



SEP 28 2012

Steven Gregory  
Pacific Energy Resources Inc  
2630 Fountain View Drive, Suite 128  
Houston, Texas 77057

**RE: Notice of Final Action - Authority to Construct  
Project Number: S-1121571**

Dear Mr. Gregory:

The Air Pollution Control Officer has issued Authority to Construct permits to Pacific Energy Resources Inc for installation of a new 85 MMBtu/hr gas-fired steam generator to be used as an additional disposal device for tank vapor recovery (TVR) S-3187-20 and Thermally Enhanced Oil Recovery (TEOR) operation S-3187-25, at the Chico-Martinez Lease Section 35, Township 28S, Range 20E in the heavy oil production stationary source within the western Kern County fields.

Enclosed are copies of the Authority to Construct permits and a copy of the notice of final action to be published approximately three days from the date of this letter.

Notice of the District's preliminary decision to issue this Authority to Construct was published on August 12, 2012. The District's analysis of the proposal was also sent to CARB on August 6, 2012. No comments were received following the District's preliminary decision on this project.

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

Sincerely,

David Warner  
Director of Permit Services

DW: RUE/cm

Enclosures



**SEP 28 2012**

Mike Tollstrup, Chief  
Project Assessment Branch  
Stationary Source Division  
California Air Resources Board  
PO Box 2815  
Sacramento, CA 95812-2815

**RE: Notice of Final Action - Authority to Construct  
Project Number: S-1121571**

Dear Mr. Tollstrup:

The Air Pollution Control Officer has issued Authority to Construct permits to Pacific Energy Resources Inc for installation of a new 85 MMBtu/hr gas-fired steam generator to be used as an additional disposal device for tank vapor recovery (TVR) S-3187-20 and Thermally Enhanced Oil Recovery (TEOR) operation S-3187-25, at the Chico-Martinez Lease Section 35, Township 28S, Range 20E in the heavy oil production stationary source within the western Kern County fields.

Enclosed are copies of the Authority to Construct permits and a copy of the notice of final action to be published approximately three days from the date of this letter.

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Sincerely,

David Warner  
Director of Permit Services

DW: RUE/cm

Enclosures

Bakersfield Californian

**NOTICE OF FINAL ACTION  
FOR THE ISSUANCE OF AUTHORITY  
TO CONSTRUCT PERMITS**

NOTICE IS HEREBY GIVEN that the Air Pollution Control Officer has issued Authority to Construct permits to Pacific Energy Resources Inc for installation of a new 85 MMBtu/hr gas-fired steam generator to be used as an additional disposal device for tank vapor recovery (TVR) S-3187-20 and Thermally Enhanced Oil Recovery (TEOR) operation S-3187-25, at the Chico-Martinez Lease Section 35, Township 28S, Range 20E in the heavy oil production stationary source within the western Kern County fields.

No comments were received following the District's preliminary decision on this project.

The application review for Project #S-1121571 is available for public inspection at [http://www.valleyair.org/notices/public\\_notices\\_idx.htm](http://www.valleyair.org/notices/public_notices_idx.htm) and the **SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.**



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-3187-20-1

**ISSUANCE DATE:** 09/20/2012

**LEGAL OWNER OR OPERATOR:** PACIFIC ENERGY RESOURCES, INC.  
**MAILING ADDRESS:** 4900 CALIFORNIA AVE, TOWER B-210  
BAKERSFIELD, CA 93309

**LOCATION:** HEAVY OIL WESTERN  
CA

**SECTION:** 35 **TOWNSHIP:** 28S **RANGE:** 20E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 5,000 BBL FIXED ROOF CRUDE OIL WASH TANK SERVED BY VAPOR CONTROL SYSTEM INCLUDING PERMIT EXEMPT 2-PHASE SEPARATOR SHARED WITH S-3187-21-0 AND '22-0 AND VENTED TO STEAM GENERATOR S-3187-19, FLARE S-3187-24, OR PERMIT EXEMPT HEATER(S) (CHICO MARTINEZ LEASE): INCLUDE STEAM GENERATOR S-3187-27-0 AS AN ADDITIONAL COMBUSTION DEVICE

### CONDITIONS

1. To maintain status as small producer, permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern county and permittee shall not engage in refining, transporting or marketing of refined petroleum products. [District Rules 4623]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Permit exempt heater shall be fired only on propane or natural gas/vapor containing no more than five (5) percent by weight hydrocarbons heavier than butane and no more than 1.0 grain of total sulfur per 100 standard cubic feet of gas. [District Rule 2020]
5. Separator shall process crude oil with 0.8762 specific gravity or higher (30°API or lower) as measured by test method API 2547 or ASTM D-1298-80 and have a capacity of 100 bbl or less. [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO



DAVID WARNER, Director of Permit Services

S-3187-20-1; Sep 20 2012 10:18AM - EDGEHILL : Joint Inspection NOT Required

6. This tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4.7. [District Rules 2201 and 4623]
7. The Permittee shall maintain with the permit accurate fugitive component counts, and the resulting emissions from the tank, using "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-2c, "Oil and Gas Production Screening Value Ranges (< 10,000 ppmv) Emission Factors". [District Rule 2201]
8. VOC emission rate from vapor service components associated with this tank up to the vapor control system trunk line shall not exceed 0.5 lb/day. [District Rule 2201]
9. VOC emission rate from vapor control system shall not exceed 0.3 lb/day. [District Rule 2201]
10. This tank shall be fully enclosed and maintained in a leak-free condition. [District Rules 2201 and 4623]
11. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]
12. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rules 2201 and 4623]
13. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]
14. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623]
15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]
16. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623]
17. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623]
18. Upon detection of a gas leak, the operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623]
19. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

20. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623]
21. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623]
22. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623]
23. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rule 4623]
24. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rule 4623]
25. Hydrocarbon composition of gas combusted in heater shall be determined at startup and annually thereafter using gas chromatographic analyses ASTM D-1945-96, ASTM D-3588-98, GPA 2145-94 and GPA 2261-00. [District Rules 1070 and 2010]
26. Permittee shall determine sulfur content of gas combusted in heater for eight consecutive weeks upon startup. After demonstrating compliance for eight consecutive weeks testing may be conducted on a quarterly basis. Weekly gas analysis shall be performed using Draeger tubes and quarterly analysis using ASTM method D3246 or double GC for H<sub>2</sub>S and mercaptans. Sulfur content of waste gas shall be measured within one day of restarting unit if the unit has not been in use for more than 7 days. [District Rules 1081 and 2201]
27. Permittee shall maintain records of the hydrocarbon composition and sulfur contents of natural/vapor control gas to qualify for permit exemption of heater. [District Rule 1070 and 2020]
28. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 1070 and 4623]
29. ATC shall be implemented concurrently with or subsequent to ATCs S-3187-20-0 and '-27-0. [District Rule 2201]



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-3187-25-1

**ISSUANCE DATE:** 09/20/2012

**LEGAL OWNER OR OPERATOR:** PACIFIC ENERGY RESOURCES, INC.  
**MAILING ADDRESS:** 4900 CALIFORNIA AVE, TOWER B-210  
BAKERSFIELD, CA 93309

**LOCATION:** HEAVY OIL WESTERN  
CA

**SECTION:** 35 **TOWNSHIP:** 28S **RANGE:** 20E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF THERMALLY ENHANCED OIL RECOVERY (TEOR) OPERATION SERVING UP TO 50 STEAM ENHANCED WELLS SERVED BY A CASING GAS COLLECTION SYSTEM CONNECTED TO TANK VAPOR CONTROL SYSTEM LISTED ON S-3187-20, AND VENTED TO STEAM GENERATOR S-3187-19, FLARE S-3187-24, OR PERMIT EXEMPT HEATER(S): INCLUDE STEAM GENERATOR S-3187-27 AS ADDITIONAL COMBUSTION DEVICE

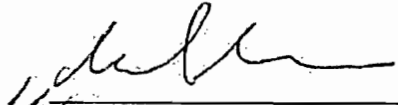
### CONDITIONS

1. Emissions rate of VOC associated with the fugitive emissions from TEOR system and ancillary equipment shall not exceed 2.9 lb/day. [District Rule 2201]
2. Permittee shall maintain records of the date and well identification where steam injection or well stimulation occurs, current list of all thermally enhanced production wells associated with this operation, leak inspection results, and accurate fugitive component counts of components in gas service and resulting emissions calculated using the emission factors in the "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", Table IV-2c, "Oil and Gas Production Screening Value Ranges (< 10,000 ppmv) Emission Factors". [District Rules 2201 and 4401]
3. Gas leaks exceeding 10,000 ppmv are a violation of this permit. [District Rule 2201]
4. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401 3.20]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO



DAVID WARNER, Director of Permit Services

S-3187-25-1 Sep 20 2012 10:19AM - EDGEHLR : Joint Inspection NOT Required

5. Components serving the produced fluid line, pressure relief devices, pumps, compressors, components used exclusively in vacuum service, one-half inch nominal or less stainless steel tube fittings, components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight or less ( 10 wt.%) as determined by the test methods in Section 6.3.4 of District Rule 4401 are subject to leak standards and I&M requirements of District Rule 4401. [Public Resources Code 21000-21177: California Environmental Quality Act and District Rule 4401]
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 requirements of District Rule 4401. [District Rule 4401]
7. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. [District Rule 4401]
8. An operator shall not operate a steam-enhanced crude oil production well unless either of the following two conditions are met: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids is connected to a VOC collection and control system as defined in Section 3.0 of this Rule or 2) the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0. [District Rule 4401]
9. There shall be no open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401]
10. There shall be no components with a major liquid leak as defined in Section 3.20.2 of Rule 4401. [District Rule 4401]
11. There shall be no components with a gas leak of greater than 50,000 ppmv. [District Rule 4401]
12. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401]
13. No leaking components (as defined in Section 5.2.2 of Rule 4401) may be used unless they have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5. [District Rule 4401]
14. Each hatch shall be closed at all times except during attended repair, replacement, or maintenance operations, providing such activities are done as expeditiously as possible with minimal spillage or material and VOC emissions into the atmosphere. [District Rule 4401]
15. The operator shall comply with the requirements of Section 6.7 if there is any change in the description of major components or critical components. [District Rule 4401]
16. Unless otherwise specified in Section 5.4, an operator shall perform all component inspections and gas leak measurements pursuant to the requirements of Section 6.3.3. [District Rule 4401]
17. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 at least once every year. [District Rule 4401]
18. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 4 of this Rule. [District Rule 4401]

CONDITIONS CONTINUE ON NEXT PAGE



19. An operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: 1) An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. 2) Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 4 of this Rule. [District Rule 4401]
20. The operator shall also perform the following inspections: 1) An operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. An operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. 2) An operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service, and 3) Except for PRDs subject to the requirements of Section 5.8.4.1 of this Rule, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401]
21. Components located in unsafe areas shall be inspected and repaired at the next process unit turnaround and inaccessible components shall be inspected at least annually. [District Rule 4401]
22. A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401]
23. Upon detection of a leak, an operator shall affix a readily visible weatherproof tag to that leaking component that includes the following information: 1) The date and time of leak detection; 2) The date and time of the leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major or minor liquid leak; and 5) Whether the component is an essential component, and unsafe-to-monitor component, or a critical component. [District Rule 4401]
24. The tag shall remain affixed to the leaky component until all the following requirements are met: 1) The component is repaired or replaced, 2) The component is re-inspected as set forth in Section 6.3, and 3) The component is found to be in compliance with this Rule. [District Rule 4401]
25. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401]
26. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.9.7, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0, an operator shall comply with at least one of the following three requirements as soon as practicable but not later than the time period specified in Table 4: 1) Repair or replace the leaking component, 2) Vent the leaking component to a VOC collection and control system as defined in Section 3.0, or 3) Remove the leaking component from operation. [District Rule 4401]
27. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401]
28. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 4. [District Rule 4401]
29. The time of the initial leak detection shall be the start of the repair period specified in Table 4. [District Rule 4401]
30. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401]
31. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401]

CONDITIONS CONTINUE ON NEXT PAGE

32. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401]
33. The operator of any steam-enhanced crude oil production well shall maintain an inspection log pursuant to Section 6.4 of Rule 4401. [District Rule 4401]
34. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration [District Rule 4401]
35. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401]
36. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401]
37. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare. [District Rule 4401]
38. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: Conduct an initial TVP testing of the produced fluid in each gauge tank not later than June 14, 2007. Thereafter, an operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401]
39. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401]
40. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401]
41. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401]
42. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401]

CONDITIONS CONTINUE ON NEXT PAGE

43. The operator shall maintain an inspection log in which the operator records at least all of the following for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type, 2) The location, type and name or description of each leaking component and description of any unit where the leaking component is found, 3) The date of leak detection and the method of leak detection, 4) For gaseous leaks, the leak concentration in ppmv and, for liquids leaks, whether the leak is major or minor, 5) The date of repair, replacement or removal from operation of leaking components, 6) The identity and location of essential components and critical components as defined in this Rule, found leaking, that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than 1 year after detection, whichever comes earlier, 8) The date or re-inspection and the leak concentration in ppmv after the component is repaired or replaced, 9) The inspectors name, business mailing address, and business telephone number, and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401]
44. The operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures as necessary. [District Rule 4401]
45. By January 30 of each year, an operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to an existing Operator Management Plan. [District Rule 4401]
46. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2520 and 4401]
47. The crude oil production wells associated with this unit do not have production enhanced by in-situ combustion. Therefore, the requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520]
48. ATC shall be implemented concurrently with or subsequent to ATCs S-3187-25-0 and '-27-0. [District Rule 2201]



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-3187-27-0

**ISSUANCE DATE:** 09/20/2012

**LEGAL OWNER OR OPERATOR:** PACIFIC ENERGY RESOURCES, INC.  
**MAILING ADDRESS:** 4900 CALIFORNIA AVE, TOWER B-210  
BAKERSFIELD, CA 93309

**LOCATION:** HEAVY OIL WESTERN  
CA

**SECTION:** 35 **TOWNSHIP:** 28S **RANGE:** 20E

**EQUIPMENT DESCRIPTION:**

85.0 MMBTU/HR NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE 4231 ULTRA-LOW NOX BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION (FGR) SYSTEM (CHICO-MARTINEZ LEASE)

### CONDITIONS

1. This unit shall be equipped with horizontal convection section with at least 235 square feet of bare tube surface area (or thermodynamically equivalent number of square feet of finned tube) per MMBtu/hr of heat input and variable frequency drive high efficiency electrical motors driving the blower and water pump. Documentation showing this unit is so equipped shall be retained on site. [Public Resources Code 21000-21177: California Environmental Quality Act]
2. The unit shall always operate at least 900 feet away from the nearest property boundary line. [District Rule 4102]
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
6. Natural gas and/or TEOR and TVR gas combusted in this unit shall have a sulfur content no greater than 1 gr S/100 scf. [District Rules 2201 and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO



DAVID WARNER, Director of Permit Services  
S-3187-27-g, Sep 20 2012 10:19AM - EDGEHLR - Joint Inspection NOT Required

7. Permittee shall test within 60 days of equipment startup, and annually thereafter, the sulfur content of noncertified (non-PUC/FERC regulated) fuel gas combusted in steam generator using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rules 2520, 9.3.2 and 4320]
8. Emissions rates from unit shall not exceed any of the following limits: 7 ppmv NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.0085 lb-NO<sub>x</sub>/MMBtu, 0.0076 lb-PM<sub>10</sub>/MMBtu, 100 ppmv CO @ 3% O<sub>2</sub> or 0.074 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4301, 4305, 4306, 4320, and 40 CFR 60.43c(e)(1)]
9. A source test to demonstrate compliance with NO<sub>x</sub> and CO emission limits shall be performed within 60 days of initial startup of this unit. [District Rules 2201 and 4320]
10. Source testing to measure NO<sub>x</sub> 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, 4306 and 4320]
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. Unless otherwise 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 4320. [District Rules 4305, 4306 and 4320]
12. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]
14. 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]
15. 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, 5.5.5, 4306, 5.5.5, and 4320]
16. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O<sub>2</sub>) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO<sub>x</sub> - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H<sub>2</sub>S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 1081, 4305, 4306, 4320, and 4351]
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320]
18. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320]

19. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320]
20. All NO<sub>x</sub>, CO, and O<sub>2</sub> emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320]
21. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320]
22. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]
23. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320]
24. Permittee shall maintain records of noncertified (non-PUC/FERC regulated) fuel gas sulfur compound measurements. [District Rules 2201 and 4320]
25. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320]
26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320]