



**JAN 18 2013**

Gerardo C. Rios, Chief  
Permits Office  
Air Division  
U.S. EPA - Region IX  
75 Hawthorne St  
San Francisco, CA 94105

Re: **Notice of Minor Title V Permit Modification**  
**District Facility # S-2234**  
**Project # 1124521**

Dear Mr. Rios:

Enclosed for you to review is an application for minor Title V permit modification for the facility identified above. Occidental of Elk Hills Inc is proposing a Title V minor permit modification to modify Permit(s) to Operate (PTOs) S-2234-29-13, '-30-13, '-31-13, 48-6, '-57-13, '-58-15, '-59-14, '-60-7, '-61-13, '-63-13, '-64-9, '-65-9, '-66-9, '-67-13, '-68-13, '-69-13, '-70-14, '-71-14, '-72-13, '-73-13, '-74-13, '-78-12, '-79-12, '-84-7, '-85-7, '-86-7, '-210-2, '-212-2, and '-214-2 of the facility's current Title V operating permit. The project adds the output voltage range for catalyst system O2 sensors as required by the current permits and 40 CFR Part 64 (CAM).

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V PTO(s) S-2234-29-16 '-30-16, '-31-16, 48-8, '-57-16, '-58-18, '-59-17, '-60-10, '-61-16, '-63-16, '-64-12, '-65-12, '-66-12, '-67-16, '-68-16, '-69-16, '-70-17, '-71-17, '-72-16, '-73-16, '-74-16, '-78-15, '-79-15, '-84-9, '-85-9, '-86-9, '-210-5, '-212-5, and '-214-5, application, and previous Title V permit. Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter.

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

Sincerely,



David Warner  
Director of Permit Services

Enclosures  
cc: Richard Edgehill, Permit Services

**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

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34946 Flyover Court  
Bakersfield, CA 93308-9725  
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**JAN 18 2013**

Dennis Champion  
Occidental of Elk Hills Inc  
10800 Stockdale Hwy  
Bakersfield, CA 93311

**Re: Notice of Minor Title V Permit Modification  
District Facility # S-2234  
Project # 1124521**

Dear Mr. Champion:

Enclosed is the District's analysis of your application for minor Title V permit modification for the facility identified above. You proposed a Title V minor permit modification to modify Permit(s) to Operate S-2234-29-13, '-30-13, '-31-13, 48-6, '-57-13, '-58-15, '-59-14, '-60-7, '-61-13, '-63-13, '-64-9, '-65-9, '-66-9, '-67-13, '-68-13, '-69-13, '-70-14, '-71-14, '-72-13, '-73-13, '-74-13, '-78-12, '-79-12, '-84-7, '-85-7, '-86-7, '-210-2, '-212-2, and '-214-2 of the current Title V operating permit. The project adds the output voltage range for catalyst system O2 sensors as required by the current permits and 40 CFR Part 64 (CAM).

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V PTO(s) S-2234-29-16 '-30-16, '-31-16, 48-8, '-57-16, '-58-18, '-59-17, '-60-10, '-61-16, '-63-16, '-64-12, '-65-12, '-66-12, '-67-16, '-68-16, '-69-16, '-70-17, '-71-17, '-72-16, '-73-16, '-74-16, '-78-15, '-79-15, '-84-9, '-85-9, '-86-9, '-210-5, '-212-5, and '-214-5, application, and previous Title V permit. This project will be finalized after the 45-day EPA comment period.

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

Sincerely,



David Warner  
Director of Permit Services

Enclosures  
cc: Richard Edgehill, Permit Services

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# TITLE V APPLICATION REVIEW

Minor Modification  
Project #: S-1124521

Engineer: Richard Edgehill  
Date: January 17, 2013

Facility Number: S-2234  
Facility Name: Occidental of Elk Hills Inc  
Mailing Address: 10800 Stockdale Hwy  
Bakersfield, CA 93311

Contact Name: Dennis Champion  
Phone: (661) 412-5214  
Title: Environmental Engineer  
Responsible Official: Armando Gonzalez  
Lead Engineer: Allan Phillips

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## I. PROPOSAL

Occidental of Elk Hills Inc (OEHI) is proposing a Title V minor permit modification to satisfy the following condition listed on current S-2234 PTOs:

The operator shall submit a Title V minor modification application by December 29, 2012 to incorporate the O2 sensor output voltage range established for this engine. [District Rule 2520, 9.3.2 and 40 CFR 64] Y

OEHI has stated that the appropriate output voltage range was established based on field observations and has proposed that the following new condition be added to the S-2234 permits:

Permittee shall ensure proper operation of catalyst system by maintaining O2 sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Y

The purpose of this evaluation is to identify all applicable requirements, determine if the facility will comply with the applicable requirements and to provide the legal and factual basis for the proposed revisions.

## II. FACILITY LOCATION

The IC engine driven compressors are approved at any site within source S-2234.

### III. EQUIPMENT DESCRIPTION

S-2234-29-16	1,000 BHP WAUKESHA MODEL L7042GSI RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER, ENLARGED TURBOCHARGER NOZZLE RING, AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-11 UNX #13198)
S-2234-30-16	1,000 BHP WAUKESHA MODEL L7042GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER, ENLARGED TURBOCHARGER NOZZLE RING, AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-12 UNX #12493)
S-2234-31-16	1,000 BHP WAUKESHA MODEL L7042GSI RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER, ENLARGED TURBOCHARGER NOZZLE RING, AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-13 UNX #13409)
S-2234-48-8	490 BHP CATERPILLAR MODEL G398 RICH-BURN NATURAL GAS-FIRED IC ENGINE POWERING A GAS COMPRESSOR (K-68 UNX #54313)
S-2234-57-16	1,000 BHP NATURAL GAS FIRED WAUKESHA MODEL L7042 RICH BURN I.C. ENGINE WITH TURBOCHARGER, ENLARGED NOZZLE RING, AIR/FUEL RATIO CONTROL UNIT, AND A NONSELECTIVE THREE WAY CATALYTIC REDUCTION (NSCR) SYSTEM (K-53 UNX #13444)
S-2234-58-18	1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-49 UNX# 51286)
S-2234-59-17	1,000 BHP WAUKESHA MODEL L7042-GSI RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-29 UNX# 13207)

S-2234-60-10	650 BHP WAUKESHA MODEL L7042-GU RICH-BURN NATURAL GAS-FIRED IC ENGINE WITH CATALYTIC CONVERTER POWERING A GAS COMPRESSOR (K-54 UNX# 12877)
S-2234-61-16	1,000 BHP WAUKESHA MODEL L7042GSI RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-52 UNX# 15676)
S-2234-63-16	1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-48 UNX# 13435)
S-2234-64-12	650 BHP WAUKESHA MODEL L7042-GU RICH-BURN NATURAL GAS-FIRED IC ENGINE WITH CATALYTIC CONVERTER POWERING A GAS COMPRESSOR (K-26 UNX# 11554)
S-2234-65-12	650 BHP WAUKESHA MODEL L7042-GU RICH-BURN NATURAL GAS-FIRED IC ENGINE WITH CATALYTIC CONVERTER POWERING A GAS COMPRESSOR (K-27 UNX #12705)
S-2234-66-12	650 BHP WAUKESHA MODEL L7042-GU RICH-BURN NATURAL GAS-FIRED IC ENGINE EQUIPPED WITH CATALYTIC CONVERTER POWERING A GAS COMPRESSOR (K-28 UNX# 12850)
S-2234-67-16	1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-30 UNX# 13426)

S-2234-68-16	1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-31 UNX# 11553)
S-2234-69-16	1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-32 UNX# 18028)
S-2234-70-17	1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-33 UNX# 16453)
S-2234-71-17	1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-34 UNX# 13417)
S-2234-72-16	1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-35 UNX# 54626)
S-2234-73-16	1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-51 UNX# 13793)
S-2234-74-16	1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-50 UNX# 13401)

S-2234-78-15	1,000 BHP WAUKESHA MODEL L7042 RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-58 UNX# 18033)
S-2234-79-15	1,000 BHP WAUKESHA MODEL L7042 RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-57 UNX# 18017)
S-2234-84-9	490 BHP CATERPILLAR MODEL G398 RICH-BURN NATURAL GAS-FIRED IC ENGINE WITH CATALYTIC CONVERTER POWERING A GAS COMPRESSOR (K-67 UNX# 54302)
S-2234-85-9	490 BHP CATERPILLAR MODEL G398 RICH-BURN NATURAL GAS-FIRED IC ENGINE WITH CATALYTIC CONVERTER POWERING A GAS COMPRESSOR (K-66 UNX# 54299)
S-2234-86-9	490 BHP CATERPILLAR MODEL G398 RICH-BURN NATURAL GAS-FIRED IC ENGINE WITH CATALYTIC CONVERTER POWERING A GAS COMPRESSOR (K-69 UNX# 54318)
S-2234-210-5	1,680 BHP WAUKESHA MODEL L7044GSI NATURAL GAS-FIRED IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION POWERING A GAS COMPRESSOR (R-46) OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234
S-2234-212-5	1,680 BHP WAUKESHA MODEL L7044GSI NATURAL GAS-FIRED IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION POWERING A GAS COMPRESSOR (R-47) OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234

S-2234-214-5 1,680 BHP WAUKESHA MODEL L7044GSI NATURAL GAS-FIRED IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION POWERING A GAS COMPRESSOR (R-42) OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-2234

#### **IV. SCOPE OF EPA AND PUBLIC REVIEW**

This change to a Title V permit is considered to be a minor modification and, as such, requires no public review.

#### **V. APPLICABLE REQUIREMENTS**

District Rule 2520, Federally Mandated Operating Permits (Adopted June 21, 2001)

#### **VI. DESCRIPTION OF PROPOSED MODIFICATIONS**

The draft PTOs include all conditions listed on the current Title V PTOs with the exception of the following changes (deleted condition in strikeout text and added condition underlined):

~~The operator shall submit a Title V minor modification application by December 29, 2012 to incorporate the O2 sensor output voltage range established for this engine. [District Rule 2520, 9.3.2 and 40 CFR 64] Y~~

Permittee shall ensure proper operation of catalyst system by maintaining O2 sensor voltage between 0.5 millivolts and 1.0 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Y

#### **VII. COMPLIANCE**

In accordance with Rule 2520, 3.20, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which

the source would otherwise be subject. Such terms and conditions include;

- a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
  - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
  6. Do not seek to consolidate overlapping applicable requirements.

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including:

1. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
2. The source's suggested draft permit; and
3. Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used.

## **VIII. ATTACHMENTS**

- A. Current and Proposed Title V Operating Permits
- B. Application

Attachment A  
Current and Proposed Title V Operating Permits

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-2234-29-16

**EXPIRATION DATE:** 10/31/2016

**EQUIPMENT DESCRIPTION:**

1,000 BHP WAUKESHA MODEL L7042GSI RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER, ENLARGED TURBOCHARGER NOZZLE RING, AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-11 UNX #13198)

## PERMIT UNIT REQUIREMENTS

1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.59 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction), SO<sub>x</sub> (as SO<sub>2</sub>): 0.34 lb/hr, PM<sub>10</sub>: 0.24 lb/hr, CO: 8.82 lb/hr and 541 ppmv @ 15% O<sub>2</sub>, or VOC: 2.23 lb/hr and 240 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201 and Kern County Rule 404] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [Kern County Rule 407] Federally Enforceable Through Title V Permit

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

10. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. This average shall be multiplied by the appropriate factor to determine compliance with the hourly emission limits. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. For engines that comply with a percent reduction limit, the percent reduction of NO<sub>x</sub> emissions shall also be reported. [District Rules 2520, 9.4.2 and 4702, 6.3.3] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
15. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
16. 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
17. 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
18. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
19. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
20. NO<sub>x</sub>, CO, and VOC emissions shall be measured (source tested) not less than every 12 months. If compliance with the emission limits is demonstrated for 2 consecutive years, testing frequency may be reduced to every 24 months. If the unit fails to demonstrated compliance with the emission limits, the testing frequency shall return to not less than every 12 months. NO<sub>x</sub> percent reduction compliance shall be demonstrated every 24 months. [District Rules 2201, 2520 9.4.2, and 4702, 6.3.2] Federally Enforceable Through Title V Permit

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

21. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub>, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The facility conducted noncertified self test shall be performed for NO<sub>x</sub> according to ARB Method 100 (or EPA Method 7E). [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
26. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
27. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
28. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
29. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
31. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
32. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit

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

33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 404. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-2234-30-16

EXPIRATION DATE: 10/31/2016

## EQUIPMENT DESCRIPTION:

1,000 BHP WAUKESHA MODEL L7042GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER, ENLARGED TURBOCHARGER NOZZLE RING, AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-12 UNX #12493)

## PERMIT UNIT REQUIREMENTS

1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.59 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction), SO<sub>x</sub> (as SO<sub>2</sub>): 0.34 lb/hr, PM<sub>10</sub>: 0.24 lb/hr, CO: 8.82 lb/hr and 541 ppmv @ 15% O<sub>2</sub>, or VOC: 2.23 lb/hr and 240 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201 and Kern County Rule 404] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [Kern County Rule 407] Federally Enforceable Through Title V Permit

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

10. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. This average shall be multiplied by the appropriate factor to determine compliance with the hourly emission limits. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. For engines that comply with a percent reduction limit, the percent reduction of NO<sub>x</sub> emissions shall also be reported. [District Rules 2520, 9.4.2 and 4702, 6.3.3] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
15. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
16. 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
17. 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
18. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
19. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
20. NO<sub>x</sub>, CO, and VOC emissions shall be measured (source tested) not less than every 12 months. If compliance with the emission limits is demonstrated for 2 consecutive years, testing frequency may be reduced to every 24 months. If the unit fails to demonstrated compliance with the emission limits, the testing frequency shall return to not less than every 12 months. NO<sub>x</sub> percent reduction compliance shall be demonstrated every 24 months. [District Rules 2201, 2520 9.4.2, and 4702, 6.3.2] Federally Enforceable Through Title V Permit

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

21. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub>, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The facility conducted noncertified self test shall be performed for NO<sub>x</sub> according to ARB Method 100 (or EPA Method 7E). [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
26. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
27. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
28. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
29. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
31. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
32. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit

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

33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 404. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-2234-31-16

**EXPIRATION DATE:** 10/31/2016

**EQUIPMENT DESCRIPTION:**

1,000 BHP WAUKESHA MODEL L7042GSI RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER, ENLARGED TURBOCHARGER NOZZLE RING, AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-13 UNX #13409)

## PERMIT UNIT REQUIREMENTS

1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.59 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction), SO<sub>x</sub> (as SO<sub>2</sub>): 0.34 lb/hr, PM<sub>10</sub>: 0.24 lb/hr, CO: 8.82 lb/hr and 541 ppmv @ 15% O<sub>2</sub>, or VOC: 2.23 lb/hr and 240 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201 and Kern County Rule 404] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [Kern County Rule 407] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. This average shall be multiplied by the appropriate factor to determine compliance with the hourly emission limits. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. For engines that comply with a percent reduction limit, the percent reduction of NO<sub>x</sub> emissions shall also be reported. [District Rules 2520, 9.4.2 and 4702, 6.3.3] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
15. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
16. 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
17. 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
18. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
19. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
20. NO<sub>x</sub>, CO, and VOC emissions shall be measured (source tested) not less than every 12 months. If compliance with the emission limits is demonstrated for 2 consecutive years, testing frequency may be reduced to every 24 months. If the unit fails to demonstrated compliance with the emission limits, the testing frequency shall return to not less than every 12 months. NO<sub>x</sub> percent reduction compliance shall be demonstrated every 24 months. [District Rules 2201, 2520 9.4.2, and 4702, 6.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub>, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The facility conducted noncertified self test shall be performed for NO<sub>x</sub> according to ARB Method 100 (or EPA Method 7E). [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
26. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
27. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
28. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
29. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
31. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
32. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit

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

33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 404. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-2234-48-8

EXPIRATION DATE: 10/31/2016

## EQUIPMENT DESCRIPTION:

490 BHP CATERPILLAR MODEL G398 RICH-BURN NATURAL GAS-FIRED IC ENGINE POWERING A GAS COMPRESSOR (K-68 UNX #54313)

## PERMIT UNIT REQUIREMENTS

1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. Particulate matter emissions at the point of discharge shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. 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
5. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction); SO<sub>x</sub> (as SO<sub>2</sub>): 0.6 lb/day; PM<sub>10</sub>: 10.5 lb/day; CO: 11.6 g/hp-hr and 1,592 ppmv @ 15% O<sub>2</sub>; or VOC: 58 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
6. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 5.4] Federally Enforceable Through Title V Permit
7. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
8. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, the permittee shall maintain on file, copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Source testing to measure the NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted not less than once every 12 months. If compliance with the emission limits is demonstrated on two (2) consecutive annual source tests, the testing frequency may be reduced to not less than once every 24 months. If the unit fails to demonstrate compliance with the applicable emission limits, the testing frequency shall return to not less than once every 12 months. [District Rules 2201 and 4702, 6.3.2] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
15. 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
16. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702, 6.4] Federally Enforceable Through Title V Permit
17. 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. NO<sub>x</sub>, CO and VOC concentrations shall be reported in ppmv, corrected to 15% oxygen. For engines that comply with a percent reduction limit, the percent reduction of NO<sub>x</sub> emissions shall also be reported. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
18. 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
19. 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
20. 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
21. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub>, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

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

22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
25. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
26. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
27. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
28. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
29. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
31. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201 and Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-2234-57-16

**EXPIRATION DATE:** 10/31/2016

**EQUIPMENT DESCRIPTION:**

1,000 BHP NATURAL GAS FIRED WAUKESHA MODEL L7042 RICH BURN I.C. ENGINE WITH TURBOCHARGER, ENLARGED NOZZLE RING, AIR/FUEL RATIO CONTROL UNIT, AND A NONSELECTIVE THREE WAY CATALYTIC REDUCTION (NSCR) SYSTEM (K-53 UNX #13444)

## PERMIT UNIT REQUIREMENTS

1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.59 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction); SO<sub>x</sub> (as SO<sub>2</sub>): 0.34 lb/hr; PM<sub>10</sub>: 0.24 lb/hr; CO: 8.82 lb/hr and 541 ppmv @ 15% O<sub>2</sub>; or VOC: 2.23 lb/hr and 240 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions at the point of discharge shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit

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

10. If the IC engine is fired on PUC-regulated natural gas, the permittee shall maintain on file, copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. 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. For engines that comply with a percent reduction limit, the percent reduction of NOx emissions shall also be reported. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
14. 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 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702, 6.4] Federally Enforceable Through Title V Permit
15. Source testing to measure the NOx, CO, and VOC emissions from this unit shall be conducted not less than once every 12 months. If compliance with the emission limits is demonstrated on two (2) consecutive annual source tests, the testing frequency may be reduced to not less than once every 24 months. If the unit fails to demonstrate compliance with the applicable emission limits, the testing frequency shall return to not less than once every 12 months. [District Rules 2201 and 4702, 6.3.2] Federally Enforceable Through Title V Permit
16. 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, 6.3.3] Federally Enforceable Through Title V Permit
17. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
19. 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
20. 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

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

21. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub>, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
26. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
27. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
28. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
29. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
31. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201 and Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

33. NOx emissions rate shall not exceed 8.00 gr/hp-hr. [PSD SJ 77-42] Federally Enforceable Through Title V Permit
34. Source testing to measure the NOx emissions from at least one representative engine of this type (Waukesha, model L7042GSI) shall be conducted not less than once every 12 months. [PSD SJ 77-42] Federally Enforceable Through Title V Permit
35. The permittee shall determine the NOx emissions from at least one representative engine of this type (Waukesha, model L7042GSI) at least once per month by either direct NOx measurement, or measurement of other exhaust gas concentrations (e.g. CO and O2) and engine parameters from which NOx emissions can be directly computed. NOx emissions shall be determined from every engine of this type at least once each calendar half. [PSD SJ 77-42] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-2234-58-18

**EXPIRATION DATE:** 10/31/2016

**EQUIPMENT DESCRIPTION:**

1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-49 UNX# 51286)

## PERMIT UNIT REQUIREMENTS

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1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.59 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction), SO<sub>x</sub> (as SO<sub>2</sub>): 0.34 lb/hr, PM<sub>10</sub>: 0.24 lb/hr, CO: 8.82 lb/hr and 541 ppmv @ 15% O<sub>2</sub>, or VOC: 2.23 lb/hr and 240 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201 and Kern County Rule 404] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. This average shall be multiplied by the appropriate factor to determine compliance with the hourly emission limits. 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. For engines that comply with a percent reduction limit, the percent reduction of NOx emissions shall also be reported. [District Rules 2520, 9.4.2 and 4702, 6.3.3] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
15. 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 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
16. 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
17. 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
18. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
19. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
20. NOx, CO, and VOC emissions shall be measured (source tested) not less than every 12 months. If compliance with the emission limits is demonstrated for 2 consecutive years, testing frequency may be reduced to every 24 months. If the unit fails to demonstrated compliance with the emission limits, the testing frequency shall return to not less than every 12 months. NOx percent reduction compliance shall be demonstrated every 24 months. [District Rules 2201, 2520 9.4.2, and 4702, 6.3.2] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The facility conducted noncertified self test shall be performed for NO<sub>x</sub> according to ARB Method 100 (or EPA Method 7E). [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
26. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
27. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
28. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
29. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
31. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
32. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 404. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-2234-59-17

**EXPIRATION DATE:** 10/31/2016

**EQUIPMENT DESCRIPTION:**

1,000 BHP WAUKESHA MODEL L7042-GSI RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-29 UNX# 13207)

## PERMIT UNIT REQUIREMENTS

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1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.59 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction), SO<sub>x</sub> (as SO<sub>2</sub>): 0.34 lb/hr, PM<sub>10</sub>: 0.24 lb/hr, CO: 8.82 lb/hr and 541 ppmv @ 15% O<sub>2</sub>, or VOC: 2.23 lb/hr and 240 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201 and Kern County Rule 404] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. This average shall be multiplied by the appropriate factor to determine compliance with the hourly emission limits. 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. For engines that comply with a percent reduction limit, the percent reduction of NOx emissions shall also be reported. [District Rules 2520, 9.4.2 and 4702, 6.3.3] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
15. 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 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
16. 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
17. 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
18. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
19. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
20. NOx, CO, and VOC emissions shall be measured (source tested) not less than every 12 months. If compliance with the emission limits is demonstrated for 2 consecutive years, testing frequency may be reduced to every 24 months. If the unit fails to demonstrated compliance with the emission limits, the testing frequency shall return to not less than every 12 months. NOx percent reduction compliance shall be demonstrated every 24 months. [District Rules 2201, 2520 9.4.2, and 4702, 6.3.2] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

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

22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The facility conducted noncertified self test shall be performed for NO<sub>x</sub> according to ARB Method 100 (or EPA Method 7E). [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
26. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
27. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
28. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
29. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
31. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
32. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 404. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-2234-60-10

**EXPIRATION DATE:** 10/31/2016

**EQUIPMENT DESCRIPTION:**

650 BHP WAUKESHA MODEL L7042-GU RICH-BURN NATURAL GAS-FIRED IC ENGINE WITH CATALYTIC CONVERTER POWERING A GAS COMPRESSOR (K-54 UNX# 12877)

## PERMIT UNIT REQUIREMENTS

1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.03 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction); SO<sub>x</sub> (as SO<sub>2</sub>): 1.6 lb/day; PM<sub>10</sub>: 13.9 lb/day; CO: 2.1 g/hp-hr and 289 ppmv @ 15% O<sub>2</sub>; or VOC: 67 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions at the point of discharge shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, the permittee shall maintain on file, copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Source testing to measure the NOx, CO, and VOC emissions from this unit shall be conducted not less than once every 12 months. If compliance with the emission limits is demonstrated on two (2) consecutive annual source tests, the testing frequency may be reduced to not less than once every 24 months. If the unit fails to demonstrate compliance with the applicable emission limits, the testing frequency shall return to not less than once every 12 months. [District Rules 2201 and 4702, 6.3.2] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
15. 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
16. 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 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702, 6.4] Federally Enforceable Through Title V Permit
17. 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. For engines that comply with a percent reduction limit, the percent reduction of NOx emissions shall also be reported. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
18. 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
19. 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
20. 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
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

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

22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
26. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
27. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
28. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
29. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
31. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201 and Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-2234-61-16

**EXPIRATION DATE:** 10/31/2016

**EQUIPMENT DESCRIPTION:**

1,000 BHP WAUKESHA MODEL L7042GSI RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-52 UNX# 15676)

## PERMIT UNIT REQUIREMENTS

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1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.59 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction); SO<sub>x</sub> (as SO<sub>2</sub>): 0.34 lb/hr; PM<sub>10</sub>: 0.24 lb/hr; CO: 8.82 lb/hr and 541 ppmv @ 15% O<sub>2</sub>; or VOC: 2.23 lb/hr and 240 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions at the point of discharge shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, the permittee shall maintain on file, copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Source testing to measure the NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted not less than once every 12 months. If compliance with the emission limits is demonstrated on two (2) consecutive annual source tests, the testing frequency may be reduced to not less than once every 24 months. If the unit fails to demonstrate compliance with the applicable emission limits, the testing frequency shall return to not less than once every 12 months. [District Rules 2201 and 4702, 6.3.2] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
15. 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
16. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702, 6.4] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. For engines that comply with a percent reduction limit, the percent reduction of NO<sub>x</sub> emissions shall also be reported. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
18. 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
19. 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
20. 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
21. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub>, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

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

22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
26. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
27. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
28. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
29. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
31. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201 and Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
33. NO<sub>x</sub> emissions rate shall not exceed 8.00 gr/hp-hr. [PSD SJ 77-42] Federally Enforceable Through Title V Permit
34. Source testing to measure the NO<sub>x</sub> emissions from at least one representative engine of this type (Waukesha, model L7042GSI) shall be conducted not less than once every 12 months. [PSD SJ 77-42] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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35. The permittee shall determine the NOx emissions from at least one representative engine of this type (Waukesha, model L7042GSI) at least once per month by either direct NOx measurement, or measurement of other exhaust gas concentrations (e.g. CO and O2) and engine parameters from which NOx emissions can be directly computed. NOx emissions shall be determined from every engine of this type at least once each calendar half. [PSD SJ 77-42]  
Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-2234-63-16

EXPIRATION DATE: 10/31/2016

**EQUIPMENT DESCRIPTION:**

1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-48 UNX# 13435)

## PERMIT UNIT REQUIREMENTS

1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.59 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction), SO<sub>x</sub> (as SO<sub>2</sub>): 0.34 lb/hr, PM<sub>10</sub>: 0.24 lb/hr, CO: 8.82 lb/hr and 541 ppmv @ 15% O<sub>2</sub>, or VOC: 2.23 lb/hr and 240 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201 and Kern County Rule 404] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. This average shall be multiplied by the appropriate factor to determine compliance with the hourly emission limits. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. For engines that comply with a percent reduction limit, the percent reduction of NO<sub>x</sub> emissions shall also be reported. [District Rules 2520, 9.4.2 and 4702, 6.3.3] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
15. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
16. 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
17. 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
18. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
19. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
20. NO<sub>x</sub>, CO, and VOC emissions shall be measured (source tested) not less than every 12 months. If compliance with the emission limits is demonstrated for 2 consecutive years, testing frequency may be reduced to every 24 months. If the unit fails to demonstrated compliance with the emission limits, the testing frequency shall return to not less than every 12 months. NO<sub>x</sub> percent reduction compliance shall be demonstrated every 24 months. [District Rules 2201, 2520 9.4.2, and 4702, 6.3.2] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub>, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

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

22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The facility conducted noncertified self test shall be performed for NO<sub>x</sub> according to ARB Method 100 (or EPA Method 7E). [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
26. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
27. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
28. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
29. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
31. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
32. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 404. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-2234-64-12

EXPIRATION DATE: 10/31/2016

## EQUIPMENT DESCRIPTION:

650 BHP WAUKESHA MODEL L7042-GU RICH-BURN NATURAL GAS-FIRED IC ENGINE WITH CATALYTIC CONVERTER POWERING A GAS COMPRESSOR (K-26 UNX# 11554)

## PERMIT UNIT REQUIREMENTS

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1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.03 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction); SO<sub>x</sub> (as SO<sub>2</sub>): 1.6 lb/day, PM<sub>10</sub>: 13.9 lb/day; CO: 2.1 g/hp-hr and 289 ppmv; or VOC: 67 ppmv. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions at the point of discharge shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, the permittee shall maintain on file, copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Source testing to measure the NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted not less than once every 12 months. If compliance with the emission limits is demonstrated on two (2) consecutive annual source tests, the testing frequency may be reduced to not less than once every 24 months. If the unit fails to demonstrate compliance with the applicable emission limits, the testing frequency shall return to not less than once every 12 months. [District Rules 2201 and 4702, 6.3.2] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
15. 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
16. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702, 6.4] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. For engines that comply with a percent reduction limit, the percent reduction of NO<sub>x</sub> emissions shall also be reported. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
18. 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
19. 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
20. 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
21. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub>, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
26. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
27. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
28. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
29. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
31. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201 and Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
33. NO<sub>x</sub> emissions rate shall not exceed 8.00 gr/hp-hr. [PSD SJ 77-42] Federally Enforceable Through Title V Permit
34. Source testing to measure the NO<sub>x</sub> emissions from at least one representative engine of this type (Waukesha, model L7042GU) shall be conducted not less than once every 12 months. [PSD SJ 77-42] Federally Enforceable Through Title V Permit

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

35. The permittee shall determine the NOx emissions from at least one representative engine of this type (Waukesha, model L7042GU) at least once per month by either direct NOx measurement, or measurement of other exhaust gas concentrations (e.g. CO and O2) and engine parameters from which NOx emissions can be directly computed. NOx emissions shall be determined from every engine of this type at least once each calendar half. [PSD SJ 77-42]  
Federally Enforceable Through Title V Permit

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

DRAFT

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-2234-65-12

**EXPIRATION DATE:** 10/31/2016

**EQUIPMENT DESCRIPTION:**

650 BHP WAUKESHA MODEL L7042-GU RICH-BURN NATURAL GAS-FIRED IC ENGINE WITH CATALYTIC CONVERTER POWERING A GAS COMPRESSOR (K-27 UNX #12705)

## PERMIT UNIT REQUIREMENTS

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1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.03 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction); SO<sub>x</sub> (as SO<sub>2</sub>): 1.6 lb/day, PM<sub>10</sub>: 13.9 lb/day; CO: 2.1 g/hp-hr and 289 ppmv; or VOC: 67 ppmv. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions at the point of discharge shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, the permittee shall maintain on file, copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Source testing to measure the NOx, CO, and VOC emissions from this unit shall be conducted not less than once every 12 months. If compliance with the emission limits is demonstrated on two (2) consecutive annual source tests, the testing frequency may be reduced to not less than once every 24 months. If the unit fails to demonstrate compliance with the applicable emission limits, the testing frequency shall return to not less than once every 12 months. [District Rules 2201 and 4702, 6.3.2] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
15. 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
16. 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 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702, 6.4] Federally Enforceable Through Title V Permit
17. 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. For engines that comply with a percent reduction limit, the percent reduction of NOx emissions shall also be reported. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
18. 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
19. 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
20. 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
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

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

22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
26. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
27. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
28. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
29. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
31. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201 and Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
33. NO<sub>x</sub> emissions rate shall not exceed 8.00 gr/hp-hr. [PSD SJ 77-42] Federally Enforceable Through Title V Permit
34. Source testing to measure the NO<sub>x</sub> emissions from at least one representative engine of this type (Waukesha, model L7042GU) shall be conducted not less than once every 12 months. [PSD SJ 77-42] Federally Enforceable Through Title V Permit

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

35. The permittee shall determine the NOx emissions from at least one representative engine of this type (Waukesha, model L7042GU) at least once per month by either direct NOx measurement, or measurement of other exhaust gas concentrations (e.g. CO and O2) and engine parameters from which NOx emissions can be directly computed. NOx emissions shall be determined from every engine of this type at least once each calendar half. [PSD SJ 77-42]  
Federally Enforceable Through Title V Permit

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

DRAFT

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-2234-66-12

EXPIRATION DATE: 10/31/2016

## EQUIPMENT DESCRIPTION:

650 BHP WAUKESHA MODEL L7042-GU RICH-BURN NATURAL GAS-FIRED IC ENGINE EQUIPPED WITH CATALYTIC CONVERTER POWERING A GAS COMPRESSOR (K-28 UNX# 12850)

## PERMIT UNIT REQUIREMENTS

1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.03 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction); SO<sub>x</sub> (as SO<sub>2</sub>): 1.6 lb/day, PM<sub>10</sub>: 13.9 lb/day; CO: 2.1 g/hp-hr and 289 ppmv; or VOC: 67 ppmv. [District Rules 2201 and 4702, 5.1] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions at the point of discharge shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, the permittee shall maintain on file, copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Source testing to measure the NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted not less than once every 12 months. If compliance with the emission limits is demonstrated on two (2) consecutive annual source tests, the testing frequency may be reduced to not less than once every 24 months. If the unit fails to demonstrate compliance with the applicable emission limits, the testing frequency shall return to not less than once every 12 months. [District Rules 2201 and 4702, 6.3.2] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
15. 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
16. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702, 6.4] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. For engines that comply with a percent reduction limit, the percent reduction of NO<sub>x</sub> emissions shall also be reported. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
18. 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
19. 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
20. 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
21. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub>, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

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

22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
26. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
27. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
28. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
29. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
31. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201 and Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
33. NO<sub>x</sub> emissions rate shall not exceed 8.00 gr/hp-hr. [PSD SJ 77-42] Federally Enforceable Through Title V Permit
34. Source testing to measure the NO<sub>x</sub> emissions from at least one representative engine of this type (Waukesha, model L7042GU) shall be conducted not less than once every 12 months. [PSD SJ 77-42] Federally Enforceable Through Title V Permit

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

35. The permittee shall determine the NOx emissions from at least one representative engine of this type (Waukesha, model L7042GU) at least once per month by either direct NOx measurement, or measurement of other exhaust gas concentrations (e.g. CO and O2) and engine parameters from which NOx emissions can be directly computed. NOx emissions shall be determined from every engine of this type at least once each calendar half. [PSD SJ 77-42]  
Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-2234-67-16

**EXPIRATION DATE:** 10/31/2016

**EQUIPMENT DESCRIPTION:**

1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-30 UNX# 13426)

## PERMIT UNIT REQUIREMENTS

1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.59 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction); SO<sub>x</sub> (as SO<sub>2</sub>): 0.34 lb/hr; PM<sub>10</sub>: 0.24 lb/hr; CO: 8.82 lb/hr and 541 ppmv @ 15% O<sub>2</sub>; or VOC: 2.23 lb/hr and 240 ppmv @ 15% O<sub>2</sub>. [District NSR Rule and District Rule 4702, 5.1] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions at the point of discharge shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, the permittee shall maintain on file, copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Source testing to measure the NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted not less than once every 12 months. If compliance with the emission limits is demonstrated on two (2) consecutive annual source tests, the testing frequency may be reduced to not less than once every 24 months. If the unit fails to demonstrate compliance with the applicable emission limits, the testing frequency shall return to not less than once every 12 months. [District Rules 2201 and 4702, 6.3.2] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
15. 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
16. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702, 6.4] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. For engines that comply with a percent reduction limit, the percent reduction of NO<sub>x</sub> emissions shall also be reported. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
18. 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
19. 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
20. 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
21. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub>, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

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

22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
26. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
27. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
28. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
29. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
31. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201 and Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
33. NO<sub>x</sub> emissions rate shall not exceed 8.00 gr/hp-hr. [PSD SJ 77-42] Federally Enforceable Through Title V Permit
34. Source testing to measure the NO<sub>x</sub> emissions from at least one representative engine of this type (Waukesha, model L7042GSI) shall be conducted not less than once every 12 months. [PSD SJ 77-42] Federally Enforceable Through Title V Permit

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

35. The permittee shall determine the NOx emissions from at least one representative engine of this type (Waukesha, model L7042GSI) at least once per month by either direct NOx measurement, or measurement of other exhaust gas concentrations (e.g. CO and O2) and engine parameters from which NOx emissions can be directly computed. NOx emissions shall be determined from every engine of this type at least once each calendar half. [PSD SJ 77-42]  
Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-2234-68-16

**EXPIRATION DATE:** 10/31/2016

**EQUIPMENT DESCRIPTION:**

1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-31 UNX# 11553)

## PERMIT UNIT REQUIREMENTS

1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.59 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction), SO<sub>x</sub> (as SO<sub>2</sub>): 0.34 lb/hr, PM<sub>10</sub>: 0.24 lb/hr, CO: 8.82 lb/hr and 541 ppmv @ 15% O<sub>2</sub>, or VOC: 2.23 lb/hr and 240 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201 and Kern County Rule 404] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. This average shall be multiplied by the appropriate factor to determine compliance with the hourly emission limits. 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. For engines that comply with a percent reduction limit, the percent reduction of NOx emissions shall also be reported. [District Rules 2520, 9.4.2 and 4702, 6.3.3] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
15. 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 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
16. 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
17. 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
18. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
19. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
20. NOx, CO, and VOC emissions shall be measured (source tested) not less than every 12 months. If compliance with the emission limits is demonstrated for 2 consecutive years, testing frequency may be reduced to every 24 months. If the unit fails to demonstrated compliance with the emission limits, the testing frequency shall return to not less than every 12 months. NOx percent reduction compliance shall be demonstrated every 24 months. [District Rules 2201, 2520 9.4.2, and 4702, 6.3.2] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The facility conducted noncertified self test shall be performed for NO<sub>x</sub> according to ARB Method 100 (or EPA Method 7E). [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
26. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
27. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
28. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
29. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
31. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
32. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 404. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-2234-69-16

EXPIRATION DATE: 10/31/2016

## EQUIPMENT DESCRIPTION:

1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-32 UNX# 18028)

## PERMIT UNIT REQUIREMENTS

1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.59 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction), SO<sub>x</sub> (as SO<sub>2</sub>): 0.34 lb/hr, PM<sub>10</sub>: 0.24 lb/hr, CO: 8.82 lb/hr and 541 ppmv @ 15% O<sub>2</sub>, or VOC: 2.23 lb/hr and 240 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201 and Kern County Rule 404] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. This average shall be multiplied by the appropriate factor to determine compliance with the hourly emission limits. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. For engines that comply with a percent reduction limit, the percent reduction of NO<sub>x</sub> emissions shall also be reported. [District Rules 2520, 9.4.2 and 4702, 6.3.3] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
15. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
16. 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
17. 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
18. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
19. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
20. NO<sub>x</sub>, CO, and VOC emissions shall be measured (source tested) not less than every 12 months. If compliance with the emission limits is demonstrated for 2 consecutive years, testing frequency may be reduced to every 24 months. If the unit fails to demonstrated compliance with the emission limits, the testing frequency shall return to not less than every 12 months. NO<sub>x</sub> percent reduction compliance shall be demonstrated every 24 months. [District Rules 2201, 2520 9.4.2, and 4702, 6.3.2] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub>, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The facility conducted noncertified self test shall be performed for NO<sub>x</sub> according to ARB Method 100 (or EPA Method 7E). [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
26. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
27. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
28. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
29. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
31. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
32. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 404. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-2234-70-17

**EXPIRATION DATE:** 10/31/2016

**EQUIPMENT DESCRIPTION:**

1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-33 UNX# 16453)

## PERMIT UNIT REQUIREMENTS

1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.59 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction), SO<sub>x</sub> (as SO<sub>2</sub>): 0.34 lb/hr, PM<sub>10</sub>: 0.24 lb/hr, CO: 8.82 lb/hr and 541 ppmv @ 15% O<sub>2</sub>, or VOC: 2.23 lb/hr and 240 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201 and Kern County Rule 404] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. This average shall be multiplied by the appropriate factor to determine compliance with the hourly emission limits. 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. For engines that comply with a percent reduction limit, the percent reduction of NOx emissions shall also be reported. [District Rules 2520, 9.4.2 and 4702, 6.3.3] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
15. 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 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
16. 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
17. 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
18. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
19. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
20. NOx, CO, and VOC emissions shall be measured (source tested) not less than every 12 months. If compliance with the emission limits is demonstrated for 2 consecutive years, testing frequency may be reduced to every 24 months. If the unit fails to demonstrated compliance with the emission limits, the testing frequency shall return to not less than every 12 months. NOx percent reduction compliance shall be demonstrated every 24 months. [District Rules 2201, 2520 9.4.2, and 4702, 6.3.2] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The facility conducted noncertified self test shall be performed for NO<sub>x</sub> according to ARB Method 100 (or EPA Method 7E). [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
26. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
27. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
28. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
29. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
31. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
32. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 404. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-2234-71-17

EXPIRATION DATE: 10/31/2016

## EQUIPMENT DESCRIPTION:

1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-34 UNX# 13417)

## PERMIT UNIT REQUIREMENTS

1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.59 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction), SO<sub>x</sub> (as SO<sub>2</sub>): 0.34 lb/hr, PM<sub>10</sub>: 0.24 lb/hr, CO: 8.82 lb/hr and 541 ppmv @ 15% O<sub>2</sub>, or VOC: 2.23 lb/hr and 240 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201 and Kern County Rule 404] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. This average shall be multiplied by the appropriate factor to determine compliance with the hourly emission limits. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. For engines that comply with a percent reduction limit, the percent reduction of NO<sub>x</sub> emissions shall also be reported. [District Rules 2520, 9.4.2 and 4702, 6.3.3] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
15. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
16. 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
17. 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
18. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
19. 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 Rules 2520, 9.4.2 and 4702] Federally Enforceable Through Title V Permit
20. NO<sub>x</sub>, CO, and VOC emissions shall be measured (source tested) not less than every 12 months. If compliance with the emission limits is demonstrated for 2 consecutive years, testing frequency may be reduced to every 24 months. If the unit fails to demonstrated compliance with the emission limits, the testing frequency shall return to not less than every 12 months. NO<sub>x</sub> percent reduction compliance shall be demonstrated every 24 months. [District Rules 2201, 2520 9.4.2, and 4702, 6.3.2] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub>, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The facility conducted noncertified self test shall be performed for NO<sub>x</sub> according to ARB Method 100 (or EPA Method 7E). [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
26. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
27. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
28. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
29. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
31. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
32. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 404. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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DRAFT

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-2234-72-16

EXPIRATION DATE: 10/31/2016

**EQUIPMENT DESCRIPTION:**

1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-35 UNX# 54626)

## PERMIT UNIT REQUIREMENTS

1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.59 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction), SO<sub>x</sub> (as SO<sub>2</sub>): 0.34 lb/hr, PM<sub>10</sub>: 0.24 lb/hr, CO: 8.82 lb/hr and 541 ppmv @ 15% O<sub>2</sub>, or VOC: 2.23 lb/hr and 240 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf. [District Rule 4201; Kern County Rule 404] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. If the engine is not fired on PUC-regulated natural gas, then the sulfur content (as hydrogen sulfide) of the natural gas being fired in the IC engine shall be calculated using a continuous monitor averaged over a daily basis in accordance with SCAQMD Rule 431.1 Attachment A (as amended June 12, 1998). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. If the engine is not fired on PUC-regulated natural gas, the sulfur content (as hydrogen sulfide) of each fuel source shall be tested. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. Source testing to measure the NOx, CO, and VOC emissions from this unit shall be conducted not less than once every 12 months. If compliance with the emission limits is demonstrated on two (2) consecutive annual source tests, the testing frequency may be reduced to not less than once every 24 months. If the unit fails to demonstrate compliance with the applicable emission limits, the testing frequency shall return to not less than once every 12 months. NOx percent reduction compliance shall be demonstrated every 24 months. [District Rules 2201, 2520 9.4.2, and 4702, 6.3.2] Federally Enforceable Through Title V Permit
14. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702, 6.3.3] Federally Enforceable Through Title V Permit
15. 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
16. 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 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the VOC test. EPA approved alternative test methods may also be used to satisfy the source testing requirements of this permit with prior written approval from the APCO. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. This average shall be multiplied by the appropriate factor to determine compliance with the hourly emission limits. 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. For engines that comply with a percent reduction limit, the percent reduction of NOx emissions shall also be reported. [District Rules 2520, 9.4.2 and 4702, 6.3.3] Federally Enforceable Through Title V Permit
18. 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
19. 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 Rules 4702 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
20. 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 Rules 4702 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2, using a portable emission monitor that meets District specifications, at least once every calendar quarter (in which a source test is not performed and the engine is operated) or, if the engine is operated less than 120 calendar days in a calendar year, at least once during that calendar year (in which a source test is not performed and the engine is operated). Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last calendar quarter. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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22. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
23. 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
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
25. The facility conducted noncertified self test shall be performed for NO<sub>x</sub> according to ARB Method 100 (or EPA Method 7E). [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
26. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
27. The permittee shall record the O<sub>2</sub> sensor reading (in millivolts) on a daily basis. [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
28. The operator shall establish an O<sub>2</sub> sensor output voltage range that indicates that the control device(s) on this engine are operating properly at all times. [40 CFR 64] Federally Enforceable Through Title V Permit
29. Permittee shall ensure proper operation of catalyst system by maintaining O<sub>2</sub> sensor voltage between 0.5 millivolts and 1.1 millivolts. [District Rule 2520, 9.3.2 and 40 CFR 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit
31. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit
32. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit
33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 404. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-2234-73-16

EXPIRATION DATE: 10/31/2016

## EQUIPMENT DESCRIPTION:

1,000 BHP WAUKESHA MODEL L7042-GSIU RICH BURN NATURAL GAS FIRED I.C. ENGINE, WITH TURBOCHARGER AND CATALYTIC CONVERTER, POWERING A GAS COMPRESSOR (K-51 UNX# 13793)

## PERMIT UNIT REQUIREMENTS

1. Approved locations for this equipment: any site within facility S-2234. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall notify the District in writing at least two weeks prior to starting operations at a new location. [District Rule 1070] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
4. Emissions rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>): 1.59 lb/hr, 0.72 gr/hp-hr and 59 ppmv @ 15% O<sub>2</sub> (equivalent to 96% NO<sub>x</sub> reduction), SO<sub>x</sub> (as SO<sub>2</sub>): 0.34 lb/hr, PM<sub>10</sub>: 0.24 lb/hr, CO: 8.82 lb/hr and 541 ppmv @ 15% O<sub>2</sub>, or VOC: 2.23 lb/hr and 240 ppmv @ 15% O<sub>2</sub>. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Percent emission reductions, if used to comply with NO<sub>x</sub> emission limits, shall be calculated as follows: For engines with external control devices that are not operated in combination with a second emission control device or technique, percent reduction shall be calculated using emission samples taken at the inlet and outlet of the control device. For engines without external control devices and for engines with an external control device in combination with a second emission control device or technique, percent reduction shall be based on source test results for the uncontrolled engine and the engine after the control device or technique has been employed. The engine's typical operating parameters, loading, and duty cycle shall be documented and repeated at each successive post-control source test to ensure the engine is meeting the percent reduction limit. When representative source sampling prior to the application of an emissions control technology or technique is not available, the APCO may approve the use of a manufacturer's uncontrolled emissions information or source sampling from a similar, uncontrolled engine. [District Rule 4702, 5.4] Federally Enforceable Through Title V Permit
6. The operator of an internal combustion engine that uses percent emission reduction to comply with the NO<sub>x</sub> emission limits shall provide an accessible inlet and outlet on the external control device or the engine as appropriate for taking emission samples and as approved by the APCO. [District Rule 4702, 5.5] Federally Enforceable Through Title V Permit
7. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201 and Kern County Rule 404] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [Kern County Rule 407] Federally Enforceable Through Title V Permit
10. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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