



AUG 06 2010

John Ludwick
Berry Petroleum
5201 Truxtun Ave Suite 300
Bakersfield, CA 93309

**Re: Notice of Minor Title V Permit Modification
District Facility # S-1246
Project # S-1062141**

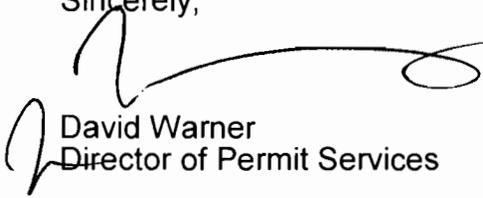
Dear Mr. Ludwick:

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 ATCs S-1246-19-22, '-19-24, and '-290-4 into the Title V operating permit. The modification is to allow permit unit S-1246-19 to operate in Eythel D property (SE/4 SEC, T12N, R24E), install a PCL diffuser plate for compliance with District Rule 4306, and add S-1246-19 as an approved incineration device for unit S-1246-290.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued ATCs S-1246-19-22, '-19-24, and '-290-4, 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. Jim Swaney at (559) 230-5900.

Sincerely,



David Warner
Director of Permit Services

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

Central Region (Main Office)
1990 E. Gettysburg Avenue
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AUG 06 2010

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 # S-1062141

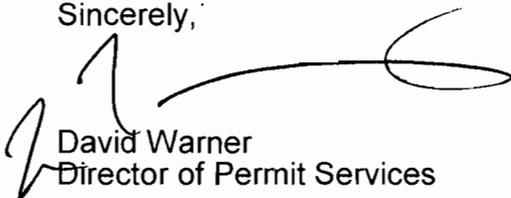
Dear Mr. Rios:

Enclosed for you to review is an application for minor Title V permit modification for the facility identified above. Berry Petroleum is proposing a Title V minor permit modification to incorporate the recently issued ATCs S-1246-19-22, '-19-24, and '-290-4 into the Title V operating permit. The modification is to allow permit unit S-1246-19 to operate in Eythel D property (SE/4 SEC, T12N, R24E), install a PCL diffuser plate for compliance with District Rule 4306, and add S-1246-19 as an approved incineration device for unit S-1246-290.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued ATCs S-1246-19-22, '-19-24, and '-290-4, 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. Jim Swaney at (559) 230-5900.

Sincerely,



David Warner
Director of Permit Services

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TITLE V APPLICATION REVIEW

Minor Modification
Project #: S-1062141

Engineer: Tim Bush
Date: June 25, 2010

Facility Number: S-1246
Facility Name: Berry Petroleum Company
Mailing Address: 5201 Truxtun Ave Suite 300
Bakersfield, CA 93309

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

Responsible Official: Tim Crawford
Title: Vice President of California Production

I. PROPOSAL

Berry Petroleum Company is proposing a Title V minor permit modification to incorporate the recently issued ATCs S-1246-19-22, '-19-24, and '-290-4 into the Title V operating permit. The modification is to allow S-1246-19 to operate in the Eythel D property (SE/4 SEC, T12N, R24E), install a PCL diffuser plate for District Rule 4306 compliance, and add S-1246-19 as an approved incineration device for unit S-1246-290.

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

Heavy Oil Western Stationary Source
Section 36 Township 12N Range 24W

III. EQUIPMENT DESCRIPTION

S-1246-19-31: 62.5 MMBTU/HR C.E. NATCO NATURAL/TEOR GAS-FIRED STEAM GENERATOR #MSJ-407 WITH FLUE GAS RECIRCULATION, NORTH

AMERICAN LO-NOX BURNER, AND O2 CONTROLLER, APPROVED FOR OPERATION AT VARIOUS SPECIFIED LOCATIONS

S-1246-290-8: TEOR SYSTEM WITH WELL VENT CASING GAS COLLECTION AND CONTROL SYSTEM INCLUDING UP TO 80 STEAM ENHANCED WELLS, GAS/LIQUID SEPARATORS, TRANSFER PUMPS, AIR-COOLED HEAT EXCHANGERS, CONDENSATE TANKS (< 100 BBL), CVR GAS SCRUBBER, UP TO TWO (2) VAPOR COMPRESSORS, UP TO TWO (2) SULFA-TREAT SULFUR SCRUBBERS OR UP TO TWO (2) LIQUID SULFUR SCRUBBERS, VAPOR PIPING TO FUEL GAS SYSTEM, AND BOOSTER COMPRESSOR WITH UP TO THREE (3) DOGGR APPROVED WASTE GAS DISPOSAL WELLS (ETHEL D PROPERTY)

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 is proposing to:

- 1) Modify natural/TEOR gas-fired steam generator #MSJ-407 (S-1246-19) by adding the Ethel D property, located in SE/4 Section 36, T12N, R24W, as an approved location, install a PCL diffuser plate for Rule 4306 compliance and
- 2) Modify thermally enhanced oil recovery (TEOR) operation S-1246-290 by adding steam generator #MSJ-407 (S-1246-19) as an approved incinerating device for the Ethel D TEOR system casing gas collection system.

The description of the modifications to the permit conditions are as follows:

S-1246-19-31:

Permit condition 1 on the proposed Permit to Operate was added to allow the unit to operate at the new location.

Permit conditions 24 and 25 on the proposed Permit to Operate were added for compliance with District Rule 4306.

Permit condition 27 on the proposed Permit to Operate was added to establish new daily emission limits.

Permit conditions 7, 8, 11, 12, 15, 16, 17, 18, 19, 20, 22, and 32 on the proposed Permit to Operate were modified for compliance with District Rule 4306.

S-1246-290-8:

Permit conditions 3 and 4 were added to the proposed Permit to Operate for compliance with District NSR Rule. These conditions allow vapors from the casing gas collection system to be controlled by permit unit S-1246-19.

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. Proposed Modified Title V Operating Permit No. S-1246-19-31, '-290-8
- B. Authorities to Construct No. S-1246-19-22, '-19-24, '-290-4
- C. Emissions Increases
- D. Application
- E. Previous Title V Operating Permit No.'s S-1246-19-23, '-290-14

ATTACHMENT A

Proposed Modified Title V Operating Permit No.
(S-1246-19-31, '-290-8)

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1246-19-31

EXPIRATION DATE: 03/31/2010

SECTION: NE28 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR C.E. NATCO NATURAL/TEOR GAS-FIRED STEAM GENERATOR WITH FLUE GAS RECIRCULATION, NORTH AMERICAN LO-NOX BURNER, AND O2 CONTROLLER:

PERMIT UNIT REQUIREMENTS

1. Unit is approved for operation at the following locations: NE/4 Section 28, T12N, R24W and SE/4 Section 36, T12N, R24W. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
3. Nitrogen oxide (NO_x) emissions shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of 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
5. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, 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
6. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
7. {2990} Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305 and 4306]
8. {2989} Source testing to measure natural gas-combustion NO_x and CO emissions from this unit 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 and 4306]
9. 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
10. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. This mean shall be multiplied by the appropriate factor. [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.

11. 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
12. 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
13. 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
14. 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
15. 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
16. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081, 4305 and 4306] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, 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 and 4306] Federally Enforceable Through Title V Permit
18. If either the NO_x or CO concentrations corrected to 3% O₂, 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 and 4306] Federally Enforceable Through Title V Permit
19. 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 and 4306] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. The operational conditions during compliance testing may be imposed as permit requirements. [District Rule 2080] Federally Enforceable Through Title V Permit
22. The duration of each startup and shutdown period shall not exceed 2.0 hours. [District Rules 4305 and 4306] 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. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
24. Except during startup and shutdown, the emission rate for firing on natural gas shall not exceed any of the following: PM10 - 0.005 lb/MMBtu, NOx (as NO2) - 0.018 lb/MMBtu or 15 ppmvd NOx @ 3% O2, VOC - 0.003 lb/MMBtu, or CO - 0.033 lb/MMBtu (46.6 ppmv @ 3% O2). [District Rules 2201, 4305, 4306 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. Except during startup and shutdown, the emission rate for incineration of waste gas from TEOR S-1246-235 shall not exceed any of the following: PM10 - 0.0075 lb/MMBtu, NOx (as NO2) - 0.018 lb/MMBtu or 15 ppmvd NOx @ 3% O2, VOC - 0.003 lb/MMBtu, or CO - 0.033 lb/MMBtu. [District Rules 2201, 4305, 4306 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. Daily SOx emissions shall not exceed 15 lbs/day. [District Rules 2201 and 4301] Federally Enforceable Through Title V Permit
27. Daily emissions shall not exceed any of the following: PM10 - 9.5 lb/day, NOx (as NO2) - 54.0 lb/day, VOC - 4.5 lb/day, CO - 49.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
28. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [Kern County Rule 407, District Rule 4301, District Rule 4801, and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each non-certified 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 quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. 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, 9.3.2] Federally Enforceable Through Title V Permit
31. 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 D1072, D3246, D4084, D4468, D6667, or double GC for H2S and Mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1; 4351, 6.2.1, 2201] Federally Enforceable Through Title V Permit
33. Permittee shall measure and record the daily quantities of natural gas and waste gas burned in this generator. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Permittee shall demonstrate compliance with the daily sulfur compound emissions limit by calculation using the quantities of natural gas and waste gas burned and the total sulfur content of these fuels, as most recently determined. Permittee shall keep an accurate daily record of the calculated sulfur compound emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
35. Daily heat input from waste gas from TEOR operations shall not exceed 790 MMBtu/day. [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.

36. Daily heat input shall be determined as follows: [fuel HHV (MMBtu/MMscf)] x [daily fuel throughput (MMscf/day)].
[District Rule 2201] Federally Enforceable Through Title V Permit
37. The fuel higher heating value (HHV) of the non-certified gas shall be determined at least once every calendar year.
[District Rule 2201] Federally Enforceable Through Title V Permit
38. 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. [District Rule 2520, 9.4.2 and District Rule 2201] Federally Enforceable Through Title V Permit
39. 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 and 4306] 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-1246-290-8

EXPIRATION DATE: 03/31/2010

SECTION: SE36 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:

TEOR SYSTEM WITH WELL VENT CASING GAS COLLECTION AND CONTROL SYSTEM INCLUDING UP TO 80 STEAM ENHANCED WELLS, GAS/LIQUID SEPARATORS, TRANSFER PUMPS, AIR-COOLED HEAT EXCHANGERS, CONDENSATE TANKS (< 100 BBL), CVR GAS SCRUBBER, UP TO TWO (2) VAPOR COMPRESSORS, UP TO TWO (2) SULFA-TREAT SULFUR SCRUBBERS OR UP TO TWO (2) LIQUID SULFUR SCRUBBERS, VAPOR PIPING TO FUEL GAS SYSTEM, AND BOOSTER COMPRESSOR WITH UP TO THREE (3) DOGGR APPROVED WASTE GAS DISPOSAL WELLS (ETHEL D PROPERTY)

PERMIT UNIT REQUIREMENTS

1. Permittee shall maintain with the permit a current listing of all steam enhanced wells with casing vents connected to the well vent collection and control system. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
2. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] Federally Enforceable Through Title V Permit
3. Well vent vapor collection and control system includes piping from sulfur scrubber(s) to steam generators S-1246-24, '19 and a permit exempt 4.2 MMBtu/hr heater treater. Well vent vapor collection and control system includes bypass piping around sulfur scrubber(s) to booster compressor to up to 3 DOGGR-approved vapor disposal well(s). Only one sulfur scrubber need operate at any time provided compliance with emissions limits have been demonstrated when operating only one sulfur scrubber. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Scrubbed well vent vapor collection and control system gas shall be incinerated only in steam generators S-1246-24, '19 and a 4.2 MMBtu/hr heater treater, and unscrubbed gas may be disposed of in up to 3 DOGGR approved vapor disposal wells. [District NSR Rule] Federally Enforceable Through Title V Permit
5. A vacuum gauge shall be located upstream (on the inlet side) of the vapor recovery compressor(s). [District NSR Rule] Federally Enforceable Through Title V Permit
6. All vapor handling components upstream of the vapor recovery compressor(s) shall be under continuous vacuum (i.e. less than 0 psig). [District NSR Rule] Federally Enforceable Through Title V Permit
7. Permittee shall monitor and record vacuum gauge readings at least monthly. [District NSR Rule] Federally Enforceable Through Title V Permit
8. The crude oil production from wells associated with this permit unit shall not lie within 1,000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
9. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, section 5.0. [District Rule 4401, 4.1] 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. Permittee shall maintain accurate component count for TEOR operation according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Fugitive emissions from all components (except those operating under continuous vacuum) in gas service including polish rods associated with this TEOR operation shall not exceed 20.8 lb VOC/ day. [District NSR Rule] Federally Enforceable Through Title V Permit
12. VOC content of the TEOR gas shall not exceed 30% of the total hydrocarbon content by weight. [District NSR Rule] Federally Enforceable Through Title V Permit
13. VOC content of the TEOR gas shall be tested not less than annually. [District NSR Rule] Federally Enforceable Through Title V Permit
14. VOC content shall be determined using ASTM Method E168, E169, or E260 as applicable, or equivalent test method with prior District approval. Halogenated exempt compounds shall be determined by CARB Method 422. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
15. Permittee shall perform leak inspections at least annually using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. [District NSR Rule and District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
16. A leak shall be defined as a reading on a portable hydrocarbon detection instrument (calibrated with methane) in excess of 10,000 ppm when measured in accordance with EPA Method 21. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit
17. Total number of leaks from components comprising the vapor collection and control system, including condensate handling components, shall not exceed that allowed by Rule 4401 for the number of wells installed. If 80 wells are installed, no more than eight (8) leaks are allowed at any one time. [District NSR Rule and District Rule 4401, 5.3] Federally Enforceable Through Title V Permit
18. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
19. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10-day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
20. Permittee shall maintain records of annual inspections including measured leaks greater than 10,000 ppmv, maintenance performed for components leaking greater than 10,000 ppmv, and date of re-check for components leaking greater than 10,000 ppmv. [District Rule 4401 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Collected vapors sent to District approved incineration devices shall be processed through sulfur scrubber(s) prior to incineration. [District NSR Rule] Federally Enforceable Through Title V Permit
22. Sulfur scrubber(s) shall meet at least one of the following performance criteria: sulfur compounds reduction efficiency shall be maintained at 95% or greater, or the sulfur compounds concentration in the vapors exiting the sulfur scrubber(s) shall not exceed 1 grain S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit
23. Compliance with sulfur scrubber efficiency requirement shall be demonstrated by measurement of total sulfur compound concentrations at scrubber inlet and outlet. The measurement shall be conducted on grab samples taken at scrubber inlet and outlet using one of the following test methods: ASTM D1072, D3246, D4084, D4468, D6667, or double GC for H₂S and mercaptans, or equivalent test method with prior District approval. Grab samples shall be taken and analyzed upon initial use of the scrubber and, thereafter, every six months. If scrubber is not in use at six month anniversary date, then efficiency shall be demonstrated within two weeks of returning scrubber to service. For each month in which scrubber is operated and laboratory analysis of grab samples is not required, operator shall monitor and adjust scrubber performance as needed using gas-detection tubes calibrated for existing sulfur species or other equivalent District approved sulfur detection method(s) or device(s). [District NSR Rule] 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.

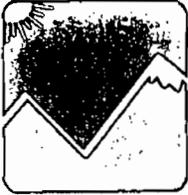
24. Permittee shall maintain a written record of inlet and outlet sulfur compound measurements and recharging dates and such records shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
25. During recharging of the sulfur scrubber(s), untreated well casing vent collection system vapors shall not be introduced into the fuel system or vented to the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
26. Scrubbed well casing vent vapor collection and control system gas burned in 4.2 MMBtu/hr heater treater shall be demonstrated by fuel gas analysis to qualify for permit exemption immediately upon burning TEOR gas in unit and at least every six months thereafter. [District Rule 2020, 8.0] Federally Enforceable Through Title V Permit
27. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
28. Permittee shall provide District with copy of DOGGR approval of vapor disposal well prior to injecting any TEOR gas. [District Rule 2010] Federally Enforceable Through Title V Permit
29. Permittee shall cease injection of vapors and notify the District immediately if DOGGR vapor disposal well approvals are revoked, denied, terminated, surrendered or altered to disallow injection. [District NSR Rule] Federally Enforceable Through Title V Permit
30. An inspection and maintenance program consistent with Rule 4403 shall be implemented and maintained for polish rod stuffing boxes (identified by annual well roster required by this permit). [District NSR Rule] Federally Enforceable Through Title V Permit
31. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

DRAFT

ATTACHMENT B

Authorities to Construct No.
(S-1246-19-22, '-19-24 '-290-4)



San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1246-19-22

ISSUANCE DATE: 08/12/2005

LEGAL OWNER OR OPERATOR: BERRY PETROLEUM COMPANY
MAILING ADDRESS: 5201 TRUXTUN AVENUE SUITE 300
BAKERSFIELD, CA 93309-0640

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR C.E. NATCO NATURAL/TEOR GAS-FIRED STEAM GENERATOR WITH FLUE GAS RECIRCULATION, NORTH AMERICAN LO-NOX BURNER, AND O2 CONTROLLER: ADD EYTHEL D PROPERTY (SE/4 SECTION 36, T12N, R24E) AS AN APPROVED LOCATION

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. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Unit is approved for operation at the following locations: NE/4 Section 28, T12N, R24W and SE/4 Section 36, T12N, R24W. [District Rule 4102]
4. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each non-certified 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 quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 326-6900 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.

DAVID L. CROW, Executive Director / APCO

DAVID WARNER, Director of Permit Services

S-1246-19-22 Aug 12 2005 7:40AM - BUSM Joint Inspection NOT Required

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6. 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, 9.3.2] Federally Enforceable Through Title V Permit
7. 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 D1072, D3246, D4084, D4468, D6667, or double GC for H2S and Mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; 4351, 6.2.1, 2201] Federally Enforceable Through Title V Permit
9. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [Kern County Rule 407, District Rule 4301, District Rule 4801, and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of 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
12. 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
13. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
14. Source testing for NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Source testing to measure NOx and CO emissions from this unit 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 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit
16. 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
17. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. This mean shall be multiplied by the appropriate factor. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
18. 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

CONDITIONS CONTINUE ON NEXT PAGE

19. 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 Rule 4305] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. 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
22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305] Federally Enforceable Through Title V Permit
23. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081, 4305] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the stack concentration of NO_x, 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 Rule 4305] Federally Enforceable Through Title V Permit
25. If either the NO_x or CO concentrations corrected to 3% O₂, 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 Rule 4305] Federally Enforceable Through Title V Permit
26. 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 4305] Federally Enforceable Through Title V Permit
27. The operational conditions during compliance testing may be imposed as permit requirements. [District Rule 2080] Federally Enforceable Through Title V Permit
28. The duration of each startup and shutdown period shall not exceed 2.0 hours. [District Rule 4305] Federally Enforceable Through Title V Permit
29. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit
30. Except during startup and shutdown, the emission rate for firing on natural gas shall not exceed any of the following: PM₁₀ - 0.005 lb/MMBtu, NO_x (as NO₂) - 0.036 lb/MMBtu or 30 ppmvd NO_x @ 3% O₂, VOC - 0.003 lb/MMBtu, or CO - 0.033 lb/MMBtu (46.6 ppmv @ 3% O₂). [District Rule 2201 and District Rules 4305 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. Except during startup and shutdown, the emission rate for incineration of waste gas from TEOR S-1246-235 shall not exceed any of the following: PM₁₀ - 0.0075 lb/MMBtu, NO_x (as NO₂) - 0.036 lb/MMBtu or 30 ppmvd NO_x @ 3% O₂, VOC - 0.003 lb/MMBtu, or CO - 0.033 lb/MMBtu. [District Rule 2201 and District Rules 4305 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

32. Daily SO_x emissions shall not exceed 15 lbs/day. [District Rules 2201 and 4301] Federally Enforceable Through Title V Permit
33. Permittee shall measure and record the daily quantities of natural gas and waste gas burned in this generator. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Permittee shall demonstrate compliance with the daily sulfur compound emissions limit by calculation using the quantities of natural gas and waste gas burned and the total sulfur content of these fuels, as most recently determined. Permittee shall keep an accurate daily record of the calculated sulfur compound emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
35. Daily heat input from waste gas from TEOR operations shall not exceed 790 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
36. Total daily heat input from natural/TEOR gas shall not exceed 1,500 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
37. Daily heat input shall be determined as follows: [fuel HHV (MMBtu/MMscf)] x [daily fuel throughput (MMscf/day)]. [District Rule 2201] Federally Enforceable Through Title V Permit
38. The fuel higher heating value (HHV) of the non-certified gas shall be determined at least once every calendar year. [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. [District Rule 2520, 9.4.2 and District Rule 2201] Federally Enforceable Through Title V Permit
40. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit
41. 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] Federally Enforceable Through Title V Permit



San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1246-19-24

ISSUANCE DATE: 04/06/2006

LEGAL OWNER OR OPERATOR: BERRY PETROLEUM COMPANY
MAILING ADDRESS: 5201 TRUXTUN AVENUE SUITE 300
BAKERSFIELD, CA 93309-0640

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE28 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR C.E. NATCO NATURAL/TEOR GAS-FIRED STEAM GENERATOR (UNIT #MSJ-407) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN LO-NOX BURNER, AND O2 CONTROLLER: INSTALL PCL DIFFUSER PLATE FOR RULE 4306 COMPLIANCE (GROUP 2)

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. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Unit is approved for operation at the following locations: NE/4 Section 28, T12N, R24W and SE/4 Section 36, T12N, R24W. [District Rule 4102]
4. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
5. Nitrogen oxide (NO_x) emissions shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of 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
7. 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

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 326-6900 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1246-19-24: Apr 6 2006 2:27PM - ELLENBEC - Joint Inspection NOT Required

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8. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
9. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305 and 4306]
10. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit 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 and 4306]
11. 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
12. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. This mean shall be multiplied by the appropriate factor. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. 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
14. 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
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 results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
17. 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
18. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081, 4305 and 4306] Federally Enforceable Through Title V Permit
19. The permittee shall monitor and record the stack concentration of NO_x, 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 and 4306] Federally Enforceable Through Title V Permit
20. If either the NO_x or CO concentrations corrected to 3% O₂, 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 and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
23. The operational conditions during compliance testing may be imposed as permit requirements. [District Rule 2080] Federally Enforceable Through Title V Permit
24. The duration of each startup and shutdown period shall not exceed 2.0 hours. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
26. Except during startup and shutdown, the emission rate for firing on natural gas shall not exceed any of the following: PM₁₀ - 0.005 lb/MMBtu, NO_x (as NO₂) - 0.018 lb/MMBtu or 15 ppmvd NO_x @ 3% O₂, VOC - 0.003 lb/MMBtu, or CO - 0.033 lb/MMBtu (46.6 ppmv @ 3% O₂). [District Rules 2201, 4305, 4306 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
27. Except during startup and shutdown, the emission rate for incineration of waste gas from TEOR S-1246-235 shall not exceed any of the following: PM₁₀ - 0.0075 lb/MMBtu, NO_x (as NO₂) - 0.018 lb/MMBtu or 15 ppmvd NO_x @ 3% O₂, VOC - 0.003 lb/MMBtu, or CO - 0.033 lb/MMBtu. [District Rules 2201, 4305, 4306 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
28. Daily SO_x emissions shall not exceed 15 lbs/day. [District Rules 2201 and 4301] Federally Enforceable Through Title V Permit
29. Daily emissions shall not exceed any of the following: PM₁₀ - 9.5 lb/day, NO_x (as NO₂) - 54.0 lb/day, VOC - 4.5 lb/day, CO - 49.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
30. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [Kern County Rule 407, District Rule 4301, District Rule 4801, and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each non-certified 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 quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When complying with SO_x 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, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

33. If the unit is fired on noncertified gaseous fuel and compliance with SO_x 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 D1072, D3246, D4084, D4468, D6667, or double GC for H₂S and Mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1; 4351, 6.2.1, 2201] Federally Enforceable Through Title V Permit
35. Permittee shall measure and record the daily quantities of natural gas and waste gas burned in this generator. [District Rule 2201] Federally Enforceable Through Title V Permit
36. Permittee shall demonstrate compliance with the daily sulfur compound emissions limit by calculation using the quantities of natural gas and waste gas burned and the total sulfur content of these fuels, as most recently determined. Permittee shall keep an accurate daily record of the calculated sulfur compound emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
37. Daily heat input from waste gas from TEOR operations shall not exceed 790 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
38. Daily heat input shall be determined as follows: [fuel HHV (MMBtu/MMscf)] x [daily fuel throughput (MMscf/day)]. [District Rule 2201] Federally Enforceable Through Title V Permit
39. The fuel higher heating value (HHV) of the non-certified gas shall be determined at least once every calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
40. 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. [District Rule 2520, 9.4.2 and District Rule 2201] Federally Enforceable Through Title V Permit
41. 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 and 4306] Federally Enforceable Through Title V Permit



San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1246-290-4

ISSUANCE DATE: 08/12/2005

LEGAL OWNER OR OPERATOR: BERRY PETROLEUM COMPANY
MAILING ADDRESS: 5201 TRUXTUN AVENUE SUITE 300
BAKERSFIELD, CA 93309-0640

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: SE36 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:

MODIFICATION OF TEOR SYSTEM WITH WELL VENT CASING GAS COLLECTION AND CONTROL SYSTEM INCLUDING UP TO 80 STEAM ENHANCED WELLS, GAS/LIQUID SEPARATORS, TRANSFER PUMPS, AIR-COOLED HEAT EXCHANGERS, CONDENSATE TANKS (< 100 BBL), CVR GAS SCRUBBER, UP TO TWO (2) VAPOR COMPRESSORS, UP TO TWO (2) SULFA-TREAT SULFUR SCRUBBERS OR UP TO TWO (2) LIQUID SULFUR SCRUBBERS, VAPOR PIPING TO FUEL-GAS SYSTEM, AND BOOSTER COMPRESSOR WITH UP TO THREE (3) DOGGR APPROVED WASTE GAS DISPOSAL WELLS (ETHEL D PROPERTY); ADD STEAM GENERATOR S-1246-19 AS AN APPROVED INCINERATION DEVICE

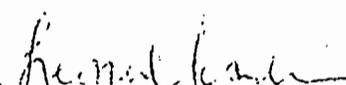
CONDITIONS

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. Permittee shall maintain with the permit a current listing of all steam enhanced wells with casing vents connected to the well vent collection and control system. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
3. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 326-6900 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.

DAVID L. CROW, Executive Director / APCO


DAVID WARNER, Director of Permit Services

S-1246-290-4 Aug 12 2005 7:40AM BUSSM Joint Inspection NOT Required

4. Well vent vapor collection and control system includes piping from sulfur scrubber(s) to steam generators S-1246-24, '19 and a permit exempt 4.2 MMBtu/hr heater treater. Well vent vapor collection and control system includes bypass piping around sulfur scrubber(s) to booster compressor to up to 3 DOGGR-approved vapor disposal well(s). Only one sulfur scrubber need operate at any time provided compliance with emissions limits have been demonstrated when operating only one sulfur scrubber. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Scrubbed well vent vapor collection and control system gas shall be incinerated only in steam generators S-1246-24, '19 and a 4.2 MMBtu/hr heater treater, and unscrubbed gas may be disposed of in up to 3 DOGGR approved vapor disposal wells. [District NSR Rule] Federally Enforceable Through Title V Permit
6. A vacuum gauge shall be located upstream (on the inlet side) of the vapor recovery compressor(s). [District NSR Rule] Federally Enforceable Through Title V Permit
7. All vapor handling components upstream of the vapor recovery compressor(s) shall be under continuous vacuum (i.e. less than 0 psig). [District NSR Rule] Federally Enforceable Through Title V Permit
8. Permittee shall monitor and record vacuum gauge readings at least monthly. [District NSR Rule] Federally Enforceable Through Title V Permit
9. The crude oil production from wells associated with this permit unit shall not lie within 1,000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
10. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, section 5.0. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
11. Permittee shall maintain accurate component count for TEOR operation according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Fugitive emissions from all components (except those operating under continuous vacuum) in gas service including polish rods associated with this TEOR operation shall not exceed 20.8 lb VOC/ day. [District NSR Rule] Federally Enforceable Through Title V Permit
13. VOC content of the TEOR gas shall not exceed 30% of the total hydrocarbon content by weight. [District NSR Rule] Federally Enforceable Through Title V Permit
14. VOC content of the TEOR gas shall be tested not less than annually. [District NSR Rule] Federally Enforceable Through Title V Permit
15. VOC content shall be determined using ASTM Method E168, E169, or E260 as applicable, or equivalent test method with prior District approval. Halogenated exempt compounds shall be determined by CARB Method 422. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
16. Permittee shall perform leak inspections at least annually using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. [District NSR Rule and District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
17. A leak shall be defined as a reading on a portable hydrocarbon detection instrument (calibrated with methane) in excess of 10,000 ppm when measured in accordance with EPA Method 21. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit
18. Total number of leaks from components comprising the vapor collection and control system, including condensate handling components, shall not exceed that allowed by Rule 4401 for the number of wells installed. If 80 wells are installed, no more than eight (8) leaks are allowed at any one time. [District NSR Rule and District Rule 4401, 5.3] Federally Enforceable Through Title V Permit
19. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10-day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
21. Permittee shall maintain records of annual inspections including measured leaks greater than 10,000 ppmv, maintenance performed for components leaking greater than 10,000 ppmv, and date of re-check for components leaking greater than 10,000 ppmv. [District Rule 4401 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. Collected vapors sent to District approved incineration devices shall be processed through sulfur scrubber(s) prior to incineration. [District NSR Rule] Federally Enforceable Through Title V Permit
23. Sulfur scrubber(s) shall meet at least one of the following performance criteria: sulfur compounds reduction efficiency shall be maintained at 95% or greater, or the sulfur compounds concentration in the vapors exiting the sulfur scrubber(s) shall not exceed 1 grain S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit
24. Compliance with sulfur scrubber efficiency requirement shall be demonstrated by measurement of total sulfur compound concentrations at scrubber inlet and outlet. The measurement shall be conducted on grab samples taken at scrubber inlet and outlet using one of the following test methods: ASTM D1072, D3246, D4084, D4468, D6667, or double GC for H₂S and mercaptans, or equivalent test method with prior District approval. Grab samples shall be taken and analyzed upon initial use of the scrubber and, thereafter, every six months. If scrubber is not in use at six month anniversary date, then efficiency shall be demonstrated within two weeks of returning scrubber to service. For each month in which scrubber is operated and laboratory analysis of grab samples is not required, operator shall monitor and adjust scrubber performance as needed using gas-detection tubes calibrated for existing sulfur species or other equivalent District approved sulfur detection method(s) or device(s). [District NSR Rule] Federally Enforceable Through Title V Permit
25. Permittee shall maintain a written record of inlet and outlet sulfur compound measurements and recharging dates and such records shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
26. During recharging of the sulfur scrubber(s), untreated well casing vent collection system vapors shall not be introduced into the fuel system or vented to the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
27. Scrubbed well casing vent vapor collection and control system gas burned in 4.2 MMBtu/hr heater treater shall be demonstrated by fuel gas analysis to qualify for permit exemption immediately upon burning TEOR gas in unit and at least every six months thereafter. [District Rule 2020, 8.0] Federally Enforceable Through Title V Permit
28. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. Permittee shall provide District with copy of DOGGR approval of vapor disposal well prior to injecting any TEOR gas. [District Rule 2010] Federally Enforceable Through Title V Permit
30. Permittee shall cease injection of vapors and notify the District immediately if DOGGR vapor disposal well approvals are revoked, denied, terminated, surrendered or altered to disallow injection. [District NSR Rule] Federally Enforceable Through Title V Permit
31. An inspection and maintenance program consistent with Rule 4403 shall be implemented and maintained for polish rod stuffing boxes (identified by annual well roster required by this permit). [District NSR Rule] Federally Enforceable Through Title V Permit
32. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

ATTACHMENT C

Emissions Increases

| | SSIPE (lb/yr) | | | | |
|--------------|---------------|----------|----------|----------|----------|
| | NOx | VOC | CO | SOx | PM10 |
| S-1246-19-22 | -9,855 | 0 | 0 | 0 | 0 |
| S-1246-290-8 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | -9,855 | 0 | 0 | 0 | 0 |

ATTACHMENT D

Application

San Joaquin Valley Unified Air Pollution Control District

APPLICATION FOR TITLE V MODIFICATION:

- ADMINSTRATIVE AMENDMENT
- MINOR MODIFICATION
- SIGNIFICANT MODIFICATION

RECEIVED
MAY 11 2006
SJVAPCD
Southern Region

| | |
|---|---|
| 1. PERMIT TO BE ISSUED TO: Berry Petroleum Company | |
| 2. MAILING ADDRESS: STREET/P.O. BOX: 5201 Truxtun Avenue, Suite 300 CITY: <u>Bakersfield</u> STATE: <u>CA</u> 9-DIGIT ZIP CODE: <u>93309</u> | |
| 3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED: STREET: <u>See ATCs</u> CITY: _____ _____ ¼ SECTION <u>36</u> TOWNSHIP <u>12N</u> RANGE <u>24W</u> | INSTALLATION DATE: ASAP |
| 4. GENERAL NATURE OF BUSINESS: Oil and Gas Production | |
| 5. EQUIPMENT FOR WHICH APPLICATION IS MADE (Include Permit Nos.): SJVUAPCD PROJECT NO. S-1052898 ATC #'s: S-1246-19-22 and S-1246-290-4 See attached copy of ATC <small>(Use additional sheets if necessary)</small> | |
| 6. DO YOU REQUEST A CERTIFICATION OF CONFORMITY WITH THIS ACTION: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | |
| 7. IS THIS APPLICATION SUBMITTED AS A RESULT OF A NOV/NTC? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NOV/NTC No: _____ | |
| 8. SIGNATURE OF APPLICANT/CONTACT PERSON:  | TYPE OR PRINT TITLE OF APPLICANT: Senior Environmental Specialist |
| 9. TYPE OR PRINT NAME OF APPLICANT/CONTACT: Charlotte Campbell | DATE: 5/11/06 |
| 10. FAX NUMBER: (661) 616-3884 | TELEPHONE NUMBER: (661) 616-3807 |

FOR APCD USE ONLY:

Berry Petroleum

| | |
|------------|--|
| DATE STAMP | FILING FEE RECEIVED: \$ <u>30</u> |
| | DATE PAID: <u>PM 5/11/06</u> |
| | PROJECT NO.: <u>S-10702171</u> FACILITY REGION & ID: <u>S-1246</u> |

Title V - Minor Mod S-1246

**San Joaquin Valley
Unified Air Pollution Control District**

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

RECEIVED

MAY 11 2006

**SJVAPCD
Southern Region**

I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

| | |
|--|-------------------------------------|
| COMPANY NAME: Berry Petroleum Company | FACILITY ID: S - 1246 |
| 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: Berry Petroleum Company | |
| 3. Agent to the Owner: | |

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

- Based on information and belief formed after reasonable inquiry, the source identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the source 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

5/9/06

Date

Tim Crawford

Name of Responsible Official (please print)

Vice President of California Production

Title of Responsible Official (please print)

ATTACHMENT E

Previous Title V Operating Permit No.'s S-
1246-19-23, '-290-14

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1246-19-23

EXPIRATION DATE: 03/31/2010

SECTION: NE28 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL/TEOR GAS-FIRED STEAM GENERATOR WITH FLUE GAS RECIRCULATION, NORTH AMERICAN LO-NOX BURNER, AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
2. 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. [District Rule 2520, 9.3.2 and District NSR Rule] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
4. 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, 9.3.2] Federally Enforceable Through Title V Permit
5. When complying with SO_x 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, 9.3.2] Federally Enforceable Through Title V Permit
6. If the unit is fired on noncertified gaseous fuel and compliance with SO_x 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
7. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2.1] Federally Enforceable Through Title V Permit
8. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [Kern County Rule 407, District Rule 4301, District Rule 4801, and 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.

9. Nitrogen oxide (NO_x) emissions shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of 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
11. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, 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
12. Source testing for NO_x and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Source testing for NO_x and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. If permittee fails any compliance demonstration for NO_x and CO emission limits when testing not less than once every 36 months, compliance with NO_x and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NO_x and CO source testing requirement. [District Rules 4305 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted by an independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 1081 and 2520, 9.3.2] 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 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
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. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit
20. The permittee shall monitor and record the stack concentration of NO_x, 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 upon restarting the unit. [District Rules 4305] Federally Enforceable Through Title V Permit
21. If either the NO_x or CO concentrations corrected to 3% O₂, 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] 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. 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] Federally Enforceable Through Title V Permit
23. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305] Federally Enforceable Through Title V Permit
24. The operational conditions during compliance testing may be imposed as permit requirements. [District Rule 2080] Federally Enforceable Through Title V Permit
25. The duration of each startup and shutdown period shall not exceed 2.0 hours. [District Rules 4305] Federally Enforceable Through Title V Permit
26. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rules 4305 and 4306] 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 1081 and 4305] Federally Enforceable Through Title V Permit
28. Except during startup and shutdown, the emission factors for firing on natural gas shall not exceed any of the following: PM₁₀ - 0.005 lb/MMBtu, NO_x (as NO₂) - 0.036 lb/MMBtu, VOC - 0.003 lb/MMBtu, or CO - 0.033 lb/MMBtu (46.6 ppmv @ 3% O₂). [District NSR Rule and District Rules 4305] Federally Enforceable Through Title V Permit
29. Except during startup and shutdown, the emission factors for incineration of waste gas from TEOR S-1246-235 shall not exceed any of the following: PM₁₀ - 0.0075 lb/MMBtu, NO_x (as NO₂) - 0.036 lb/MMBtu, VOC - 0.003 lb/MMBtu, or CO - 0.033 lb/MMBtu. [District NSR Rule and District Rules 4305] Federally Enforceable Through Title V Permit
30. Daily SO_x emissions shall not exceed 15 lbs/day. [District NSR Rule] Federally Enforceable Through Title V Permit
31. Daily heat input from waste gas from the TEOR (Permit Unit S-1246-235) shall not exceed 790 MMBtu/day. [District NSR Rule] Federally Enforceable Through Title V Permit
32. Total daily heat input from natural/TEOR gas shall not exceed 1,500 MMBtu/day. [District NSR Rule] Federally Enforceable Through Title V Permit
33. Daily heat input shall be determined as follows: [fuel HHV (MMBtu/MMscf)] x [daily fuel throughput (MMscf/day)]. [District NSR Rule] Federally Enforceable Through Title V Permit
34. The fuel higher heating value (HHV) shall be determined at least once every calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
35. The owner or operator of a boiler, steam generator, or process heater subject to the requirement of District Rule 4306 shall comply with all applicable deadlines in Table 2, Section 7.0 of the Rule. [District Rule 4306] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1246-290-14

EXPIRATION DATE: 03/31/2010

SECTION: SE36 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:

TEOR OPERATION WITH WELL VENT CASING GAS COLLECTION AND CONTROL SYSTEM INCLUDING UP TO 250 STEAM ENHANCED WELLS, GAS/LIQUID SEPARATORS, TRANSFER PUMPS, AIR-COOLED HEAT EXCHANGERS, CONDENSATE TANKS (< 100 BBL), VAPOR COMPRESSORS, SULFUR SCRUBBERS VENTED TO STEAM GENERATORS S-1246-19, '-24, '-269, '-332, PERMIT EXEMPT 4.2 MMBTU/HR HEATER TREATER, OR DOGGR APPROVED WASTE GAS DISPOSAL WELLS (ETHEL D PROPERTY)

PERMIT UNIT REQUIREMENTS

1. Permittee shall maintain with the permit a current listing of all steam enhanced wells with casing vents connected to the well vent collection and control system. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
2. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] Federally Enforceable Through Title V Permit
3. Well vent vapor collection and control system includes piping to District approved incineration devices or DOGGR-approved vapor disposal well(s). [District NSR Rule] Federally Enforceable Through Title V Permit
4. TEOR gas shall be incinerated District approved incineration devices or disposed of in DOGGR-approved vapor disposal wells. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The crude oil production from wells associated with this permit unit shall not lie within 1,000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
6. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, section 5.0. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
7. Permittee shall maintain accurate component count for TEOR operation according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Fugitive emissions from all components in gas service associated with this TEOR operation shall not exceed 79.5 lb VOC/day. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Permittee shall perform leak inspections at least annually using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. [District NSR Rule and District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
10. A leak shall be defined as a reading on a portable hydrocarbon detection instrument (calibrated with methane) in excess of 10,000 ppm when measured in accordance with EPA Method 21. [District NSR Rule and District Rule 4401] 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. Total number of leaks from components comprising the vapor collection and control system, including condensate handling components, shall not exceed the lower of the number allowed by Rule 4401 for the number of wells installed or 8 leaks. [District NSR Rule and District Rule 4401, 5.3] Federally Enforceable Through Title V Permit
12. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
13. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10-day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
14. Permittee shall maintain records of annual inspections including measured leaks greater than 10,000 ppmv, maintenance performed for components leaking greater than 10,000 ppmv, and date of re-check for components leaking greater than 10,000 ppmv. [District Rules 2520, 9.3.2 and 4401] Federally Enforceable Through Title V Permit
15. If TEOR gas incineration device requires gas to be scrubbed, then Sulfur scrubber(s) shall reduce sulfur compounds by 95% or greater or to less than 1.0 gr/100scf. [District NSR Rule] Federally Enforceable Through Title V Permit
16. Compliance with sulfur scrubber efficiency requirement shall be demonstrated by measurement of total sulfur compound concentrations at scrubber inlet and outlet. The measurement shall be conducted on grab samples taken at scrubber inlet and outlet using one of the following test methods: ASTM D1072, ASTM D3246, ASTM D6228 (GC-FPD), double GC for H₂S and mercaptans, or equivalent test method with prior District approval. Grab samples shall be taken and analyzed upon initial use of the scrubber and, thereafter, every six months. If scrubber is not in use at six month anniversary date, then efficiency shall be demonstrated within two weeks of returning scrubber to service. For each month in which scrubber is operated and laboratory analysis of grab samples is not required, operator shall monitor and adjust scrubber performance as needed using gas-detection tubes calibrated for existing sulfur species or other equivalent District approved sulfur detection method(s) or device(s). [District NSR Rule] Federally Enforceable Through Title V Permit
17. Permittee shall maintain a written record of inlet and outlet sulfur compound measurements and recharging dates and such records shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
18. TEOR gas shall not be vented to the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
19. TEOR gas burned in 4.2 MMBtu/hr heater treater shall be demonstrated by fuel gas analysis to qualify for permit exemption immediately upon burning TEOR gas in unit and at least every six months thereafter. [District Rule 2020, 8.0] Federally Enforceable Through Title V Permit
20. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rules 2520, 9.3.2 and 4401, 6.1] Federally Enforceable Through Title V Permit
21. Permittee shall maintain records of DOGGR approval of vapor disposal wells. [District Rule 2010] Federally Enforceable Through Title V Permit
22. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

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