includes the following information, total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
- 48 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 Rule 4702] Federally Enforceable Through Title V Permit





**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT

  
**HEALTHY AIR LIVING™**

## AUTHORITY TO CONSTRUCT

**PERMIT NO** S-1738-481-0

**ISSUANCE DATE** 02/12/2014

**LEGAL OWNER OR OPERATOR** VINTAGE PRODUCTION CALIFORNIA LLC

**MAILING ADDRESS** 9600 MING AVE SUITE 300  
BAKERSFIELD CA 93311

**LOCATION** LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

### EQUIPMENT DESCRIPTION

233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) PUC GAS/PRODUCED GAS/LPG FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER (OPERATED AT VARIOUS UNSPECIFIED LOCATIONS WITHIN STATIONARY SOURCE S-1738)

## 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 - 103 lb, 2nd quarter - 103 lb, 3rd quarter - 103 lb, and fourth quarter - 103 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 ERC Certificate Number N-1148-2 (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] 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.

Sayed Sadredin, Executive Director / APCO



DAVID WARNER, Director of Permit Services

S-1738-481-0 F 02/12/2014 8:55AM - RICKARDK Joint1 pac10 NOTR q end

- 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 - 179 lb, 2nd quarter - 179 lb, 3rd quarter - 179 lb, and fourth quarter - 179 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
- 6 ERC Certificate Numbers N-1139-1 and N-1140-1 (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 This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative [District Rule 4702] Federally Enforceable Through Title V Permit
- 8 This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District [District Rule 4702] Federally Enforceable Through Title V Permit
- 9 The operator shall collect data through the I&M plan in a form approved by the APCO [District Rule 4702] Federally Enforceable Through Title V Permit
- 10 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]
- 11 The exhaust stack height shall be at least 12 feet [District Rule 4102]
- 12 Two of the 15 engines (S-1738-470 through -484) shall always operate at least 500 feet away from any receptor and the remaining 13 engines shall always operate at least 1,500 feet away from any receptor [District Rule 4102]
- 13 Unit shall not be operated within 1,000 feet of any K-12 school [CH&SC 42301.6]
- 14 Emissions rates shall not exceed any of the following PM<sub>10</sub> 0.01 g/bhp-hr, NO<sub>x</sub> (as NO<sub>2</sub>) 5 ppmvd @15% O<sub>2</sub>, VOC (as CH<sub>4</sub>) 25 ppmvd @15% O<sub>2</sub>, CO 50 ppmvd @15% O<sub>2</sub>, or SO<sub>x</sub> (as SO<sub>2</sub>) 0.0438 g/bhp-hr Emission limits are on a 15 minute average [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
- 15 Sulfur content of fuel shall not exceed any of the following limits produced natural gas 5.2 grains/100 dscf and LPG 5.4 grains/100 dscf [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit
- 16 The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, and O<sub>2</sub> at least once every calendar quarter using a portable emission monitor that meets District specifications Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring Monitoring shall be performed within 1 day of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule Records must be maintained of the dates of non-operation to validate extended monitoring frequencies [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 17 If the NO<sub>x</sub> and/or CO concentrations corrected to 15% O<sub>2</sub> as measured by the portable analyzer, exceed the permitted emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 4701 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 18 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 Rule 4702] Federally Enforceable Through Title V Permit
- 19 The permittee shall maintain records of (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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 4701 and 4702] Federally Enforceable Through Title V Permit
- 20 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
- 21 Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 22 Source testing to measure natural gas-combustion NO<sub>x</sub>, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 23 Compliance with NO<sub>x</sub>, CO, and VOC emission limits may be demonstrated by submission of annual source test results from one or more representative IC engines as approved by the APCO. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 24 For representative testing, an engine operating log shall be maintained for each engine in the group. The log shall include, on a monthly basis, the total hours of operation, and maintenance or modifications performed. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 25 Should any representative engines exceed the required emission limits, each engine in the group shall demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested engines being considered in violation of this rule. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- ~~26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit~~
- 27 Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28 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. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29 Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 30 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
- 31 The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 1081, 4701, and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 32 Permittee shall maintain records of either operating hours per day, location (e g well number) at which IC engine is operated, source test results, monitoring data, and other information deemed necessary by the APCO to demonstrate compliance with Rules 4701 and 4702 for a period of five years and shall make such records readily available for District inspection upon request [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 33 Portable analyzers will be maintained and calibrated according to the manufacturer's specifications in order to ensure they operate properly and their accuracy remains within specification EPA protocol calibration gases will be utilized to ensure proper calibration After a successful calibration, the accuracy of the analyzer may be verified by utilizing reference gases that most closely approximate the emission limit to be checked Between calibrations, the analyzer shall be checked before each use with reference gases to ensure its sensor cells are operational and accurate [District Rule 4702] Federally Enforceable Through Title V Permit
- 34 Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO<sub>x</sub> and CO [District Rule 1081 4701, and 4702] Federally Enforceable Through Title V Permit
- 35 The following conditions must be met for representative units to be used to test for pollutant (NO<sub>x</sub>) emissions for a group of units 1) all units are initially source tested and emissions from each unit in the group are less than 90% of the permitted value and vary 25% or less from the average of all runs 2) all units in the group are similar in terms of rated brake horsepower, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing [District Rule 4702] Federally Enforceable Through Title V Permit
- 36 All units in a group for which representative units are annually source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative units [District Rule 4702] Federally Enforceable Through Title V Permit
- 37 The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group The units included in the 30% shall be rotated, such that in 3 years, all units in the entire group will have been tested at least once [District Rule 4702] Federally Enforceable Through Title V Permit
- 38 Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf [District Rule 4201] Federally Enforceable Through Title V Permit
- 39 If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills [District Rule 2201] Federally Enforceable Through Title V Permit
- 
- 40 If the engine is not fired exclusively on PUC-regulated natural gas, then the sulfur content of the gas being fired in the IC engine shall be determined using ASTM method D1072, D3031, D4084 or D3246 [District Rule 2201] Federally Enforceable Through Title V Permit
- 41 If the engine is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested annually and whenever a change in the fuel source is made [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 42 Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures [District Rule 4702] Federally Enforceable Through Title V Permit
- 43 The acceptable catalyst temperature differential shall be established by source testing this unit or other representative units as approved by the District The normal range/level shall be any temperature increase across the catalyst unless compliance with applicable NO<sub>x</sub> and CO emissions limits have been demonstrated through source testing at a similar temperature drop [District Rule 4702] Federally Enforceable Through Title V Permit
- 44 Permittee shall maintain records of the date and time of temperature measurements and the measured temperatures The records shall also include a description of any corrective action taken to maintain the temperature differential at the acceptable level [District Rule 4702] Federally Enforceable Through Title V Permit
- 45 If the catalyst temperature differential is outside of the normal range/level, the permittee shall notify the District and take corrective action (i e temperature differential returned to normal range/level) within one (1) hour of detection If the catalyst temperature differential rate is not immediately corrected, the permittee shall conduct a source test within 60 days, to demonstrate compliance with the applicable emissions limits at the new temperature differential [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 46 The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 47 Permittee shall maintain an engine operating log, on a monthly basis, which includes the following information, total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data, compliance source test results and any other information necessary to demonstrate compliance with Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
- 48 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 Rule 4702] Federally Enforceable Through Title V Permit



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT

  
**HEALTHY AIR LIVING™**

## AUTHORITY TO CONSTRUCT

**PERMIT NO** S-1738-482-0

**ISSUANCE DATE** 02/12/2014

**LEGAL OWNER OR OPERATOR** VINTAGE PRODUCTION CALIFORNIA LLC

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

**LOCATION** LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

### EQUIPMENT DESCRIPTION

233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) PUC GAS/PRODUCED GAS/LPG FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER (OPERATED AT VARIOUS UNSPECIFIED LOCATIONS WITHIN STATIONARY SOURCE S-1738)

## 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 - 103 lb, 2nd quarter - 103 lb, 3rd quarter - 103 lb, and fourth quarter - 103 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 ERC Certificate Number N-1148-2 (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] 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-1738-482-0 Feb 12 2014 6:55AM - RICKARDK Joint Inspection NOT Required

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

- 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 - 179 lb, 2nd quarter - 179 lb, 3rd quarter - 179 lb, and fourth quarter - 179 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
- 6 ERC Certificate Numbers N-1139-1 and N-1140-1 (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 This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative [District Rule 4702] Federally Enforceable Through Title V Permit
- 8 This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District [District Rule 4702] Federally Enforceable Through Title V Permit
- 9 The operator shall collect data through the I&M plan in a form approved by the APCO [District Rule 4702] Federally Enforceable Through Title V Permit
- 10 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]
- 11 The exhaust stack height shall be at least 12 feet [District Rule 4102]
- 12 Two of the 15 engines (S-1738-470 through '484) shall always operate at least 500 feet away from any receptor and the remaining 13 engines shall always operate at least 1,500 feet away from any receptor [District Rule 4102]
- 13 Unit shall not be operated within 1,000 feet of any K-12 school [CH&SC 42301.6]
- 14 Emissions rates shall not exceed any of the following PM<sub>10</sub> 0.01 g/bhp-hr; NO<sub>x</sub> (as NO<sub>2</sub>) 5 ppmvd @15% O<sub>2</sub>, VOC (as CH<sub>4</sub>) 25 ppmvd @15% O<sub>2</sub>, CO 50 ppmvd @15% O<sub>2</sub>, or SO<sub>x</sub> (as SO<sub>2</sub>) 0.0438 g/bhp-hr Emission limits are on a 15 minute average [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
- 15 Sulfur content of fuel shall not exceed any of the following limits produced natural gas 5.2 grains/100 dscf and LPG 5.4 grains/100 dscf [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit
- 16 The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, and O<sub>2</sub> at least once every calendar quarter using a portable emission monitor that meets District specifications Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring Monitoring shall be performed within 1 day of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule Records must be maintained of the dates of non-operation to validate extended monitoring frequencies [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 17 If the NO<sub>x</sub> and/or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer exceed the permitted emission concentration the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 4701 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- CONDITIONS CONTINUE ON NEXT PAGE



- 32 Permittee shall maintain records of either operating hours per day, location (e.g. well number) at which IC engine is operated, source test results, monitoring data, and other information deemed necessary by the APCO to demonstrate compliance with Rules 4701 and 4702 for a period of five years and shall make such records readily available for District inspection upon request [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 33 Portable analyzers will be maintained and calibrated according to the manufacturer's specifications in order to ensure they operate properly and their accuracy remains within specification. EPA protocol calibration gases will be utilized to ensure proper calibration. After a successful calibration, the accuracy of the analyzer may be verified by utilizing reference gases that most closely approximate the emission limit to be checked. Between calibrations, the analyzer shall be checked before each use with reference gases to ensure its sensor cells are operational and accurate [District Rule 4702] Federally Enforceable Through Title V Permit
- 34 Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO<sub>x</sub> and CO [District Rule 1081, 4701, and 4702] Federally Enforceable Through Title V Permit
- 35 The following conditions must be met for representative units to be used to test for pollutant (NO<sub>x</sub>) emissions for a group of units: 1) all units are initially source tested and emissions from each unit in the group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of rated brake horsepower, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing [District Rule 4702] Federally Enforceable Through Title V Permit
- 36 All units in a group for which representative units are annually source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative units [District Rule 4702] Federally Enforceable Through Title V Permit
- 37 The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, such that in 3 years, all units in the entire group will have been tested at least once [District Rule 4702] Federally Enforceable Through Title V Permit
- 38 Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf [District Rule 4201] Federally Enforceable Through Title V Permit
- 39 If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills [District Rule 2201] Federally Enforceable Through Title V Permit
- 
- 40 If the engine is not fired exclusively on PUC-regulated natural gas, then the sulfur content of the gas being fired in the IC engine shall be determined using ASTM method D1072, D3031, D4084 or D3246 [District Rule 2201] Federally Enforceable Through Title V Permit
- 41 If the engine is not fired exclusively on PUC regulated natural gas, the sulfur content of each fuel source shall be tested annually and whenever a change in the fuel source is made [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 42 Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures [District Rule 4702] Federally Enforceable Through Title V Permit
- 43 The acceptable catalyst temperature differential shall be established by source testing this unit or other representative units as approved by the District. The normal range/level shall be any temperature increase across the catalyst unless compliance with applicable NO<sub>x</sub> and CO emissions limits have been demonstrated through source testing at a similar temperature drop [District Rule 4702] Federally Enforceable Through Title V Permit
- 44 Permittee shall maintain records of the date and time of temperature measurements and the measured temperatures. The records shall also include a description of any corrective action taken to maintain the temperature differential at the acceptable level [District Rule 4702] Federally Enforceable Through Title V Permit
- 45 If the catalyst temperature differential is outside of the normal range/level, the permittee shall notify the District and take corrective action (i.e. temperature differential returned to normal range/level) within one (1) hour of detection. If the catalyst temperature differential rate is not immediately corrected, the permittee shall conduct a source test within 60 days to demonstrate compliance with the applicable emissions limits at the new temperature differential [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 46 The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 47 Permittee shall maintain an engine operating log, on a monthly basis, which includes the following information, total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
- 48 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 Rule 4702] Federally Enforceable Through Title V Permit



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT

**HEALTHY AIR LIVING™**

## AUTHORITY TO CONSTRUCT

**PERMIT NO** S-1738-483 0

**ISSUANCE DATE** 02/12/2014

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

**LOCATION** LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

### EQUIPMENT DESCRIPTION

233 BHP WAUKESHA MODEL F 1905 (OR EQUIVALENT) PUC GAS/PRODUCED GAS/LPG FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER (OPERATED AT VARIOUS UNSPECIFIED LOCATIONS WITHIN STATIONARY SOURCE S-1738)

## 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 - 103 lb, 2nd quarter - 103 lb, 3rd quarter - 103 lb, and fourth quarter - 103 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 ERC Certificate Number N-1148-2 (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] 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-1738-483-0 Feb 12 2014 9:55AM - RICKARDK Joint Inspection NOT Required

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

- 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 - 179 lb, 2nd quarter - 179 lb, 3rd quarter - 179 lb, and fourth quarter - 179 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
- 6 ERC Certificate Numbers N-1139-1 and N-1140-1 (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 This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative [District Rule 4702] Federally Enforceable Through Title V Permit
- 8 This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
- 9 The operator shall collect data through the I&M plan in a form approved by the APCO [District Rule 4702] Federally Enforceable Through Title V Permit
- 10 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]
- 11 The exhaust stack height shall be at least 12 feet [District Rule 4102]
- 12 Two of the 15 engines (S-1738-470 through -484) shall always operate at least 500 feet away from any receptor and the remaining 13 engines shall always operate at least 1,500 feet away from any receptor [District Rule 4102]
- 13 Unit shall not be operated within 1,000 feet of any K-12 school [CH&SC 42301.6]
- 14 Emissions rates shall not exceed any of the following PM<sub>10</sub> 0.01 g/bhp-hr, NO<sub>x</sub> (as NO<sub>2</sub>) 5 ppmvd @15% O<sub>2</sub>, VOC (as CH<sub>4</sub>) 25 ppmvd @15% O<sub>2</sub>, CO 50 ppmvd @15% O<sub>2</sub> or SO<sub>x</sub> (as SO<sub>2</sub>) 0.0438 g/bhp-hr Emission limits are on a 15 minute average [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
- 15 Sulfur content of fuel shall not exceed any of the following limits produced natural gas 5.2 grains/100 dscf and LPG 5.4 grains/100 dscf [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
- 16 The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, and O<sub>2</sub> at least once every calendar quarter using a portable emission monitor that meets District specifications Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring Monitoring shall be performed within 1 day of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule or within the last quarter if on a quarterly monitoring schedule Records must be maintained of the dates of non-operation to validate extended monitoring frequencies [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 17 If the NO<sub>x</sub> and/or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the permitted emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 4701 and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 18 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 Rule 4702] Federally Enforceable Through Title V Permit
- 19 The permittee shall maintain records of (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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 4701 and 4702] Federally Enforceable Through Title V Permit
- 20 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
- 21 Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start up. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 22 Source testing to measure natural gas-combustion NO<sub>x</sub>, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 23 Compliance with NO<sub>x</sub>, CO, and VOC emission limits may be demonstrated by submission of annual source test results from one or more representative IC engines as approved by the APCO. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 24 For representative testing, an engine operating log shall be maintained for each engine in the group. The log shall include, on a monthly basis, the total hours of operation, and maintenance or modifications performed. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 25 Should any representative engines exceed the required emission limits, each engine in the group shall demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested engines being considered in violation of this rule. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 26 ~~Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB~~ certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
- 27 Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 28 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. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 29 Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 30 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
- 31 The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 1081, 4701, and 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 32 Permittee shall maintain records of either operating hours per day, location (e.g. well number) at which IC engine is operated, source test results, monitoring data, and other information deemed necessary by the APCO to demonstrate compliance with Rules 4701 and 4702 for a period of five years and shall make such records readily available for District inspection upon request [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 33 Portable analyzers will be maintained and calibrated according to the manufacturer's specifications in order to ensure they operate properly and their accuracy remains within specification. EPA protocol calibration gases will be utilized to ensure proper calibration. After a successful calibration, the accuracy of the analyzer may be verified by utilizing reference gases that most closely approximate the emission limit to be checked. Between calibrations, the analyzer shall be checked before each use with reference gases to ensure its sensor cells are operational and accurate [District Rule 4702] Federally Enforceable Through Title V Permit
- 34 Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO<sub>x</sub> and CO [District Rule 1081, 4701 and 4702] Federally Enforceable Through Title V Permit
- 35 The following conditions must be met for representative units to be used to test for pollutant (NO<sub>x</sub>) emissions for a group of units: 1) all units are initially source tested and emissions from each unit in the group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of rated brake horsepower, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing [District Rule 4702] Federally Enforceable Through Title V Permit
- 36 All units in a group for which representative units are annually source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune-up procedures as the representative units [District Rule 4702] Federally Enforceable Through Title V Permit
- 37 The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, such that in 3 years, all units in the entire group will have been tested at least once [District Rule 4702] Federally Enforceable Through Title V Permit
- 38 Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf [District Rule 4201] Federally Enforceable Through Title V Permit
- 39 If the IC engine is fired on PUC regulated natural gas, then maintain on file copies of all natural gas bills [District Rule 2201] Federally Enforceable Through Title V Permit
- 
- 40 If the engine is not fired exclusively on PUC regulated natural gas, then the sulfur content of the gas being fired in the IC engine shall be determined using ASTM method D1072, D3031, D4084 or D3246 [District Rule 2201] Federally Enforceable Through Title V Permit
- 41 If the engine is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested annually and whenever a change in the fuel source is made [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 42 Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures [District Rule 4702] Federally Enforceable Through Title V Permit
- 43 The acceptable catalyst temperature differential shall be established by source testing this unit or other representative units as approved by the District. The normal range/level shall be any temperature increase across the catalyst unless compliance with applicable NO<sub>x</sub> and CO emissions limits have been demonstrated through source testing at a similar temperature drop [District Rule 4702] Federally Enforceable Through Title V Permit
- 44 Permittee shall maintain records of the date and time of temperature measurements and the measured temperatures. The records shall also include a description of any corrective action taken to maintain the temperature differential at the acceptable level [District Rule 4702] Federally Enforceable Through Title V Permit
- 45 If the catalyst temperature differential is outside of the normal range/level, the permittee shall notify the District and take corrective action (i.e. temperature differential returned to normal range/level) within one (1) hour of detection. If the catalyst temperature differential rate is not immediately corrected, the permittee shall conduct a source test within 60 days, to demonstrate compliance with the applicable emissions limits at the new temperature differential [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 46 The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 47 Permittee shall maintain an engine operating log, on a monthly basis, which includes the following information, total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
- 48 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 Rule 4702] Federally Enforceable Through Title V Permit



## AUTHORITY TO CONSTRUCT

**PERMIT NO** S-1738-484-0

**ISSUANCE DATE** 02/12/2014

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

**LOCATION** LIGHT OIL WESTERN STATIONARY SOURCE  
KERN COUNTY  
CA

### EQUIPMENT DESCRIPTION

233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) PUC GAS/PRODUCED GAS/LPG FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER (OPERATED AT VARIOUS UNSPECIFIED LOCATIONS WITHIN STATIONARY SOURCE S-1738)

## 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 - 103 lb, 2nd quarter - 103 lb, 3rd quarter - 103 lb, and fourth quarter - 103 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 ERC Certificate Number N-1148-2 (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] 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.

Sayed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

S-1738-484-0 F 02/12/2014 9:06AM - RICKARDK Joint Inspection NOT Required



- 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 - 179 lb, 2nd quarter - 179 lb, 3rd quarter - 179 lb, and fourth quarter - 179 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
- 6 ERC Certificate Numbers N-1139-1 and N-1140-1 (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 This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
- 8 This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
- 9 The operator shall collect data through the I&M plan in a form approved by the APCO. [District Rule 4702] Federally Enforceable Through Title V Permit
- 10 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]
- 11 The exhaust stack height shall be at least 12 feet. [District Rule 4102]
- 12 Two of the 15 engines (S-1738-470 through -484) shall always operate at least 500 feet away from any receptor and the remaining 13 engines shall always operate at least 1,500 feet away from any receptor. [District Rule 4102]
- 13 Unit shall not be operated within 1,000 feet of any K-12 school. [CH&SC 42301.6]
- 14 Emissions rates shall not exceed any of the following: PM<sub>10</sub> 0.01 g/bhp-hr, NO<sub>x</sub> (as NO<sub>2</sub>) 5 ppmvd @15% O<sub>2</sub>, VOC (as CH<sub>4</sub>) 25 ppmvd @15% O<sub>2</sub>, CO 50 ppmvd @15% O<sub>2</sub>, or SO<sub>x</sub> (as SO<sub>2</sub>) 0.0438 g/bhp-hr. Emission limits are on a 15 minute average. [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
- 15 Sulfur content of fuel shall not exceed any of the following limits: produced natural gas 5.2 grains/100 dscf and LPG 5.4 grains/100 dscf. [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit
- 16 The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, and O<sub>2</sub> at least once every calendar quarter using a portable emission monitor that meets District specifications. Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 1 day of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 17 If the NO<sub>x</sub> and/or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the permitted emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, 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 4701 and 4702] Federally Enforceable Through Title V Permit

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- 18 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 Rule 4702] Federally Enforceable Through Title V Permit
- 19 The permittee shall maintain records of (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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 4701 and 4702] Federally Enforceable Through Title V Permit
- 20 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
- 21 Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 22 Source testing to measure natural gas-combustion NO<sub>x</sub>, CO, and VOC emissions from this unit shall be measured not less than once every 24 months [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 23 Compliance with NO<sub>x</sub>, CO, and VOC emission limits may be demonstrated by submission of annual source test results from one or more representative IC engines as approved by the APCO [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 24 For representative testing, an engine operating log shall be maintained for each engine in the group. The log shall include, on a monthly basis, the total hours of operation, and maintenance or modifications performed [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 25 Should any representative engines exceed the required emission limits, each engine in the group shall demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested engines being considered in violation of this rule [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- ~~26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory [District Rule 1081] Federally Enforceable Through Title V Permit~~
- 27 Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate [District Rule 4702] Federally Enforceable Through Title V Permit
- 28 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. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen [District Rule 4702] Federally Enforceable Through Title V Permit
- 29 Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing [District Rule 1081] Federally Enforceable Through Title V Permit
- 30 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
- 31 The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100 and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane [District Rules 1081, 4701, and 4702] Federally Enforceable Through Title V Permit

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- 32 Permittee shall maintain records of either operating hours per day, location (e.g. well number) at which IC engine is operated, source test results, monitoring data, and other information deemed necessary by the APCO to demonstrate compliance with Rules 4701 and 4702 for a period of five years and shall make such records readily available for District inspection upon request [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
- 33 Portable analyzers will be maintained and calibrated according to the manufacturer's specifications in order to ensure they operate properly and their accuracy remains within specification. EPA protocol calibration gases will be utilized to ensure proper calibration. After a successful calibration, the accuracy of the analyzer may be verified by utilizing reference gases that most closely approximate the emission limit to be checked. Between calibrations the analyzer shall be checked before each use with reference gases to ensure its sensor cells are operational and accurate [District Rule 4702] Federally Enforceable Through Title V Permit
- 34 Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO<sub>x</sub> and CO [District Rule 1081, 4701, and 4702] Federally Enforceable Through Title V Permit
- 35 The following conditions must be met for representative units to be used to test for pollutant (NO<sub>x</sub>) emissions for a group of units: 1) all units are initially source tested and emissions from each unit in the group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of rated brake horsepower, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing [District Rule 4702] Federally Enforceable Through Title V Permit
- 36 All units in a group for which representative units are annually source tested for NO<sub>x</sub> and CO emissions shall have received the same maintenance and tune up procedures as the representative units [District Rule 4702] Federally Enforceable Through Title V Permit
- 37 The number of representative units source tested for NO<sub>x</sub> and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, such that in 3 years all units in the entire group will have been tested at least once [District Rule 4702] Federally Enforceable Through Title V Permit
- 38 Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf [District Rule 4201] Federally Enforceable Through Title V Permit
- 39 If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills [District Rule 2201] Federally Enforceable Through Title V Permit
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- 40 If the engine is not fired exclusively on PUC-regulated natural gas, then the sulfur content of the gas being fired in the IC engine shall be determined using ASTM method D1072, D3031, D4084 or D3246 [District Rule 2201] Federally Enforceable Through Title V Permit
- 41 If the engine is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested annually and whenever a change in the fuel source is made [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 42 Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures [District Rule 4702] Federally Enforceable Through Title V Permit
- 43 The acceptable catalyst temperature differential shall be established by source testing this unit or other representative units as approved by the District. The normal range/level shall be any temperature increase across the catalyst unless compliance with applicable NO<sub>x</sub> and CO emissions limits have been demonstrated through source testing at a similar temperature drop [District Rule 4702] Federally Enforceable Through Title V Permit
- 44 Permittee shall maintain records of the date and time of temperature measurements and the measured temperatures. The records shall also include a description of any corrective action taken to maintain the temperature differential at the acceptable level [District Rule 4702] Federally Enforceable Through Title V Permit
- 45 If the catalyst temperature differential is outside of the normal range/level, the permittee shall notify the District and take corrective action (i.e. temperature differential returned to normal range/level) within one (1) hour of detection. If the catalyst temperature differential rate is not immediately corrected, the permittee shall conduct a source test within 60 days, to demonstrate compliance with the applicable emissions limits at the new temperature differential [District Rule 4702] Federally Enforceable Through Title V Permit

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- 46 The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 47 Permittee shall maintain an engine operating log, on a monthly basis, which includes the following information, total hours of operation, type and quantity of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
- 48 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 Rule 4702] Federally Enforceable Through Title V Permit