



MAR 07 2011

John E. Haley
Aera Energy LLC
P.O. Box 11164
Bakersfield, CA 93389

**Re: Notice of Minor Title V Permit Modification
District Facility # S-1547
Project # S-1085247**

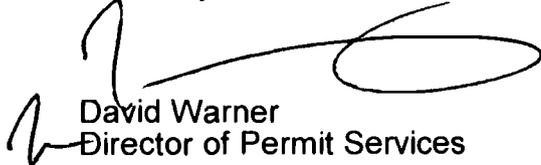
Dear Mr. Haley:

Enclosed is the District's analysis of your application for minor Title V permit modification for the facility identified above. You proposed a Title V minor permit modification to incorporate recently issued Authorities to Construct S-1547-359-19 and '1141-0 into the Title V operating permit. The applicant proposes to install a degassing vessel and the vapors will be captured and discharged to the S-1547-359 casing vent recovery system.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued Authorities to Construct S-1547-359-19 and '1141-0, emission increases, application, and previous Title V permit. This project will be subject to a 45-day EPA commenting period prior to the District taking final action.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. 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 95358-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1890 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34846 Flyover Court
Bakersfield, CA 93308-9725
Tel: 861-392-5500 FAX: 661-392-5585



MAR 07 2011

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-1547
Project # S-1085247

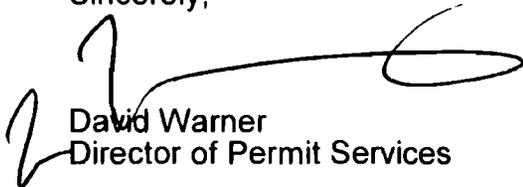
Dear Mr. Rios:

Enclosed for you to review is an application for minor Title V permit modification for the facility identified above. Aera Energy LLC is proposing a Title V minor permit modification to incorporate the recently issued Authorities to Construct S-1547-359-19 and '1141-0 into the Title V operating permit. The applicant proposes to install a degassing vessel and the vapors will be captured and discharged to the S-1547-359 casing vent recovery system.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued Authorities to Construct S-1547-359-19 and '1141-0, emission increases, application, and previous Title V permit. Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. 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-1085247

Engineer: Stanley Tom
Date: September 21, 2010

Facility Number: S-1547
Facility Name: Aera Energy LLC
Mailing Address: P.O. Box 11164
Bakersfield, CA 93389

Contact Name: John E. Haley
Phone: (661) 665-7424

Responsible Official: J. D. O'Connor
Title: Process Supervisor

I. PROPOSAL

Aera Energy LLC is proposing a Title V minor permit modification to incorporate the recently issued ATCs S-1547-359-19 and '1141-0 into the Title V operating permit. The applicant proposes to install a degassing vessel and the vapors will be captured and discharged to the S-1547-359 casing vent recovery system.

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 in Kern County, CA
Sections 1, 2, 3, 4, 10, 11, 12 Township 29S, Range 21 E
Sections 33, 34, 35 Township 28S, Range 21 E

III. EQUIPMENT DESCRIPTION

S-1547-359-27: VAPOR COLLECTION AND CONTROL SYSTEM SERVING
1657 THERMALLY ENHANCED WELLS IN SECTIONS 1, 2, 3, 4, 10, 11, 12 OF
T29S, R21E, SECTIONS 33, 34, 35 OF T28S, R21 E

S-1547-1141-2: PRODUCED WATER HYDROGEN SULFIDE DEGASSING OPERATION WITH 51,000 GALLON DEGASSING VESSEL AND VAPOR CONTROL SYSTEM INCLUDING COMPRESSOR(S), PUMP(S), KNOCKOUT VESSEL(S), AND FIN-FAN HEAT EXCHANGER(S) (DEHY 2)

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

S-1547-359-27:

The modification will allow the casing vent recovery system to receive vapors from degassing vessel listed on S-1547-1141.

S-1547-1141-2:

Permit condition 1 was added to the proposed Permit to Operate to ensure the opacity limits are not exceeded.

Permit condition 2 was added to the proposed Permit to Operate to specify how the vapors will be controlled.

Permit condition 3 was added to the proposed Permit to Operate to specify the VOC content of the vapors.

Permit condition 4 was added to the proposed Permit to Operate to specify the VOC content testing requirements.

Permit condition 5 was added to the proposed Permit to Operate to specify the VOC content test methods.

Permit condition 6 was added to the proposed Permit to Operate to specify recordkeeping requirements.

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-1547-359-27 and '1141-2
- B. Authorities to Construct No. S-1547-359-19 and '1141-0
- C. Emissions Increases
- D. Application
- E. Previous Title V Operating Permit No S-1547-359-26

ATTACHMENT A

**Proposed Modified Title V Operating Permit No.
(S-1547-359-27 and '1141-2)**

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1547-359-27

EXPIRATION DATE: 05/31/2007

SECTION: 33 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

VAPOR COLLECTION AND CONTROL SYSTEM SERVING 1657 THERMALLY ENHANCED WELLS IN SECTIONS 1, 2, 3, 4, 10, 11, 12 OF T29S, R21E, SECTIONS 33, 34, 35 OF T28S, R21E

PERMIT UNIT REQUIREMENTS

1. Vapor collection and control system can receive vapors from tank vapor control system S-1547-888, TEOR system S-1547-1079, free water knockout vessel S-1547-1104, and degassing operation S-1547-1141. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Vapor collection system shall include 2 sulfur scrubbing systems, using District approved scrubbing agents. Scrubber(s) may be by-passed only when incinerating vapors in scrubbed steam generator S-1547-47. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Scrubbed gases shall be incinerated in steam generators S-1547-726, '-733, '-735 through '-738, '-742 through '-749, '-760, '-761, '-762, '-803, '-834, '-835, and '-837. Alternatively, the wells can be operated with the casing vents closed. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Unscrubbed vapor may be routed to the Sec. 32 Belridge gas plant (S-1543-4) via the Del Sur gas gathering system (compressors S-1578-433, '-434, '-435 and emergency flare S-1548-134). [District Rule 2201] Federally Enforceable Through Title V Permit
5. Vapor collection system shall be equipped with heat exchangers, gas/liquid separators, 2 gas compressors, compressor discharge knock-outs, and liquid pumps. [District Rule 2201] Federally Enforceable Through Title V Permit
6. All produced fluids from any well served by vapor collection system which has had the casing vent closed shall be handled only in closed production equipment served by a 99% effective vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Water/VOCs condensate from all liquid knockout drums shall be pumped to production manifold, recycled to production wells for disposal, or pumped to vapor controlled storage tanks. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The regeneration vessel air vent at each sulfur scrubbing system may be vented to atmosphere provided daily emissions from each vent shall not exceed 2.0 lbs VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Permittee shall determine VOC content of the exhaust at each regeneration vessel air vent semi-annually. If a semi-annual VOC content analysis fails to show compliance, the regeneration vessel air vents shall be tested once per week. If compliance with the VOC content limit has been demonstrated for eight consecutive weeks, then the VOC content testing frequency shall revert to semi-annually. Gas analysis shall be performed using ASTM D-3588. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Total mass flowrate of sulfur compounds in gas leaving sulfur removal systems shall not exceed 336.92 lb/day as sulfur. [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.

Facility Name: AERA ENERGY LLC

Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

S-1547-359-27 : Sep 23 2010 1:32PM -- TOMS

11. Emissions of Volatile Organic Compounds (VOC) shall not exceed 1,888.1 lb/day (including regeneration vessel air vents). [District Rule 2201] Federally Enforceable Through Title V Permit
12. Permittee shall maintain accurate records of sulfur content and daily vapor flow rate of all uncondensed vapors sent to approved incineration devices S-1547-726, '-733, '-735 through '-738, '-742 through '-749, '-760, '-761, '-762, '-803, '-834, '-835, and '-837 for disposal. Permittee shall maintain an accurate record of the daily flow rate of unscrubbed vapor routed to the Sec. 32 Belridge gas plant, S-1543-4. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Permittee shall maintain with the permit a listing (updated each calendar year) of all steam-enhanced wells connected to the casing vent control system and such listing shall be made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
14. 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, 5.0 (as amended December 14, 2006). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
15. The annual inspection requirements of Section 5.8.1 through Section 5.8.5 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10 wt %) or less, as determined by the test methods in Section 6.3.5 of Rule 4401. [District Rule 4401 4.9] Federally Enforceable Through Title V Permit
16. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, 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 of Rule 4401. [District Rule 4401, 5.5.1 and 5.5.2] Federally Enforceable Through Title V Permit
17. An operator shall be in violation of this rule if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to Section 5.8 of Rule 4401 demonstrates that one or more of the following conditions exist at the facility: Existence of an 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 as defined by Section 5.6.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines. [District Rule 4401 5.6.2] Federally Enforceable Through Title V Permit
18. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401 3.20] Federally Enforceable Through Title V Permit
19. An operator shall be in violation of this rule if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to Section 5.8 of Rule 4401 demonstrates that one or more of the conditions in Section 5.6.2 exist at the facility: existence of a component with any of the following: a major liquid leak, a gas leak greater than 50,000 ppmv, a minor liquid leak or a minor gas leak in excess of the allowable number of leaks allowed by Table 3 of Rule 4401, or a gas leak greater than 10,000 ppmv up to 50,000 ppmv in excess of the allowable number of leaks allowed by Table 3 of Rule 4401. [District Rule 4401 5.6.2] Federally Enforceable Through Title V Permit
20. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.6.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components 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 5.9 of Rule 4401. [District Rule 4401 5.7.1] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401 5.7.2] Federally Enforceable Through Title V Permit
22. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401 5.7.3] Federally Enforceable Through Title V Permit
23. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401 5.8.1] Federally Enforceable Through Title V Permit
24. 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 Rule 4401. [District Rule 4401 5.8.2] Federally Enforceable Through Title V Permit
25. In addition to the inspections required by Section 5.8.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: 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. 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 Rule 4401. [District Rule 4401 5.8.3] Federally Enforceable Through Title V Permit
26. In addition to the inspections required by Sections 5.8.1, 5.8.2 and 5.8.3 of Rule 4401, operator shall perform the following: 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, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.8.4.1 of Rule 4401, 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 5.8.4] Federally Enforceable Through Title V Permit
27. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401 5.8.5] Federally Enforceable Through Title V Permit
28. 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 5.8.6] Federally Enforceable Through Title V Permit
29. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401 5.9.1] Federally Enforceable Through Title V Permit
30. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and 5.9.2.3 of Rule 4401, or the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.9.2] Federally Enforceable Through Title V Permit
31. 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 5.9.3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

32. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.9.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 4 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401 5.9.4] Federally Enforceable Through Title V Permit
33. 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 5.9.4] Federally Enforceable Through Title V Permit
34. 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 of Rule 4401. [District Rule 4401 5.9.5] Federally Enforceable Through Title V Permit
35. The time of the initial leak detection shall be the start of the repair period specified in Table 4 of Rule 4401. [District Rule 4401 5.9.6] Federally Enforceable Through Title V Permit
36. 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 5.9.7] Federally Enforceable Through Title V Permit
37. 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 6.1.1] Federally Enforceable Through Title V Permit
38. 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 6.1.3] Federally Enforceable Through Title V Permit
39. The results of source tests conducted pursuant to Section 4.6.2 of Rule 4401 shall be submitted to the APCO within 60 days after the completion of the source test. [District Rule 4401 6.1.4] Federally Enforceable Through Title V Permit
40. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401 6.1.5] Federally Enforceable Through Title V Permit
41. Records 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 shall be maintained. [District Rule 4401 6.1.6] Federally Enforceable Through Title V Permit
42. 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 6.1.7] Federally Enforceable Through Title V Permit
43. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401 6.1.8] Federally Enforceable Through Title V Permit
44. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.11] Federally Enforceable Through Title V Permit
45. 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 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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46. 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 6.2.2] Federally Enforceable Through Title V Permit
47. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 for a vapor control system which does not have a VOC destruction device. [District Rule 4401 6.2.3] Federally Enforceable Through Title V Permit
48. An operator seeking approval pursuant to Section 6.2.2 or Section 6.2.3 shall submit a written request and supporting information to the APCO. The District shall evaluate the request and if approved by the APCO, the District shall provide EPA and ARB with a copy of the evaluation and shall request EPA and ARB approval. The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request. [District Rule 4401 6.2.4] Federally Enforceable Through Title V Permit
49. 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 6.3.1] Federally Enforceable Through Title V Permit
50. 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 6.3.2] Federally Enforceable Through Title V Permit
51. 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 6.3.3] Federally Enforceable Through Title V Permit
52. 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 6.3.5] Federally Enforceable Through Title V Permit
53. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, 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 one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, 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 6.4] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

54. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
55. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended December 17, 1992), formerly District Rule 465.1, excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
56. 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, 13.2] Federally Enforceable Through Title V Permit
57. All records of required monitoring data and support information shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

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

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1547-1141-2

EXPIRATION DATE: 05/31/2007

SECTION: 2 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

PRODUCED WATER HYDROGEN SULFIDE DEGASSING OPERATION WITH 51,000 GALLON DEGASSING VESSEL AND VAPOR CONTROL SYSTEM INCLUDING COMPRESSOR(S), PUMP(S), KNOCKOUT VESSEL(S), AND FIN-FAN HEAT EXCHANGER(S) (DEHY 2)

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. Vapor from this operation shall only be sent to well vent vapor collection and control system listed in permit S-1547-359. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vessel and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly gas sampling of vessel and vapor control system piping and components. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

ATTACHMENT B

Authorities to Construct No.
(S-1547-359-19 and '1141-0)



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-359-19

ISSUANCE DATE: 06/14/2007

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
 BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
 KERN COUNTY, CA

SECTION: 33 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF VAPOR COLLECTION AND CONTROL SYSTEM SERVING 1657 THERMALLY ENHANCED WELLS IN SECTIONS 1, 2, 3, 4, 10, 11, 12 OF T29S, R21E, SECTIONS 33, 34, 35 OF T28S, R21E: AUTHORIZE RECEIPT OF VAPORS FROM PERMIT UNIT S-1547-1141

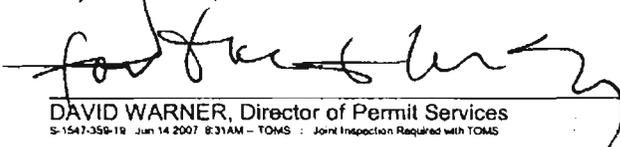
CONDITIONS

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. Vapor collection and control system can receive vapors from tank vapor control system S-1547-888, TEOR system S-1547-1079, free water knockout vessel S-1547-1104, and degassing operation S-1547-1141. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Vapor collection system shall include 2 sulfur scrubbing systems using District approved scrubbing agents. Scrubber(s) may be by-passed only when incinerating vapors in scrubbed steam generator S-1547-47. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Scrubbed gases shall be incinerated in steam generators S-1547-726, '-733, '-735 through '-738, '-742 through '-749, '-760, '-761, '-762, '-803, '-834, '-835, and '-837. Alternatively, the wells can be operated with the casing vents closed. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Vapor collection system shall be equipped with heat exchangers, gas/liquid separators with vane-type mist eliminators, 2 gas compressors, compressor discharge knock-outs, and liquid pumps. [District NSR Rule] 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-1547-359-19 Jun 14 2007 8:31AM - TOMS : Joint Inspection Required with TOMS

6. All produced fluids from any well served by vapor collection system which has had the casing vent closed shall be handled only in closed production equipment served by a 99% effective vapor control system. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Water/VOCs condensate from all liquid knockout drums shall be pumped to production manifold, recycled to production wells for disposal, or pumped to vapor controlled storage tanks. [District NSR Rule] Federally Enforceable Through Title V Permit
8. The regeneration vessel air vent at each sulfur scrubbing system may be vented to atmosphere provided daily emissions from each vent shall not exceed 2.0 lbs VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Permittee shall determine VOC content of the exhaust at each regeneration vessel air vent semi-annually. If a semi-annual VOC content analysis fails to show compliance, the regeneration vessel air vents shall be tested once per week. If compliance with the VOC content limit has been demonstrated for eight consecutive weeks, then the VOC content testing frequency shall revert to semi-annually. Gas analysis shall be performed using ASTM D-3588. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Total mass flowrate of sulfur compounds in gas leaving sulfur removal systems shall not exceed 336.92 lb/day as sulfur. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Emissions of Volatile Organic Compounds (VOC) shall not exceed 1,888.1 lb/day (including regeneration vessel air vents). [District NSR Rule] Federally Enforceable Through Title V Permit
12. Permittee shall maintain accurate records of sulfur content and daily vapor flow rate of all uncondensed vapors sent to approved incineration devices(S-1547-726, '-733, '-735 through '-738, '-742 through '-749, '-760, '-761, '-762, '-803, '-834, '-835, and '-837) for disposal. Such records shall be maintained readily available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Permittee shall maintain with the permit a listing (updated annually within 60 days of permit anniversary) of all steam-enhanced wells connected to the casing vent control system and such listing shall be made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
14. A leak shall be defined as a reading on a portable hydrocarbon detection instrument (calibrated with methane) in excess of 10,000 ppmv when measured in accordance with EPA Method 21. [District Rule 4401, 3.4] Federally Enforceable Through Title V Permit
15. The crude oil production from wells associated with this permit unit shall not lie within 1000 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
16. 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, 5.0 (as amended December 14, 2006). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
17. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(as amended December 16, 1993). [District Rule 1081 and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
18. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit
19. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
20. 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. This requirement does not apply to cyclic wells located on contiguous and adjacent oil production properties with less than 10 cyclic wells owned by or under the control of a company. [District Rule 4401, 5.1 and 5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. For cyclic wells located on properties with less than 10 cyclic wells and owned by a company, the uncontrolled VOC emissions from any well vent or system of well vents connected to a single control device shall be reduced by at least 50 percent. Properties shall include contiguous and adjacent oil production properties owned by or under control of the company. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit
22. Total number of leaks from the vapor collection and control system, including condensate handling, shall not exceed the number as allowed by Rule 4401 (as amended December 14, 2006) at any one time. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit
23. Units consisting of more than 500 wells shall not exceed one leak detected for each 20 wells tested with a minimum of 50 wells tested. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit
24. The operator, upon detection of a leaking component, shall affix to that component 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
25. The 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. Failure to repair a leak after a 10-day extension constitutes a violation of this rule. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
26. 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
27. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by ARB certified contractors during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are burned in fuel burning equipment or in a smokeless open flare and the source's Operating Permit contains adequate periodic monitoring to ensure the source meets 99% control efficiency. [District Rule 4401, 5.1, 5.2 and 6.2.1] Federally Enforceable Through Title V Permit
28. The control efficiency of systems designed to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on recognized emission factors for components and number of components; and the efficiency of destruction devices determined by EPA Method 25, 25a, or 25b as applicable. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
29. VOC content shall be determined using ASTM Method E168-67, E169-63, or E260-73 as applicable. Halogenated exempt compounds shall be determined by ARB Method 422. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
30. The operator shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. 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 centimeter or less from the surface of the component interface. [District Rules 2520, 9.4.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit
31. 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] Federally Enforceable Through Title V Permit
32. Unless waived by the District, the operator shall maintain source test records which show that the control efficiency requirements have been satisfied. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended December 17, 1992), formerly District Rule 465.1, excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
35. 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, 13.2] Federally Enforceable Through Title V Permit
36. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1141-0

ISSUANCE DATE: 06/14/2007

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: 2 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:

PRODUCED WATER HYDROGEN SULFIDE DEGASSING OPERATION WITH 51,000 GALLON DEGASSING VESSEL AND VAPOR CONTROL SYSTEM INCLUDING COMPRESSOR(S), PUMP(S), KNOCKOUT VESSEL(S), AND FIN-FAN HEAT EXCHANGER(S) (DEHY 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] Federally Enforceable Through Title V Permit
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
4. Vapor from this operation shall only be sent to well vent vapor collection and control system listed in permit S-1547-359. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of vessel and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling of vessel and vapor control system piping and components. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] 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-1547-1141-0 Jun 14 2007 8:31AM - TOMS Joint Inspection Required with TOMS

Southern Regional Office • 2700 M Street, Suite 275 • Bakersfield, CA 93301-2370 • (661) 326-6900 • Fax (661) 326-6985

7. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
8. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

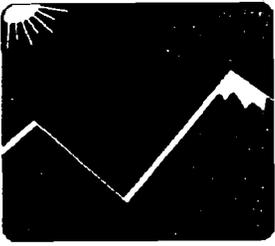
ATTACHMENT C

Emissions Increases

	SSIPE (lb/yr)				
	NOx	VOC	CO	SOx	PM10
S-1547-359-19	0	0	0	0	0
S-1547-1141-0	0	0	0	0	0
TOTAL	0	0	0	0	0

ATTACHMENT D

Application



San Joaquin Valley Unified Air Pollution Control District

APPLICATION FOR TITLE V MODIFICATION:

Received
NOV 24 2008
Permits Srvc
SJVAPCD

- ADMINISTRATIVE AMENDMENT
 MINOR MODIFICATION
 SIGNIFICANT MODIFICATION

1. PERMIT TO BE ISSUED TO: <p style="text-align: center;">Aera Energy LLC</p>	
2. MAILING ADDRESS: STREET/P.O. BOX: P.O. Box 11164 CITY: Bakersfield STATE: CA 9-DIGIT ZIP CODE: 93389-1164	
3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED: STREET: Heavy Oil Western Stationary Source CITY: _____ SW 1/4 SECTION 2 TOWNSHIP 29S RANGE 21E	INSTALLATION DATE:
4. GENERAL NATURE OF BUSINESS: Oil and Natural Gas Production	
5. EQUIPMENT FOR WHICH APPLICATION IS MADE (Include Permit Nos.): Implement Authorities to Construct #S-1547-359-19 and S-1547-1141-0 into the Title V permit for the Heavy Oil Western Stationary Source.	
<small>(Use additional sheets if necessary)</small>	
6. DO YOU REQUEST A CERTIFICATE OF CONFORMITY WITH THIS ACTION? <input type="checkbox"/> YES <input checked="" 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: Environmental Engineer
9. TYPE OR PRINT NAME OF APPLICANT/CONTACT: John E. Haley	DATE: 11/17/08
10. FAX NUMBER: (661) 665-7437	TELEPHONE NUMBER: (661) 665-7424

FOR APCD USE ONLY:

DATE STAMP	FILING FEE RECEIVED: \$ _____ / DATE PAID: _____ PROJECT NO.: S-1085247 FACILITY REGION & ID: S-1547
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**San Joaquin Valley
Unified Air Pollution Control District**

TITLE V COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

COMPANY NAME: Aera Energy LLC	FACILITY ID: S-1547
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: Aera Energy LLC	
3. Agent to the Owner: N/A	

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

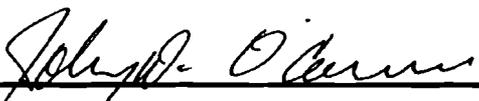
- Based on information and belief formed after reasonable inquiry, the emission units identified in this application will continue to comply with the applicable federal requirement(s) which the emission units are in compliance.

- Based on information and belief formed after reasonable inquiry, the emission units 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

11/17/08
Date

J.D. O'Connor
Name of Responsible Official (please print)

Process Supervisor
Title of Responsible Official (please print)

ATTACHMENT E

Previous Title V Operating Permit No
S-1547-359-26

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1547-359-26

EXPIRATION DATE: 05/31/2007

SECTION: 33 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

VAPOR COLLECTION AND CONTROL SYSTEM SERVING 1657 THERMALLY ENHANCED WELLS IN SECTIONS 1, 2, 3, 4, 10, 11, 12 OF T29S, R21E, SECTIONS 33, 34, 35 OF T28S, R21E

PERMIT UNIT REQUIREMENTS

1. Vapor collection and control system can receive vapors from tank vapor control system S-1547-888, TEOR system S-1547-1079, free water knockout vessel S-1547-1104, and degassing operation S-1547-1141. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Vapor collection system shall include 2 sulfur scrubbing systems, using District approved scrubbing agents. Scrubber(s) may be by-passed only when incinerating vapors in scrubbed steam generator S-1547-47. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Scrubbed gases shall be incinerated in steam generators S-1547-726, '-733, '-735 through '-738, '-742 through '-749, '-760, '-761, '-762, '-803, '-834, '-835, and '-837. Alternatively, the wells can be operated with the casing vents closed. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Unscrubbed vapor may be routed to the Sec. 32 Beldridge gas plant (S-1543-4) via the Del Sur gas gathering system (compressors S-1578-433, '-434, '-435 and emergency flare S-1548-134). [District Rule 2201] Federally Enforceable Through Title V Permit
5. Vapor collection system shall be equipped with heat exchangers, gas/liquid separators, 2 gas compressors, compressor discharge knock-outs, and liquid pumps. [District Rule 2201] Federally Enforceable Through Title V Permit
6. All produced fluids from any well served by vapor collection system which has had the casing vent closed shall be handled only in closed production equipment served by a 99% effective vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Water/VOCs condensate from all liquid knockout drums shall be pumped to production manifold, recycled to production wells for disposal, or pumped to vapor controlled storage tanks. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The regeneration vessel air vent at each sulfur scrubbing system may be vented to atmosphere provided daily emissions from each vent shall not exceed 2.0 lbs VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Permittee shall determine VOC content of the exhaust at each regeneration vessel air vent semi-annually. If a semi-annual VOC content analysis fails to show compliance, the regeneration vessel air vents shall be tested once per week. If compliance with the VOC content limit has been demonstrated for eight consecutive weeks, then the VOC content testing frequency shall revert to semi-annually. Gas analysis shall be performed using ASTM D-3588. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Total mass flowrate of sulfur compounds in gas leaving sulfur removal systems shall not exceed 336.92 lb/day as sulfur. [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.

11. Emissions of Volatile Organic Compounds (VOC) shall not exceed 1,888.1 lb/day (including regeneration vessel air vents). [District Rule 2201] Federally Enforceable Through Title V Permit
12. Permittee shall maintain accurate records of sulfur content and daily vapor flow rate of all uncondensed vapors sent to approved incineration devices S-1547-726, '-733, '-735 through '-738, '-742 through '-749, '-760, '-761, '-762, '-803, '-834, '-835, and '-837 for disposal. Permittee shall maintain an accurate record of the daily flow rate of unscrubbed vapor routed to the Sec. 32 Belridge gas plant, S-1543-4. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Permittee shall maintain with the permit a listing (updated each calendar year) of all steam-enhanced wells connected to the casing vent control system and such listing shall be made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
14. 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, 5.0 (as amended December 14, 2006). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
15. The annual inspection requirements of Section 5.8.1 through Section 5.8.5 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10 wt %) or less, as determined by the test methods in Section 6.3.5 of Rule 4401. [District Rule 4401 4.9] Federally Enforceable Through Title V Permit
16. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, 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 of Rule 4401. [District Rule 4401, 5.5.1 and 5.5.2] Federally Enforceable Through Title V Permit
17. An operator shall be in violation of this rule if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to Section 5.8 of Rule 4401 demonstrates that one or more of the following conditions exist at the facility: Existence of an 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 as defined by Section 5.6.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines. [District Rule 4401 5.6.2] Federally Enforceable Through Title V Permit
18. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401 3.20] Federally Enforceable Through Title V Permit
19. An operator shall be in violation of this rule if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to Section 5.8 of Rule 4401 demonstrates that one or more of the conditions in Section 5.6.2 exist at the facility: existence of a component with any of the following: a major liquid leak, a gas leak greater than 50,000 ppmv, a minor liquid leak or a minor gas leak in excess of the allowable number of leaks allowed by Table 3 of Rule 4401, or a gas leak greater than 10,000 ppmv up to 50,000 ppmv in excess of the allowable number of leaks allowed by Table 3 of Rule 4401. [District Rule 4401 5.6.2] Federally Enforceable Through Title V Permit
20. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.6.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components 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 5.9 of Rule 4401. [District Rule 4401 5.7.1] Federally Enforceable Through Title V Permit

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21. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401 5.7.2] Federally Enforceable Through Title V Permit
22. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401 5.7.3] Federally Enforceable Through Title V Permit
23. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401 5.8.1] Federally Enforceable Through Title V Permit
24. 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 Rule 4401. [District Rule 4401 5.8.2] Federally Enforceable Through Title V Permit
25. In addition to the inspections required by Section 5.8.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: 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. 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 Rule 4401. [District Rule 4401 5.8.3] Federally Enforceable Through Title V Permit
26. In addition to the inspections required by Sections 5.8.1, 5.8.2 and 5.8.3 of Rule 4401, operator shall perform the following: 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, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.8.4.1 of Rule 4401, 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 5.8.4] Federally Enforceable Through Title V Permit
27. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401 5.8.5] Federally Enforceable Through Title V Permit
28. 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 5.8.6] Federally Enforceable Through Title V Permit
29. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401 5.9.1] Federally Enforceable Through Title V Permit
30. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and 5.9.2.3 of Rule 4401, or the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.9.2] Federally Enforceable Through Title V Permit
31. 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 5.9.3] Federally Enforceable Through Title V Permit

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32. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.9.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 4 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401 5.9.4] Federally Enforceable Through Title V Permit
33. 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 5.9.4] Federally Enforceable Through Title V Permit
34. 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 of Rule 4401. [District Rule 4401 5.9.5] Federally Enforceable Through Title V Permit
35. The time of the initial leak detection shall be the start of the repair period specified in Table 4 of Rule 4401. [District Rule 4401 5.9.6] Federally Enforceable Through Title V Permit
36. 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 5.9.7] Federally Enforceable Through Title V Permit
37. 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 6.1.1] Federally Enforceable Through Title V Permit
38. 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 6.1.3] Federally Enforceable Through Title V Permit
39. The results of source tests conducted pursuant to Section 4.6.2 of Rule 4401 shall be submitted to the APCO within 60 days after the completion of the source test. [District Rule 4401 6.1.4] Federally Enforceable Through Title V Permit
40. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401 6.1.5] Federally Enforceable Through Title V Permit
41. Records 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 shall be maintained. [District Rule 4401 6.1.6] Federally Enforceable Through Title V Permit
42. 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 6.1.7] Federally Enforceable Through Title V Permit
43. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401 6.1.8] Federally Enforceable Through Title V Permit
44. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.11] Federally Enforceable Through Title V Permit
45. 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 6.2.1] Federally Enforceable Through Title V Permit

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46. 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 6.2.2] Federally Enforceable Through Title V Permit
47. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 for a vapor control system which does not have a VOC destruction device. [District Rule 4401 6.2.3] Federally Enforceable Through Title V Permit
48. An operator seeking approval pursuant to Section 6.2.2 or Section 6.2.3 shall submit a written request and supporting information to the APCO. The District shall evaluate the request and if approved by the APCO, the District shall provide EPA and ARB with a copy of the evaluation and shall request EPA and ARB approval. The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request. [District Rule 4401 6.2.4] Federally Enforceable Through Title V Permit
49. 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 6.3.1] Federally Enforceable Through Title V Permit
50. 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 6.3.2] Federally Enforceable Through Title V Permit
51. 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 6.3.3] Federally Enforceable Through Title V Permit
52. 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 6.3.5] Federally Enforceable Through Title V Permit
53. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, 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 one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, 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 6.4] Federally Enforceable Through Title V Permit

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54. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
55. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended December 17, 1992), formerly District Rule 465.1, excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
56. 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, 13.2] Federally Enforceable Through Title V Permit
57. All records of required monitoring data and support information shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

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