



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

SEP 11 2012

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-1246**  
**Project # 1113928**

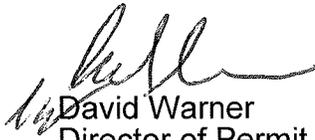
Dear Mr. Rios:

Enclosed for you to review is an application for minor Title V permit modification for the facility identified above. Berry Petroleum Company is proposing a Title V minor permit modification to incorporate the recently issued Authorities to Construct S-1246-46-34 and S-1246-351-0 into the Title V operating permit. These Authorities to Construct authorize the modification of one existing 30 MMBtu/hr steam generator (S-1246-46) and the installation of one new 30 MMBtu/hr steam generator (S-1246-351).

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued Authorities to Construct S-1246-46-34 and S-1246-351-0, emission increases, 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

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

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061  
[www.valleyair.org](http://www.valleyair.org)

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



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

SEP 11 2012

John Ludwick  
Berry Petroleum Company  
5201 Truxton Avenue  
Bakersfield, CA 93309-0421

**Re: Notice of Minor Title V Permit Modification  
District Facility # S-1246  
Project # 1113928**

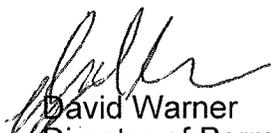
Dear Mr. Ludwick:

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 incorporate recently issued Authorities to Construct S-1246-46-34 and S-1246-351-0 into the Title V operating permit. These Authorities to Construct authorize the modification of one existing 30 MMBtu/hr steam generator (S-1246-46) and the installation of one new 30 MMBtu/hr steam generator (S-1246-351).

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued Authorities to Construct S-1246-46-34 and S-1246-351-0, emission increases, application, and previous Title V permit. This project will be subject to a 45-day EPA commenting period prior to the District taking final action.

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

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Tel: (661) 392-5500 FAX: (661) 392-5585

# TITLE V APPLICATION REVIEW

Minor Modification  
Project #: S-1113928

Engineer: Steve Roeder  
Date: September 10, 2012

*ABP & SPL 9/11/12*

Facility Number: S-1246  
Facility Name: Berry Petroleum Company  
Mailing Address: 5201 Truxtun Avenue  
Bakersfield, Ca 93309-0421

Contact Name: John Ludwick  
Phone: (661) 616-3807

Responsible Official: Robert Boston  
Title: Manager of EH&S

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## I. PROPOSAL

Berry Petroleum Company is proposing a Title V minor permit modification to incorporate Authority to Construct (ATC) S-1246-46-34 and '-351-0 into the Title V operating permit. See ATC S-1246-351-0 in Appendix A, Permit S-1246-46-33 in Appendix B and ATC S-1246-46-34 in Appendix C.

These Authorities to Construct authorized the modification of one existing 30 MMBtu/hr steam generator (S-1246-46) and the installation of one new 30 MMBtu/hr steam generator (S-1246-351).

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 subject steam generators are located at various locations in Berry's Heavy Oil Western Stationary Source. The specific locations are listed in the tables below.

Unit	Section	Township	Range
S-1246-46	NE Section 11	32S	22E
	NE Section 11, SW Section 2, NE Section 3, NE Section 2	31S	22E
	NE Section 21	30S	22E
S-1246-351	Section 28, Section 34	12N	24W
	Section 31	32S	24E
	Section 36	32S	23E
	NE Section 11, SW Section 11	31S	22E

### III. EQUIPMENT DESCRIPTION

S-1246-46-35: 30.0 MMBTU/HR NATURAL/TEOR GAS-FIRED STRUTHERS STEAM GENERATOR WITH NORTH AMERICAN BURNER WITH FGR, APPROVED FOR OPERATION AT VARIOUS SPECIFIED LOCATIONS

S-1246-351-1 30 MMBTU/HR PUC QUALITY NATURAL GAS, ETHANE-RICH NATURAL GAS, TEOR AND TVR GAS FIRED STEAM GENERATOR WITH MAGNA-FLAME ULTRA LOW-EMISSIONS (LE) BURNER AND FGR, APPROVED FOR OPERATION AT VARIOUS SPECIFIED LOCATIONS

### 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

Berry Petroleum Company requested an Authority to Construct (ATC) for the replacement of two steam generators (S-1246-3 and '-119) with one (1) new 30

MMBtu/hr natural/ethane-rich natural/TEOR/TVR (tank vapor recovery) gas fired steam generator for Rule 4320 compliance.

In addition, annual emissions from steam generators '-3, '-46, and '-119 are included in an SLC. The SLC on permit '-46 will be removed to reflect the removal of permit units '-3 and '-119 from service.

**Current PTO vs ATC:**

**S-1246-351** (See ATC 351-0 in Appendix A)

ATC S-1246-351-0 is new and does not yet have a Title V permit.

**Current PTO vs PTO:**

**S-1246-46** (See Permit 46-33 in Appendix B and ATC 46-34 in Appendix C)

Condition #9 on PTO S-1246-46-33 was removed as the condition is repetitive of the equipment description.

Condition #10 on PTO S-1246-46-33 was revised to remove reference to a SOx emission limit. The sulfur content of the fuel is already limited by condition 8 of this PTO.

Condition #14 on PTO S-1246-46-33 was removed as units '-3 and '-119 will be cancelled as a result of implementing ATC S-1246-46-34.

Condition #15 on PTO S-1246-46-33 was removed as it is repetitive of condition 11 of this PTO.

Condition #22 on PTO S-1246-46-33 was removed as sulfur content is limited by conditions 8 and 10 of this PTO.

Conditions #29, 35, 36, and 38 on PTO S-1246-46-33 were replaced by conditions #35, and 37 of PTO S-1246-46-35.

**Proposed PTOs vs ATCs** (See ATC 351-0 in Appendix A, Proposed Permit 351-1 in Appendix D, ATC 46-34 in Appendix C and Proposed permit 46-35 in Appendix D.)

Condition #1 on both ATCs was removed as this condition required submittal of an application to modify the Title V permit, which has already been satisfied with this permit action.

Condition #2 on ATC S-1246-46-34 was removed as this condition required that ATC S-1246-46-32 be implemented prior to or concurrently with this ATC, which has already been satisfied.

Condition #3 on ATC S-1246-46-34 and condition #2 on S-1246-351-0 was removed as these conditions required that Permits S-1246-3 and '-119 be cancelled prior to operating the steam generators authorized by '-46 and '-351. These requirements will be satisfied with this permit action.

Conditions #7, 8, and 9 on ATC S-1246-46-34 and conditions #6, 7 and 13 on ATC S-1246-351-0 will be removed as these conditions have already been included in the facility wide permit.

## 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. Appendixes**

- A. ATC S-1246-351-0
- B. Permit S-1246-46-33
- C. ATC S-1246-46-34
- D. Proposed Modified Title V Operating Permits S-1246-46-35 and 351-1
- E. Emissions Increases
- F. Application

Appendix A  
ATC S-1246-351-0

## AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-1246-351-0

**ISSUANCE DATE:** 05/23/2011

**LEGAL OWNER OR OPERATOR:** BERRY PETROLEUM COMPANY  
**MAILING ADDRESS:** 5201 TRUXTUN AVENUE SUITE 100  
ATTN: EH&S MANAGER  
BAKERSFIELD, CA 93309-0422

**LOCATION:** HEAVY OIL WESTERN STATIONARY SOURCE  
KERN COUNTY, CA

**EQUIPMENT DESCRIPTION:**

30 MMBTU/HR PUC QUALITY NATURAL GAS, ETHANE-RICH NATURAL GAS, TEOR, AND TVR GAS FIRED SKID MOUNTED STEAM GENERATOR WITH MAGNA-FLAME ULTRA LOW-EMISSIONS (LE) BURNER AND FGR, OPERATING AT MULTIPLE SPECIFIED LOCATIONS, DIRECTLY REPLACING S-1246-3 AND S-1246-119 FOR RULE 4320 COMPLIANCE

## CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. Prior to operating this steam generator, Permits S-1246-3 and -119 shall be cancelled. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Unit is approved for operation only at Sections 28 and 34, T12N, R24W; Section 31, T32S, R24E; Section 36, T32S, R23E; & NE/4 and SW/4 Section 11, T31S, R22E.. [District Rule 4102] Federally Enforceable Through Title V Permit
4. Unit shall not be located within 1,000 feet of any K-12 school. [District Rule CH&SC 42301.6] Federally Enforceable Through Title V Permit
5. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
6. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

**YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT.** This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

**COPY**

DAVID WARNER, Director of Permit Services

S-1246-351-0 - Sep 10 2012 10:31AM - ROEDERS : Joint Inspection NOT Required

7. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] Federally Enforceable Through Title V Permit
8. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102] Federally Enforceable Through Title V Permit
10. This steam generator may be fired on any combination of PUC quality natural, ethane-rich natural, TEOR, and TVR gas. [District Rules 2201] Federally Enforceable Through Title V Permit
11. If the unit is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum fuel sulfur content shall not exceed 5.0 gr S/100scf. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
13. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
14. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
15. When complying with SO<sub>x</sub> emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
16. If the unit is fired on noncertified gaseous fuel and compliance with SO<sub>x</sub> emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
18. At least quarterly, the permittee shall monitor using the methods specified in this permit the higher heating value of each non-certified fuel supplied to this unit, or, alternatively, have the higher heating value certified by the fuel supplier. The records of higher heating value and quantity of fuel combusted shall be used to demonstrate that the rated heat input capacity of this unit, as averaged over a calendar quarter, is not exceeded. [District Rules 2201] Federally Enforceable Through Title V Permit
19. The higher heating value of each non-certified fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D 3588. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
20. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
21. Except for periods of startup and shutdown, emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.0085 lb-NO<sub>x</sub>/MMBtu, 0.0076 lb-PM<sub>10</sub>/MMBtu, 50 ppmvd CO @ 3% O<sub>2</sub> or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4801] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

22. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial startup and at least once every twelve (12) months thereafter. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
27. 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
28. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
30. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

34. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. 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 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
37. Permittee shall maintain monthly records of gas combusted in this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c(i)] Federally Enforceable Through Title V Permit

**APPENDIX B**  
**Permit S-1246-46-33**

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-1246-46-33

**EXPIRATION DATE:** 03/31/2016

**SECTION:** NE11 **TOWNSHIP:** 31S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

30.0 MMBTU/HR NATURAL/TEOR GAS-FIRED STRUTHERS STEAM GENERATOR WITH NORTH AMERICAN BURNER WITH FGR, APPROVED FOR OPERATION AT VARIOUS SPECIFIED LOCATIONS

## PERMIT UNIT REQUIREMENTS

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1. This unit is approved for operation at the following locations: NE Section 21, T30S/R22E; NE Section 11, T32S/R22E, NE Section 11, T31S/R22E, SW Section 2, T31S/R22E, NE Section 3, T31S/R22E and NE/4 Section 2, 31S, R22E. [District Rule 4102]
2. Unit shall not be located within 1000 feet of any K-12 school. [CH&SC 42301.6]
3. Permittee shall notify District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070]
4. All well vent vapor shall be treated by a fuel gas scrubber prior to being burned. [District Rule 2201] Federally Enforceable Through Title V Permit
5. This steam generator may be fired on any combination of ethane-rich natural gas, PUC quality natural gas and scrubbed well vent vapor. [District Rules 2201] Federally Enforceable Through Title V Permit
6. At least quarterly, the permittee shall monitor using the methods specified in this permit the higher heating value of each non-certified fuel supplied to this unit, or, alternatively, have the higher heating value certified by the fuel supplier. The records of higher heating value and quantity of fuel combusted shall be used to demonstrate that the rated heat input capacity of this unit, as averaged over a calendar quarter, is not exceeded. [District Rules 2201] Federally Enforceable Through Title V Permit
7. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
8. The sulfur content of fuel combusted shall not exceed 5 grains-S per 100 scf. [District Rule 4320] Federally Enforceable Through Title V Permit
9. Steam generator shall have no provisions for firing on fuel oil. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Emissions from the steam generator shall not exceed any of the following limits: 0.0143 lb-SOx/MMBtu, or 0.042 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.0085 lb-NOx/MMBtu or 400 ppmvd CO @ 3% O2 or 0.291 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 13.1 lb-NOx/day or 2,234 lb-NOx/yr. [District Rule 2201] 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.

13. Nitrogen oxide (NO<sub>x</sub>) emissions shall not exceed 140 lb/hr, calculated as NO<sub>2</sub>. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
14. Combined, annual SO<sub>x</sub> emission (measured as SO<sub>2</sub>) for steam generators '3, '46 and '119 shall not exceed 63,206 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Except during periods of startup and shutdown, carbon monoxide emissions shall not exceed 400 ppmv @ 3% O<sub>2</sub>. [District Rules 4305 and 4320] Federally Enforceable Through Title V Permit
16. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods [District Rules 4305, 5.5.6, 4306, 5.3 and 4320] Federally Enforceable Through Title V Permit
17. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22, and 4320] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 , 4306 and 4320] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
21. 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 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] 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. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
23. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO<sub>2</sub>, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
26. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
27. Source testing to measure NO<sub>x</sub> and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
29. Permittee shall maintain records and demonstrate compliance with sulfur compounds emission sampling limits by annual fuel gas sulfur analysis from an independent testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
30. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
31. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
32. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SO<sub>x</sub> (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H<sub>2</sub>S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 4305, 4306, 2520, 9.4.2, and 4320] 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. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
37. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306 and 4320] Federally Enforceable Through Title V Permit
38. Permittee shall maintain records of the sulfur content and the daily quantity of gas and vapor burned in this steam generator. Compliance with the daily SOx emissions limit shall be demonstrated by calculation, using the sulfur content and quantities of gas and vapor burned, or by testing sulfur content using draeger tubes. Compliance with annual bubbled SOx emissions limit shall be demonstrated by maintaining a record of the cumulative, combined SOx emissions calculated for steam generators '3, '46 and '119. All records shall be maintained for a period of five years and shall be provided to the District upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
39. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
40. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. The requirements of SJVUAPCD Rule 4351(Amended October 19, 1995) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. All records shall be kept and maintained for a period of at least five years, and shall be made readily available for District inspection upon request. [District Rules 1070, 2201, 2520, 9.4.2, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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

Appendix C  
ATC S-1246-46-34



# AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-1246-46-34

**ISSUANCE DATE:** 05/23/2011

**LEGAL OWNER OR OPERATOR:** BERRY PETROLEUM COMPANY  
**MAILING ADDRESS:** 5201 TRUXTUN AVENUE SUITE 100  
ATTN: EH&S MANAGER  
BAKERSFIELD, CA 93309-0422

**LOCATION:** HEAVY OIL WESTERN STATIONARY SOURCE  
KERN COUNTY, CA

**EQUIPMENT DESCRIPTION:**  
MODIFICATION OF 30.0 MMBTU/HR NATURAL/TEOR GAS-FIRED STRUTHERS STEAM GENERATOR WITH NORTH AMERICAN BURNER WITH FGR, APPROVED FOR OPERATION AT VARIOUS SPECIFIED LOCATIONS: REMOVE THE SOX SLC

## CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. Authority to Construct (ATC) S-1246-46-32 shall be implemented prior to or concurrently with this ATC [District Rule 2201] Federally Enforceable Through Title V Permit
3. Prior to operating this steam generator, Permits S-1246-3 and -119 shall be cancelled. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This unit is approved for operation at the following locations: NE Section 21, T30S/R22E; NE Section 11, T32S/R22E, NE Section 11, T31S/R22E, SW Section 2, T31S/R22E, NE Section 3, T31S/R22E and NE/4 Section 2, 31S, R22E. [District Rule 4102]
5. Unit shall not be located within 1000 feet of any K-12 school. [CH&SC 42301.6]
6. Permittee shall notify District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
7. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

**YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT.** This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

**COPY**

DAVID WARNER, Director of Permit Services  
S-1246-46-34 : Sep 10 2012 1:37PM - ROEDERS : Joint Inspection NOT Required

8. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
9. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
10. All well vent vapor shall be treated by a fuel gas scrubber prior to being burned. [District Rule 2201] Federally Enforceable Through Title V Permit
11. This steam generator may be fired on any combination of ethane-rich natural gas, PUC quality natural gas and scrubbed well vent vapor. [District Rules 2201] Federally Enforceable Through Title V Permit
12. At least quarterly, the permittee shall monitor using the methods specified in this permit the higher heating value of each non-certified fuel supplied to this unit, or, alternatively, have the higher heating value certified by the fuel supplier. The records of higher heating value and quantity of fuel combusted shall be used to demonstrate that the rated heat input capacity of this unit, as averaged over a calendar quarter, is not exceeded. [District Rules 2201] Federally Enforceable Through Title V Permit
13. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
14. The sulfur content of fuel combusted shall not exceed 5 grains-S per 100 scf. [District Rule 4320] Federally Enforceable Through Title V Permit
15. Emissions from the steam generator shall not exceed 0.042 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.0085 lb-NO<sub>x</sub>/MMBtu or 400 ppmvd CO @ 3% O<sub>2</sub> or 0.291 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 13.1 lb-NO<sub>x</sub>/day or 2,234 lb-NO<sub>x</sub>/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Nitrogen oxide (NO<sub>x</sub>) emissions shall not exceed 140 lb/hr, calculated as NO<sub>2</sub>. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods [District Rules 4305, 5.5.6, 4306, 5.3 and 4320] Federally Enforceable Through Title V Permit
20. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22, and 4320] 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> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

22. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] 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 Rules 4305, 4306 and 4320] 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 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO<sub>2</sub>, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
28. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
29. Source testing to measure NO<sub>x</sub> and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306]
31. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
32. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

34. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SO<sub>x</sub> (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H<sub>2</sub>S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 4305, 4306, 2520, 9.4.2, and 4320] Federally Enforceable Through Title V Permit
35. When complying with SO<sub>x</sub> emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
36. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
37. If the unit is fired on noncertified gaseous fuel and compliance with SO<sub>x</sub> emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306 and 4320] Federally Enforceable Through Title V Permit
39. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
40. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. The requirements of SJVUAPCD Rule 4351 (Amended October 19, 1995) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. All records shall be kept and maintained for a period of at least five years, and shall be made readily available for District inspection upon request. [District Rules 1070, 2201, 2520, 9.4.2, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

Appendix D  
Proposed Title V Permits  
S-1246-46-35, and  
S-1246-351-1

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-1246-46-35

**EXPIRATION DATE:** 03/31/2016

**SECTION:** NE11 **TOWNSHIP:** 31S **RANGE:** 22E

## **EQUIPMENT DESCRIPTION:**

30.0 MMBTU/HR NATURAL/TEOR GAS-FIRED STRUTHERS STEAM GENERATOR WITH NORTH AMERICAN BURNER WITH FGR, APPROVED FOR OPERATION AT VARIOUS SPECIFIED LOCATIONS

## **PERMIT UNIT REQUIREMENTS**

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1. This unit is approved for operation at the following locations: NE Section 21, T30S/R22E; NE Section 11, T32S/R22E, NE Section 11, T31S/R22E, SW Section 2, T31S/R22E, NE Section 3, T31S/R22E and NE/4 Section 2, 31S, R22E. [District Rule 4102]
2. Unit shall not be located within 1000 feet of any K-12 school. [CH&SC 42301.6]
3. Permittee shall notify District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
4. All well vent vapor shall be treated by a fuel gas scrubber prior to being burned. [District Rule 2201] Federally Enforceable Through Title V Permit
5. This steam generator may be fired on any combination of ethane-rich natural gas, PUC quality natural gas and scrubbed well vent vapor. [District Rules 2201] Federally Enforceable Through Title V Permit
6. At least quarterly, the permittee shall monitor using the methods specified in this permit the higher heating value of each non-certified fuel supplied to this unit, or, alternatively, have the higher heating value certified by the fuel supplier. The records of higher heating value and quantity of fuel combusted shall be used to demonstrate that the rated heat input capacity of this unit, as averaged over a calendar quarter, is not exceeded. [District Rules 2201] Federally Enforceable Through Title V Permit
7. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
8. The sulfur content of fuel combusted shall not exceed 5 grains-S per 100 scf. [District Rule 4320] Federally Enforceable Through Title V Permit
9. Emissions from the steam generator shall not exceed 0.042 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.0085 lb-NOx/MMBtu or 400 ppmvd CO @ 3% O2 or 0.291 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 13.1 lb-NOx/day or 2,234 lb-NOx/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

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

12. Nitrogen oxide (NO<sub>x</sub>) emissions shall not exceed 140 lb/hr, calculated as NO<sub>2</sub>. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods [District Rules 4305, 5.5.6, 4306, 5.3 and 4320] Federally Enforceable Through Title V Permit
14. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22, and 4320] Federally Enforceable Through Title V Permit
15. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. 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 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. {521} Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO<sub>2</sub>, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

23. Source testing to measure NO<sub>x</sub> and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. {2980} For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306]
25. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
26. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
27. 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
28. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SO<sub>x</sub> (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H<sub>2</sub>S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 4305, 4306, 2520, 9.4.2, and 4320] Federally Enforceable Through Title V Permit
29. When complying with SO<sub>x</sub> emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
30. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
31. If the unit is fired on noncertified gaseous fuel and compliance with SO<sub>x</sub> emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
32. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306 and 4320] Federally Enforceable Through Title V Permit
33. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
34. {533} Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
35. {468} The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [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.

36. {535} The requirements of SJVUAPCD Rule 4351(Amended October 19, 1995) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
37. All records shall be kept and maintained for a period of at least five years, and shall be made readily available for District inspection upon request. [District Rules 1070, 2201, 2520, 9.4.2, 4305, 4306 and 4320] 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-1246-351-1

**EXPIRATION DATE:** 03/31/2016

**EQUIPMENT DESCRIPTION:**

30 MMBTU/HR PUC QUALITY NATURAL GAS, ETHANE-RICH NATURAL GAS, TEOR AND TVR GAS FIRED STEAM GENERATOR WITH MAGNA-FLAME ULTRA LOW-EMISSIONS (LE) BURNER AND FGR, APPROVED FOR OPERATION AT VARIOUS SPECIFIED LOCATIONS, DIRECTLY REPLACING S-1246-3 AND S-1246-119 FOR RULE 4320 COMPLIANCE

## PERMIT UNIT REQUIREMENTS

1. Unit is approved for operation only at Sections 28 and 34, T12N, R24W; Section 31, T32S, R24E; Section 36, T32S, R23E; & NE/4 and SW/4 Section 11, T31S, R22E.. [District Rule 4102] Federally Enforceable Through Title V Permit
2. Unit shall not be located within 1,000 feet of any K-12 school. [District Rule CH&SC 42301.6] Federally Enforceable Through Title V Permit
3. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102] Federally Enforceable Through Title V Permit
6. This steam generator may be fired on any combination of PUC quality natural, ethane-rich natural, TEOR, and TVR gas. [District Rules 2201] Federally Enforceable Through Title V Permit
7. If the unit is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The maximum fuel sulfur content shall not exceed 5.0 gr S/100scf. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] 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.

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
13. At least quarterly, the permittee shall monitor using the methods specified in this permit the higher heating value of each non-certified fuel supplied to this unit, or, alternatively, have the higher heating value certified by the fuel supplier. The records of higher heating value and quantity of fuel combusted shall be used to demonstrate that the rated heat input capacity of this unit, as averaged over a calendar quarter, is not exceeded. [District Rules 2201] Federally Enforceable Through Title V Permit
14. The higher heating value of each non-certified fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D 3588. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
15. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
16. Except for periods of startup and shutdown, emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.0085 lb-NOx/MMBtu, 0.0076 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306, 4320, and 4801] Federally Enforceable Through Title V Permit
17. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial startup and at least once every twelve (12) months thereafter. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. 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
22. 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
23. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] 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.

25. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. 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 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. Permittee shall maintain monthly records of gas combusted in this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
33. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c(i)] Federally Enforceable Through Title V Permit

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

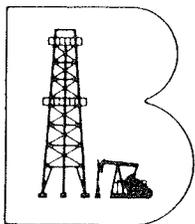
# Appendix E

## Emissions Increases

	SSIPE (lb/yr)				
	NOx	VOC	CO	SOx	PM10
S-1246-46-35	0	0	0	0	0
S-1246-351-1	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

# Appendix F

## Application



# Berry Petroleum Company

5201 Truxtun Ave.  
Bakersfield, CA 93309-0421

(661) 616-3900  
www.bry.com

September 2, 2011

RECEIVED  
SEP - 2 2011  
SJVAPCD  
Southern Region

Mr. Leonard Scandura  
San Joaquin Valley Unified APCD  
34946 Flyover Court  
Bakersfield, CA 93308

**RE: Title V Modification – Two steam generators**

Dear Mr. Scandura:

Berry Petroleum Company (BPC) is implementing Authorities to Construct (ATC) for two steam generators S-1246-46-34 and '-351-0 at BPC's Midway Sunset Oilfield, Kern County Heavy Oil Western Stationary Source. Enclosed for your review please find the following:

- Application for Title V Modification (TVFORM-008)
- Title V Compliance Certification (TVFORM-009)
- Copy of the first page for the referenced ATC

If you should have any questions or require additional information please contact me at (661) 616-3807 or by e-mail at [jjl@bry.com](mailto:jjl@bry.com).

Sincerely,

John Ludwick  
Regulatory Compliance Specialist

Enclosures

# San Joaquin Valley Air Pollution Control District

www.valleyair.org

RECEIVED

SEP - 2 2011

## Permit Application For:

ADMINISTRATIVE AMENDMENT    
  MINOR MODIFICATION    
  SIGNIFICANT MODIFICATION

SJVAPCD  
Southern Region

1. PERMIT TO BE ISSUED TO: <b>Berry Petroleum Company (BPC)</b>	
2. MAILING ADDRESS: <b>5201 Truxtun Ave., Suite 100</b> STREET/P.O. BOX: _____	
CITY: <b>Bakersfield</b>	STATE: <b>CA</b> 9-DIGIT ZIP CODE: <b>93309</b>
3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED: STREET: <b>Various location in HOW</b> CITY: _____ _____% SECTION     _____ TOWNSHIP     _____ RANGE _____	INSTALLATION DATE: _____
4. GENERAL NATURE OF BUSINESS: <b>Oil and gas production</b>	
5. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE (include Permit #'s if known, and use additional sheets if necessary)  <b>Implement Authorities to Construct for two steam generators S-1246-46-34 and '-351-0.</b>	
6. TYPE OR PRINT NAME OF APPLICANT: <b>John Ludwick</b>	TITLE OF APPLICANT: <b>Regulatory Compliance Specialist</b>
7. SIGNATURE OF APPLICANT: 	DATE: <b>9/2/2011</b> PHONE: (661) 616-3807 FAX: (661) 616-3892 EMAIL: <b>jjl@bry.com</b>

**For APCD Use Only:**

DATE STAMP	FILING FEE RECEIVED: \$ _____ CHECK#: _____
	DATE PAID: _____
	PROJECT NO: <b>S-1113928</b> FACILITY ID: <b>S-1246</b>

**TVMM**

RECEIVED  
SEP - 2 2011  
SJVAPCD  
Southern Region

## San Joaquin Valley Unified Air Pollution Control District

### TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

#### I. TYPE OF PERMIT ACTION (Check appropriate box)

SIGNIFICANT PERMIT MODIFICATION                       ADMINISTRATIVE  
 MINOR PERMIT MODIFICATION                                       AMENDMENT

COMPANY NAME: <b>Berry Petroleum Company (BPC)</b>	FACILITY ID: <b>S-1246</b>
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: <b>Berry Petroleum Company (BPC)</b>	
3. Agent to the Owner: <b>Robert Boston</b>	

#### II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

  
\_\_\_\_\_

Signature of Responsible Official

9/2/2011  
\_\_\_\_\_

Date

**Robert Boston**  
\_\_\_\_\_

Name of Responsible Official (please print)

**Manager of EH&S**  
\_\_\_\_\_

Title of Responsible Official (please print)