MAR 04 2015

Wm Douglas Shaffer
California Resources Production Corp
9600 Ming Avenue, Suite 300
Bakersfield, CA 93311

RE: Final - Authority to Construct / Certificate of Conformity (Significant Modification)
Facility Number: S-1738
Project Number: S-1143715

Dear Mr. Shaffer:

The Air Pollution Control Officer has issued the Authority to Construct permits to California Resources Production Corp for ten (10) IC engines, in western Kern County, CA. Enclosed are the Authority to Construct permits and a copy of the notice of final action to be published approximately three days from the date of this letter.

Notice of the District's preliminary decision to issue the Authority to Construct permits was published on December 8, 2014. The District's analysis of the proposal was also sent to CARB and US EPA Region IX on December 3, 2014. All comments received following the District's preliminary decision on this project were considered. A copy of the comments and responses are enclosed.

Comments received by the District during the public notice period resulted in minor changes due to public comment. These changes were minor and did not trigger additional public notification requirements, nor did they have any impact upon the Best Available Control Technology determination or on the amount of offsets required for project approval.

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

www.valleyair.org www.healthyairliving.com
Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Leonard Scandura at (661) 392-5500.

Sincerely,

[Signature]

Arnaud Marjollet
Director of Permit Services

AM:RUE/st

Enclosures

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

Condition 10 from ATC '499-0 should be added to ATC '498-0.

Condition 10 reads as follows:

10. IC engine is authorized to operate only in the South Half of Section 25, Section 35, and Section 36 in Township I IN, Range 21 W, and the West Half of Section 30, Township 11N, Range 20W. [District Rule 2201] Federally Enforceable Through Title V Permit

District Response

The condition has been added.

Applicant Comment

Condition 16 on ATC '499-0 should be corrected to the proper (modeled) stack height of 10 feet rather than 12 feet as shown.

Condition 16 reads as follows:

16. The exhaust stack height shall be at least 42 10 feet. [District Rule 4102]

District Response

The restriction on stack height was added in error and the condition has been deleted.
Facility # S-1738
CALIFORNIA RESOURCES PRODUCTION CORP.  
9600 MING AVENUE, SUITE 300  
BAKERSFIELD, CA 93311

AUTHORITY TO CONSTRUCT (ATC)

QUICK START GUIDE

1. **Pay Invoice.** Please pay enclosed invoice before due date.

2. **Fully Understand ATC.** Make sure you understand ALL conditions in the ATC prior to construction, modification and/or operation.

3. **Follow ATC.** You must construct, modify and/or operate your equipment as specified on the ATC. Any unspecified changes may require a new ATC.

4. **Notify District.** You must notify the District's Compliance Department, at the telephone numbers below, upon start-up and/or operation under the ATC. Please record the date construction or modification commenced and the date the equipment began operation under the ATC. You may NOT operate your equipment until you have notified the District's Compliance Department.

5. **Source Test.** Schedule and perform any required source testing. See http://www.valleyair.org/busind/comply/source_testing.htm for source testing resources.

6. **Maintain Records.** Maintain all records required by ATC. Records are reviewed during every inspection (or upon request) and must be retained for 5 years.

   By operating in compliance, you are doing your part to improve air quality for all Valley residents.

   For assistance, please contact District Compliance staff at any of the telephone numbers listed below.

Seyed Sadredin
Executive Director/Air Pollution Control Officer

<table>
<thead>
<tr>
<th>Northern Region</th>
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<td>FAX: (209) 557-8475</td>
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<td>FAX: 661-392-5585</td>
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www.valleyair.org  www.healthyairliving.com
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1738-498-0

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES PRODUCTION CORP.

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
KERN COUNTY
CA

EQUIPMENT DESCRIPTION:
233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) NATURAL GAS- FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER POWERING A WELL PUMPING UNIT

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. 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

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
5. ERC Certificate Numbers C-1291-2 and S-4302-I (or certificates split from these certificates) shall be used to supply the required NOx, and VOC 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

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

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

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

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

10. IC engine is authorized to operate only in the South Half of Section 25, Section 35, and Section 36 in Township 11N, Range 21 W, and the West Half of Section 30, Township 11N, Range 20W. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Permittee shall notify the District Compliance Division of each location at which the IC engine is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

12. 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

13. 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

14. 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

15. 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]

16. Unit shall not be operated within 1,000 feet of any K-12 school. [CH&SC 42301.6]

17. Emissions rates shall not exceed any of the following: PM10: 0.01 g/bhp-hr; NOx (as NO2): 5 ppmvd @15% O2; VOC (as CH4): 25 ppmvd @15% O2; CO: 50 ppmvd @15% O2; or SOx (as SO2): 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

18. Sulfur content of produced natural gas fuel shall not exceed 5.2 grains S/100 dscf. [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, and O2 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
20. If the NO\textsubscript{x} and/or CO concentrations corrected to 15% O\textsubscript{2}, 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

21. 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

22. The permittee shall maintain records of: (1) the date and time of NO\textsubscript{x}, CO, and O\textsubscript{2} measurements, (2) the O\textsubscript{2} concentration in percent and the measured NO\textsubscript{x} and CO concentrations corrected to 15% O\textsubscript{2}, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

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

24. Source testing to measure NO\textsubscript{x}, 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

25. Source testing to measure natural gas-combustion NO\textsubscript{x}, 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

26. Compliance with NO\textsubscript{x}, 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

27. 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

28. 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

29. 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

30. 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

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of the 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\textsubscript{x}, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
32. 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

33. 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

34. 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

35. 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

36. 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

37. 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

38. 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

39. 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

40. 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

41. Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf. [District Rule 4201] Federally Enforceable Through Title V Permit

42. 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

43. 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

44. 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

45. Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures. [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
46. 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 differential. [District Rule 4702] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

51. 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-1738-499-0

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES PRODUCTION CORP.

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
KERN COUNTY
CA

EQUIPMENT DESCRIPTION:
233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) NATURAL GAS- FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER POWERING A WELL PUMPING UNIT

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. 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

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

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. ERC Certificate Numbers C-1291-2 and S-4302-I (or certificates split from these certificates) shall be used to supply
the required NOX, and VOC 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

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

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

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

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

10. IC engine is authorized to operate only in the South Half of Section 25, Section 35, and Section 36 in Township 11N,
Range 21 W, and the West Half of Section 30, Township 11N, Range 20W. [District Rule 2201] Federally Enforceable
Through Title V Permit

11. Permittee shall notify the District Compliance Division of each location at which the IC engine is located in excess of
24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule
1070] Federally Enforceable Through Title V Permit

12. 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

13. 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

14. 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

15. 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]

16. Unit shall not be operated within 1,000 feet of any K-12 school. [CH&SC 42301.6]

17. Emissions rates shall not exceed any of the following: PM10: 0.01 g/bhp-hr; NOx (as NO2): 5 ppmvd @15% O2;
VOC (as CH4): 25 ppmvd @15% O2; CO: 50 ppmvd @15% O2; or SOx (as SO2): 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

18. Sulfur content of produced natural gas fuel shall not exceed 5.2 grains S/100 dscf. [District Rules 2201, 4702, and
4801] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, and O2 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

CONDITIONS CONTINUE ON NEXT PAGE
20. If the NOx and/or CO concentrations corrected to 15% O2, 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

21. 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

22. 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

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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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
32. 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

33. 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

34. 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

35. 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

36. 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

37. 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

38. 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

39. 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

40. 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

41. Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf. [District Rule 4201] Federally Enforceable Through Title V Permit

42. 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

43. 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

44. 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

45. Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures. [District Rule 4702] Federally Enforceable Through Title V Permit
46. 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 differential. [District Rule 4702] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

51. 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-1738-500-0

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES PRODUCTION CORP.

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
KERN COUNTY
CA

EQUIPMENT DESCRIPTION:
233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) NATURAL GAS- FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER POWERING A WELL PUMPING UNIT

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. 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

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
5. ERC Certificate Numbers C-1291-2 and S-4302-1 (or certificates split from these certificates) shall be used to supply the required NOx, and VOC 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

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

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

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

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

10. IC engine is authorized to operate only in the South Half of Section 25, Section 35, and Section 36 in Township 11N, Range 21 W, and the West Half of Section 30, Township 11N, Range 20W. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Permittee shall notify the District Compliance Division of each location at which the IC engine is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

12. 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

13. 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

14. 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

15. 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]

16. Unit shall not be operated within 1,000 feet of any K-12 school. [CH&SC 42301.6]

17. Emissions rates shall not exceed any of the following: PM10: 0.01 g/bhp-hr; NOx (as NO2): 5 ppmvd @15% O2; VOC (as CH4): 25 ppmvd @15% O2; CO: 50 ppmvd @15% O2; or SOx (as SO2): 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

18. Sulfur content of produced natural gas fuel shall not exceed 5.2 grains S/100 dscf. [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, and O2 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
20. If the NOx and/or CO concentrations corrected to 15% O2, 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

21. 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

22. 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

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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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
32. 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

33. 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

34. 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

35. 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

36. 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

37. 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

38. 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

39. 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

40. 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

41. Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf. [District Rule 4201] Federally Enforceable Through Title V Permit

42. 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

43. 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

44. 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

45. Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures. [District Rule 4702] Federally Enforceable Through Title V Permit
46. 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 differential. [District Rule 4702] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

51. 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-1738-501-0

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES PRODUCTION CORP.

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
          KERN COUNTY
          CA

EQUIPMENT DESCRIPTION:
233 BHP WAKESHA MODEL F-1905 (OR EQUIVALENT) NATURAL GAS- FIRED IC ENGINE WITH CATALYTIC
CONVERTER AND AIR FUEL RATIO CONTROLLER POWERING A WELL PUMPING UNIT

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. 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

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

Amaud Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. ERC Certificate Numbers C-1291-2 and S-4302-1 (or certificates split from these certificates) shall be used to supply the required NOx, and VOC 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

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

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

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

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

10. IC engine is authorized to operate only in the South Half of Section 25, Section 35, and Section 36 in Township 11N, Range 21 W, and the West Half of Section 30, Township 11N, Range 20W. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Permittee shall notify the District Compliance Division of each location at which the IC engine is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

12. 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

13. 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

14. 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

15. 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]

16. Unit shall not be operated within 1,000 feet of any K-12 school. [CH&SC 42301.6]

17. Emissions rates shall not exceed any of the following: PM10: 0.01 g/bhp-hr; NOx (as NO2): 5 ppmvd @15% O2; VOC (as CH4): 25 ppmvd @15% O2; CO: 50 ppmvd @15% O2; or SOx (as SO2): 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

18. Sulfur content of produced natural gas fuel shall not exceed 5.2 grains S/100 dscf. [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, and O2 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

CONDITIONS CONTINUE ON NEXT PAGE
20. If the NOx and/or CO concentrations corrected to 15% O2, 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 performing the notification and testing required by this condition. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

21. 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

22. 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

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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

CONDITIONS CONTINUE ON NEXT PAGE
32. 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

33. 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

34. 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

35. 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

36. 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

37. 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

38. 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

39. 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

40. 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

41. Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf. [District Rule 4201] Federally Enforceable Through Title V Permit

42. 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

43. 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

44. 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

45. Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures. [District Rule 4702] Federally Enforceable Through Title V Permit
46. 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 differential. [District Rule 4702] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

51. 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-1738-502-0

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES PRODUCTION CORP.
MAILING ADDRESS: 9600 MING AVENUE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
KERN COUNTY
CA

EQUIPMENT DESCRIPTION:
233 BHP WAKESHA MODEL F-1905 (OR EQUIVALENT) NATURAL GAS-FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER POWERING A WELL PUMPING UNIT

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. 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

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

Seyn Marfollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. ERC Certificate Numbers C-1291-2 and S-4302-1 (or certificates split from these certificates) shall be used to supply
the required NOX, and VOC 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

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

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

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

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

10. IC engine is authorized to operate only in the South Half of Section 25, Section 35, and Section 36 in Township 11N,
Range 21 W, and the West Half of Section 30, Township 11N, Range 20W. [District Rule 2201] Federally Enforceable
Through Title V Permit

11. Permittee shall notify the District Compliance Division of each location at which the IC engine is located in excess of
24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule
1070] Federally Enforceable Through Title V Permit

12. 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

13. 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

14. 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

15. 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]

16. Unit shall not be operated within 1,000 feet of any K-12 school. [CH&SC 42301.6]

17. Emissions rates shall not exceed any of the following: PM10: 0.01 g/bhp-hr; NOx (as NO2): 5 ppmvd @15% O2;
VOC (as CH4): 25 ppmvd @15% O2; CO: 50 ppmvd @15% O2; or SOx (as SO2): 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

18. Sulfur content of produced natural gas fuel shall not exceed 5.2 grains S/100 dscf. [District Rules 2201, 4702, and
4801] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, and O2 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
20. If the NOx and/or CO concentrations corrected to 15% O2, 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 performing the notification and testing required by this condition. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

21. 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

22. 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

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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

CONDITIONS CONTINUE ON NEXT PAGE
32. 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

33. 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

34. 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

35. 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

36. 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

37. 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

38. 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

39. 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

40. 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

41. Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf. [District Rule 4201] Federally Enforceable Through Title V Permit

42. 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

43. 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

44. 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

45. Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures. [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
46. 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 differential. [District Rule 4702] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

51. 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-1738-503-0
ISSUANCE DATE: 02/11/2015

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES PRODUCTION CORP.
MAILING ADDRESS: 9600 MING AVENUE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
KERN COUNTY
CA

EQUIPMENT DESCRIPTION:
233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) NATURAL GAS-FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER POWERING A WELL PUMPING UNIT

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. 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

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
5. ERC Certificate Numbers C-1291-2 and S-4302-I (or certificates split from these certificates) shall be used to supply the required NOX, and VOC 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

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

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

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

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

10. IC engine is authorized to operate only in the South Half of Section 25, Section 35, and Section 36 in Township 11N, Range 21 W, and the West Half of Section 30, Township 11N, Range 20W. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Permittee shall notify the District Compliance Division of each location at which the IC engine is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

12. 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

13. 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

14. 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

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

16. Unit shall not be operated within 1,000 feet of any K-12 school. [CH&SC 42301.6]

17. Emissions rates shall not exceed any of the following: PM10: 0.01 g/bhp-hr; NOx (as NO2): 5 ppmvd @15% O2; VOC (as CH4): 25 ppmvd @15% O2; CO: 50 ppmvd @15% O2; or SOx (as SO2): 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

18. Sulfur content of produced natural gas fuel shall not exceed 5.2 grains S/100 dscf. [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, and O2 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
20. If the NOx and/or CO concentrations corrected to 15% O2, 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

21. 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

22. 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

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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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
32. 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

33. 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

34. 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

35. 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

36. 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

37. 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

38. 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

39. 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

40. 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

41. Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf. [District Rule 4201] Federally Enforceable Through Title V Permit

42. 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

43. 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

44. 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

45. Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures. [District Rule 4702] Federally Enforceable Through Title V Permit
46. 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 differential. [District Rule 4702] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

51. 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-1738-504-0

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES PRODUCTION CORP.

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

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
KERN COUNTY
CA

EQUIPMENT DESCRIPTION:
233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) NATURAL GAS-FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER POWERING A WELL PUMPING UNIT

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. 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

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

Amad Marjollet, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. ERC Certificate Numbers C-1291-2 and S-4302-1 (or certificates split from these certificates) shall be used to supply the required NOX, and VOC 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

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

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

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

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

10. IC engine is authorized to operate only in the South Half of Section 25, Section 35, and Section 36 in Township 11N, Range 21 W, and the West Half of Section 30, Township 11N, Range 20W. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Permittee shall notify the District Compliance Division of each location at which the IC engine is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

12. 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

13. 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

14. 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

15. 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]

16. Unit shall not be operated within 1,000 feet of any K-12 school. [CH&SC 42301.6]

17. Emissions rates shall not exceed any of the following: PM10: 0.01 g/bhp-hr; NOx (as NO2): 5 ppmvd @15% O2; VOC (as CH4): 25 ppmvd @15% O2; CO: 50 ppmvd @15% O2; or SOx (as SO2): 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

18. Sulfur content of produced natural gas fuel shall not exceed 5.2 grains S/100 dscf. [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, and O2 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

CONDITIONS CONTINUE ON NEXT PAGE
20. If the NOx and/or CO concentrations corrected to 15% O2, 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

21. 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

22. 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

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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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. NOx, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
32. 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

33. 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

34. 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

35. 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

36. 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

37. 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

38. 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

39. 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

40. 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

41. Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf. [District Rule 4201] Federally Enforceable Through Title V Permit

42. 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

43. 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

44. 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

45. Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures. [District Rule 4702] Federally Enforceable Through Title V Permit
46. 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 differential. [District Rule 4702] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

51. 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-1738-505-0

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES PRODUCTION CORP.
MAILING ADDRESS: 9600 MING AVENUE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
KERN COUNTY
CA

EQUIPMENT DESCRIPTION:
233 BHP WAKESHA MODEL F-1905 (OR EQUIVALENT) NATURAL GAS-FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER POWERING A WELL PUMPING UNIT

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. 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

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
5. ERC Certificate Numbers C-1291-2 and S-4302-1 (or certificates split from these certificates) shall be used to supply the required NOX, and VOC 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

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

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

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

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

10. IC engine is authorized to operate only in the South Half of Section 25, Section 35, and Section 36 in Township 11N, Range 21 W, and the West Half of Section 30, Township 11N, Range 20W. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Permittee shall notify the District Compliance Division of each location at which the IC engine is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

12. 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

13. 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

14. 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

15. 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]

16. Unit shall not be operated within 1,000 feet of any K-12 school. [CH&SC 42301.6]

17. Emissions rates shall not exceed any of the following: PM10: 0.01 g/bhp-hr; NOx (as NO2): 5 ppmvd @15% O2; VOC (as CH4): 25 ppmvd @15% O2; CO: 50 ppmvd @15% O2; or SOx (as SO2): 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

18. Sulfur content of produced natural gas fuel shall not exceed 5.2 grains S/100 dscf. [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, and O2 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

CONDITIONS CONTINUE ON NEXT PAGE
20. If the NOx and/or CO concentrations corrected to 15% O2, 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

21. 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

22. 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

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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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
32. 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

33. 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

34. 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

35. 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

36. 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

37. 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

38. 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

39. 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

40. 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

41. Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf. [District Rule 4201] Federally Enforceable Through Title V Permit

42. 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

43. 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

44. 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

45. Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures. [District Rule 4702] Federally Enforceable Through Title V Permit
46. 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 differential. [District Rule 4702] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

51. 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-1738-506-0
ISSUANCE DATE: 02/11/2015

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES PRODUCTION CORP.
MAILING ADDRESS: 9600 MING AVENUE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
KERN COUNTY
CA

EQUIPMENT DESCRIPTION:
233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) NATURAL GAS FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER POWERING A WELL PUMPING UNIT

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. 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

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
5. ERC Certificate Numbers C-1291-2 and S-4302-1 (or certificates split from these certificates) shall be used to supply the required NOx, and VOC 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

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

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

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

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

10. IC engine is authorized to operate only in the South Half of Section 25, Section 35, and Section 36 in Township 11N, Range 21 W, and the West Half of Section 30, Township 11N, Range 20W. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Permittee shall notify the District Compliance Division of each location at which the IC engine is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

12. 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

13. 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

14. 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

15. 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]

16. Unit shall not be operated within 1,000 feet of any K-12 school. [CH&SC 42301.6]

17. Emissions rates shall not exceed any of the following: PM10: 0.01 g/bhp-hr; NOx (as NO2): 5 ppmvd @15% O2; VOC (as CH4): 25 ppmvd @15% O2; CO: 50 ppmvd @15% O2; or SOx (as SO2): 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

18. Sulfur content of produced natural gas fuel shall not exceed 5.2 grains S/100 dscf. [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, and O2 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

CONDITIONS CONTINUE ON NEXT PAGE
20. If the NOx and/or CO concentrations corrected to 15% O2, 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 performing the notification and testing required by this condition. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

21. 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

22. 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

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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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. NOx, NO, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
32. 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

33. 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

34. 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

35. 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

36. 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

37. 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

38. 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

39. 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

40. 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

41. Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf. [District Rule 4201] Federally Enforceable Through Title V Permit

42. 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

43. 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

44. 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

45. Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures. [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
46. 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 differential. [District Rule 4702] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

51. 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-1738-507-0

LEGAL OWNER OR OPERATOR: CALIFORNIA RESOURCES PRODUCTION CORP.
MAILING ADDRESS: 9600 MING AVENUE, SUITE 300
BAKERSFIELD, CA 93311
LOCATION: LIGHT OIL WESTERN STATIONARY SOURCE
KERN COUNTY
CA

EQUIPMENT DESCRIPTION:
233 BHP WAUKESHA MODEL F-1905 (OR EQUIVALENT) NATURAL GAS FIRED IC ENGINE WITH CATALYTIC CONVERTER AND AIR FUEL RATIO CONTROLLER POWERING A WELL PUMPING UNIT

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. 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

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
5. ERC Certificate Numbers C-1291-2 and S-4302-1 (or certificates split from these certificates) shall be used to supply the required NOx, and VOC 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

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

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

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

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

10. IC engine is authorized to operate only in the South Half of Section 25, Section 35, and Section 36 in Township 11N, Range 21 W, and the West Half of Section 30, Township 11N, Range 20 W. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Permittee shall notify the District Compliance Division of each location at which the IC engine is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

12. 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

13. 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

14. 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

15. 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]

16. Unit shall not be operated within 1,000 feet of any K-12 school. [CH&SC 42301.6]

17. Emissions rates shall not exceed any of the following: PM10: 0.01 g/bhp-hr; NOx (as NO2): 5 ppmvd @15% O2; VOC (as CH4): 25 ppmvd @15% O2; CO: 50 ppmvd @15% O2; or SOx (as SO2): 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

18. Sulfur content of produced natural gas fuel shall not exceed 5.2 grains S/100 dscf. [District Rules 2201, 4702, and 4801] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, and O2 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
20. If the NOx and/or CO concentrations corrected to 15% O2, 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

21. 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

22. 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

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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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
32. 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

33. 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

34. 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

35. 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

36. 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

37. 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

38. 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

39. 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

40. 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

41. Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf. [District Rule 4201] Federally Enforceable Through Title V Permit

42. 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

43. 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

44. 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

45. Permittee shall monitor and record, on a monthly basis, the catalyst inlet and outlet temperatures. [District Rule 4702] Federally Enforceable Through Title V Permit
46. 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 differential. [District Rule 4702] Federally Enforceable Through Title V Permit

47. 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

48. 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

49. 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

50. 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

51. 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