

MAR 23 2017

Douglas Shaffer  
California Resources Production Corp.  
9600 Ming Ave, Ste 300  
Bakersfield, CA 93311

**Re: Notice of Final Action - Significant Title V Permit Modification**  
**District Facility # S-1738**  
**Project # 1153092**

Dear Mr. Shaffer:

The Air Pollution Control Officer has modified the Title V permit for California Resources Production Corp. located within the Light Oil Western Stationary Source in Kern County, CA. Your facility proposed to incorporate Authorities to Construct (ATCs) S-1738-60-12, '-124-10, and '-345-6 into the Title V operating permit. This project authorizes the modification of three natural gas-fired IC engines to lower the NOx emission limit to 11 ppmv @ 15% O2 for Rule 4702 compliance. In addition, the facility requested to remove the manometer recording requirement from permit S-1738-60 and the non-resettable fuel flow meter requirement from permits S-1738-124 and '-345.

Enclosed is the modified Title V permit. The application and proposal were sent to CARB and US EPA Region IX on October 17, 2016. No comments were received following the District's preliminary decision on this project.

The notice of final decision for this project will be published approximately three days from the date of this letter.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Errol Villegas, Permit Services Manager, at (559) 230-5900.

Sincerely,

  
for Arnaud Marjollet  
Director of Permit Services

Enclosures

cc: Tung Le, 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

PERMIT UNIT: S-1738-60-13

EXPIRATION DATE: 02/28/2018

SECTION: NE30 TOWNSHIP: 11N RANGE: 21W

## EQUIPMENT DESCRIPTION:

208 BHP WAUKESHA MODEL F1905GRU NATURAL GAS-FIRED IC ENGINE WITH HOUSTON INDUSTRIAL SILENCING DN/S-2085C DENOX CATALYTIC CONVERTER (LANDSLIDE LEASE WELL 72X-30)

## PERMIT UNIT REQUIREMENTS

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1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. Engine shall be maintained according to engine manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
4. During periods of operation, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] Federally Enforceable Through Title V Permit
5. Engine fuel shall contain no more than 400 ppmv sulfur. [District Rule 2201] Federally Enforceable Through Title V Permit
6. This IC engine shall be fired exclusively on natural gas with a sulfur content of less than or equal to 5.0 grains/100 scf. [District Rules 4702 and 4801] Federally Enforceable Through Title V Permit
7. Emission rates shall not exceed any of the following limits: NOx: 11 ppmv @ 15% O<sub>2</sub>, CO: 2000 ppmv @ 15% O<sub>2</sub>, or VOC: 81 ppmv @ 15% O<sub>2</sub>. [District Rules 2201, 4701 and 4702] Federally Enforceable Through Title V Permit
8. Exhaust shall vent through NSCR unit only. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Engine shall be equipped with alarm which is activated when catalyst exit temperature exceeds 1400 deg F. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Engine shall be shut down immediately upon activation of temperature alarm. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Engine exhaust temperature at catalyst shall be maintained between 650 and 1200 deg F. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Catalyst shall be periodically inspected and cleaned according to manufacturer's recommendations. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Compliance with NOx, CO and VOC emission limits shall be demonstrated through source testing not less than once every 24 months. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
14. 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 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

15. Compliance demonstration (source testing) shall be District witnessed, or authorized, and sample collections shall be performed by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
16. 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 Rules 1081, 4701 and 4702] Federally Enforceable Through Title V Permit
17. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
18. 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
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. 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 5 days 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
21. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable 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
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 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
24. Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures. [District Rule 4702] Federally Enforceable Through Title V Permit
25. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

26. 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
27. 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
28. 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
29. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rules 2520, 9.3.2 and 4702] Federally Enforceable Through Title V Permit
30. If the engine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 2520, 9.3.2 and 4702] Federally Enforceable Through Title V Permit
31. The sulfur content of the natural gas being fired in the IC engine shall be determined using EPA Methods 11 or 15, or ASTM methods D1072, D3031, D4084 or D3246. [District Rules 2520, 9.3.2 and 4702] Federally Enforceable Through Title V Permit
32. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type and quantity (cubic feet of gas or gallons of liquid) of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
33. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. The engine's oil and filter shall be changed every 1,440 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. The engine's spark plugs shall be inspected every 1,440 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
37. The engine's hoses and belts shall be inspected every 1,440 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
38. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
39. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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

40. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
41. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
42. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4701 and 4702 and 40 CFR 63, Subpart ZZZZ] Federally Enforceable Through Title V Permit
43. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201 and Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-1738-124-11

**EXPIRATION DATE:** 02/28/2018

**SECTION:** SE30 **TOWNSHIP:** 11N **RANGE:** 21W

**EQUIPMENT DESCRIPTION:**

195 BHP WAUKESHA NATURAL GAS-FIRED IC ENGINE WITH JOHNSON-MATTHEY MODEL MX-10 NSCR  
(LANDSLIDE LEASE 65X-30)

## PERMIT UNIT REQUIREMENTS

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1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
3. During periods of operation, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] Federally Enforceable Through Title V Permit
4. This IC engine shall be fired exclusively on PUC quality natural gas with a sulfur content of less than or equal to 5.0 grains/100 scf. [District Rules 4702 and 4801] Federally Enforceable Through Title V Permit
5. Emission rates shall not exceed any of the following limits: NO<sub>x</sub>: 11 ppmv @ 15% O<sub>2</sub>, CO: 2000 ppmv @ 15% O<sub>2</sub>, or VOC: 159 ppmv @ 15% O<sub>2</sub>. [District Rules 2201, 4701 and 4702] Federally Enforceable Through Title V Permit
6. Compliance with NO<sub>x</sub>, CO and VOC emission limits shall be demonstrated through source testing not less than once every 24 months. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
7. 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 1081] Federally Enforceable Through Title V Permit
8. Compliance demonstration (source testing) shall be District witnessed, or authorized, and sample collections shall be performed by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
9. 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 Rules 1081, 4701 and 4702] Federally Enforceable Through Title V Permit
10. 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
11. 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

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

12. 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
13. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. 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 5 days 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
14. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable 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
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
16. 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
17. Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures. [District Rule 4702] Federally Enforceable Through Title V Permit
18. 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
19. 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
20. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. 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]
22. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rules 2520, 9.3.2 and 4702] Federally Enforceable Through Title V Permit
23. If the engine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 2520, 9.3.2 and 4702] Federally Enforceable Through Title V Permit
24. The sulfur content of the natural gas being fired in the IC engine shall be determined using EPA Methods 11 or 15, or ASTM methods D1072, D3031, D4084 or D3246. [District Rules 2520, 9.3.2 and 4702] Federally Enforceable Through Title V Permit
25. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type and quantity (cubic feet of gas or gallons of liquid) of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
26. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. The engine's oil and filter shall be changed every 1,440 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The engine's spark plugs shall be inspected every 1,440 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
30. The engine's hoses and belts shall be inspected every 1,440 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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



34. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63, Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201 and Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1738-345-7

EXPIRATION DATE: 02/28/2018

SECTION: 24 TOWNSHIP: 11N RANGE: 20W

## EQUIPMENT DESCRIPTION:

615 BHP WAUKESHA MODEL 3521GSI NATURAL GAS-FIRED RICH-BURN IC ENGINE EQUIPPED WITH NSCR [WHEELER RIDGE COMPRESSOR PLANT]

## PERMIT UNIT REQUIREMENTS

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1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
3. During periods of operation, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] Federally Enforceable Through Title V Permit
4. This IC engine shall be fired exclusively on PUC quality natural gas with a sulfur content of less than or equal to 5.0 grains/100 scf. [District Rules 4702 and 4801] Federally Enforceable Through Title V Permit
5. Emission rates shall not exceed any of the following limits: NOx: 11 ppmv @ 15% O2, CO: 2000 ppmv @ 15% O2, or VOC: 125 ppmv @ 15% O2. [District Rules 2201, 4701 and 4702] Federally Enforceable Through Title V Permit
6. Compliance with NOx, CO and VOC emission limits shall be demonstrated through source testing not less than once every 24 months. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
7. 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 1081] Federally Enforceable Through Title V Permit
8. Compliance demonstration (source testing) shall be District witnessed, or authorized, and sample collections shall be performed by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
9. 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 Rules 1081, 4701 and 4702] Federally Enforceable Through Title V Permit
10. 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
11. 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

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12. 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
13. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. 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 5 days 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
14. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable 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
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
16. 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
17. Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures. [District Rule 4702] Federally Enforceable Through Title V Permit
18. 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
19. 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
20. 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

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21. 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
22. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rules 2520, 9.3.2 and 4702] Federally Enforceable Through Title V Permit
23. If the engine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 2520, 9.3.2 and 4702] Federally Enforceable Through Title V Permit
24. The sulfur content of the natural gas being fired in the IC engine shall be determined using EPA Methods 11 or 15, or ASTM methods D1072, D3031, D4084 or D3246. [District Rules 2520, 9.3.2 and 4702] Federally Enforceable Through Title V Permit
25. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type and quantity (cubic feet of gas or gallons of liquid) of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
26. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [District 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
30. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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32. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63, Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. Compliance with permit conditions in the Title V permit shall be deemed compliance with Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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