



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT



JUN 11 2012

Mr. Jerry Frost  
Vintage Production California, LLC  
9600 Ming Avenue  
Bakersfield, CA 93309

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)  
District Facility # S-1326  
Project # S-1121201**

Dear Mr. Frost:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. The applicant is requesting that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. Vintage is proposing to modify the TEOR operation by increasing the well count to 1,085 wells, expanding the operation into Sections: 24, 25 and 26, Township: 28S, Range: 27E, and removing Rule 4401 Inspection and Re-inspection conditions (per exemption Rule 4401, Section 4.7)

After addressing any EPA comments made during the 45-day comment period, the Authority to Construct will be issued to the facility with a Certificate of Conformity. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Warner", with a long horizontal flourish extending to the right.

David Warner  
Director of Permit Services

DW: SD/cm

Enclosures



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

JUN 11 2012



HEALTHY AIR LIVING™

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

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)  
District Facility # S-1326  
Project # S-1121201**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for Vintage Production California, LLC (Sections: 23, 24, 25 and 26, Township: 28S, Range: 27E), which has been issued a Title V permit. Vintage Production California, LLC is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. Vintage is proposing to modify the TEOR operation by increasing the well count to 1,085 wells, expanding the operation into Sections: 24, 25 and 26, Township: 28S, Range: 27E, and removing Rule 4401 Inspection and Re-inspection conditions (per exemption Rule 4401, Section 4.7).

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authority to Construct # S-1326-287-10 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner  
Director of Permit Services

DW: ST/cm

Enclosures



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT



JUN 11 2012

Mike Tollstrup, Chief  
Project Assessment Branch  
Air Resources Board  
P O Box 2815  
Sacramento, CA 95812-2815

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)  
District Facility # S-1326  
Project # S-1121201**

Dear Mr. Tollstrup:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. The applicant is requesting that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. Vintage is proposing to modify the TEOR operation by increasing the well count to 1,085 wells, expanding the operation into Sections: 24, 25 and 26, Township: 28S, Range: 27E , and removing Rule 4401 Inspection and Re-inspection conditions (per exemption Rule 4401, Section 4.7).

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authority to Construct # S-1326-287-10 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 30-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner  
Director of Permit Services

DW: SD/cm

Enclosures



CH&SC 41700 Health Risk Assessment  
CH&SC 42301.6 School Notice  
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)  
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

### III. PROJECT LOCATION

The new wells will be located in Vintage's Heavy Oil Central Stationary Source within the Kern Front Oil Field within the Sections: 23, 24, 25 and 26, Township: 28S, Range: 27E. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

### IV. PROCESS DESCRIPTION

Steam generators are used to provide high quality steam for injection into heavy crude oil production zones. The heat added by the steam reduces the viscosity of the crude oil making it easier to produce.

Produced fluids from the TEOR operation (-287) are discharged to the tank vapor recovery system that is listed on storage tank S-1326-263.

Like all existing wells, the wells being added will produce heavy crude oil (API gravity less than 20°) and water. The new wells will also be subject to the existing requirement that all components in vapor service exclusively handle vapor streams with less than 10% by weight VOC. The components required for the tie-in of wells, valves, flanges, connections, stuffing boxes, etc. will be assigned zero emissions in accordance with District policy SSP 2015. This policy stipulates that components in heavy oil liquid service and components in vapor service with streams having less than 10% VOC will not be assessed VOC emissions.

### V. EQUIPMENT LISTING

#### Pre-project Equipment Descriptions:

S-1326-287-7: THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 305 STEAM ENHANCED PRODUCTION WELLS CONNECTED TO WELL HEAD CASING VENT VAPOR RECOVERY SYSTEM (CVR) VENTING VAPORS TO SECTION 23 TANK VAPOR RECOVERY SYSTEM (S-1326-263)

#### Proposed Modifications:

S-1326-287-10: MODIFICATION OF THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 305 STEAM ENHANCED PRODUCTION WELLS CONNECTED TO WELL HEAD CASING VENT VAPOR RECOVERY SYSTEM (CVR) VENTING VAPORS TO SECTION 23 TANK VAPOR RECOVERY SYSTEM (S-1326-263): REMOVE RULE 4401 INSPECTION

CONDITIONS, ADD 780 WELLS AND EXPAND TEOR OPERATION TO INCLUDE THE FOLLOWING LOCATIONS: SECTION 24, 25 AND 26, TOWNSHIP: 28S, RANGE: 27E

Proposed PTO Equipment Descriptions:

S-1326-287-10 : THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 1085 STEAM ENHANCED PRODUCTION WELLS CONNECTED TO WELL HEAD CASING VENT VAPOR RECOVERY SYSTEM (CVR) VENTING VAPORS TO SECTION 23 TANK VAPOR RECOVERY SYSTEM (S-1326-263)

## VI. EMISSION CONTROL TECHNOLOGY EVALUATION

The existing vapor recovery system has been shown to be very effective in controlling emissions from well head casing vents, demonstrating a VOC reduction efficiency of greater than > 99% from the uncontrolled level. The collected vapor is disposed of downhole or burned in devices approved for that purpose. There will be no change in emission control technology; therefore, no further discussion is required.

## VII. GENERAL CALCULATIONS

### A. Assumptions

- VOC content of hydrocarbons in the gas stream are < 10% by weight. In accordance with District SSP 2015 policy "Quantifying Fugitive VOC Emissions at Petroleum and SOCMI Facilities", VOC emissions are not assessed to piping and components handling vapor streams with a VOC content of 10% or less by weight and condensate streams having a water content greater than 50%. Therefore, fugitive emissions components do not emit VOCs.
- There are no emissions associated with this project and calculations are not required

## Rule 2201 New and Modified Stationary Source Review Rule

### A. Best Available Control Technology (BACT)

#### 1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions\*:

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an APE exceeding two pounds per day, and/or

- d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

\*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

**a. New emissions units – PE > 2 lb/day**

The applicant is proposing to install 780 new wells with a well head casing vent vapor recovery system with a PE less than 2 lb/day for VOC. BACT is not triggered since the PE is less than 2 lbs/day.

**b. Relocation of emissions units – PE > 2 lb/day**

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore, BACT is not triggered.

**c. Modification of emissions units – AIPE > 2 lb/day**

The existing wells and well head casing vent vapor recovery system are not being modified in this project. Therefore, BACT is not triggered.

**d. SB 288/Federal Major Modification**

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are not SB 288/Federal Major Modifications.

**B. Offsets**

**1. Offset Applicability**

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201. The facility concedes that they are above the offset threshold for VOCs. However, there are no emissions associated with his project; therefore, no offsets are required.

**C. Public Notification**

**1. Applicability**

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

**a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications**

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

**b. PE > 100 lb/day**

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant; therefore, public noticing for PE > 100 lb/day purposes is not required.

**c. Offset Threshold**

The facilities current pre-project emissions (SSPE1) are above the offset threshold for VOCs. Therefore, the Offset threshold for VOCs was not exceeded in this project. Public noticing for the project exceeding the offset threshold is not required.

**d. SSIPE > 20,000 lb/year**

As stated above, there are no emissions associated with this project; therefore, SSIPE < 20,000. Public noticing for the project exceeding the 20,000 lb/year is not required

**2. Public Notice Action**

As discussed above, this project will not result in any emissions, for any pollutant, which would subject the project to any of the noticing requirements listed above. Therefore, public notice will not be required for this project.

**D. Daily Emission Limits (DELs)**

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

**Proposed Rule 2201 (DEL) Conditions:**

- Total combined fugitive emissions from all components associated with this TEOR operation shall not exceed 0.0 lb VOC/ day. [District NSR Rule]
- Well casing vents shall remain closed, connected to well produced fluids lines, or connected to a well vent VOC collection and control system at all times except during periods of actual service or repair when wells are not producing. [District Rules 2201 and 4401]

- VOC content of gas collected by the CVR system shall not exceed 10% by weight. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rules 2201 and 4401]
- Permittee may use test results obtained from S-1326-263 to demonstrate compliance. [District NSR Rule and District Rule 1070] Y
- Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201 and 4401]

## **E. Compliance Assurance**

### **1. Source Testing**

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

### **2. Monitoring**

The fugitive components associated with this project handle gas/vapor or liquid with a VOC content of ten percent by weight or less (<10 wt.%); therefore, they are exempt from the inspection and re-inspection requirements of Rule 4401. District Rule 2201 will not require monitoring to demonstrate compliance with Rule 2201.

### **3. Recordkeeping**

The following conditions will be included on the ATC to ensure compliance with recordkeeping requirements:

- Permittee shall maintain a current list of all steam enhanced wells authorized by this permit and shall update the list whenever a well is added, replaced, or deleted. [District Rule 2201]
- Permittee shall maintain an accurate component count for the well vent collection and control system serving this operation, in accordance with CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District Rule 2201]
- All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rules 2201 and 4401] N
- The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Y

The following conditions will be removed per exemption in Rule 4401:

- For a period of at least five years, permittee shall maintain records of the component inspections

required by this permit, including the components inspected, date of inspection, leak screening level concentration values recorded and manner and date of repair and reinspection of identified leaking components. Records shall be made readily available for District inspection upon request. [District NSR Rule] Y

- Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401] N

#### **4. Reporting**

No reporting is required to demonstrate compliance with Rule 2201.

#### **Rule 2520 Federally Mandated Operating Permits**

This facility is subject to this Rule, and has received their Title V Operating Permit. A significant permit modification is defined as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

Minor permit modifications do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions. Vintage proposes to remove Rule 4401 inspection and re-inspection conditions, which is a relaxation in monitoring conditions. As a result, the proposed project constitutes a Significant Modification to the Title V Permit.

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility shall not implement the changes requested until the final permit is issued.

#### **Rule 4101 Visible Emissions**

District Rule 4101, Section 5.0, indicates that 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 dark or darker than Ringlemann 1 or equivalent to 20% opacity. Compliance with the requirements of this rule is expected.

#### **Rule 4102 Nuisance**

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations provided the equipment is well maintained. Therefore, compliance with this rule is expected.

## **California Health & Safety Code 41700 (Health Risk Assessment)**

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

There are no increases in emissions associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

## **Rule 4401 Steam Enhanced Crude Oil Production Well Vents**

The purpose of this rule is to limit the VOC emissions from steam-enhanced crude oil production well vents. This rule is applicable to all steam-enhanced crude oil production wells and any associated vapor collection and control systems.

### Section 3.0, Definitions

Section 3.20.1 defines various types of gas and liquid leaks.

The following condition will be included on the ATC to ensure compliance:

- A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv as methane; and 2) A minor gas leak is a detection of 400 to 10,000 ppmv as methane for pressure relief devices (PRDs) and 2,000 to 10,000 for components other than PRDs. [District Rule 4401] Y
- A liquid leak is defined as the dripping of VOC-containing liquid. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak that is not a major liquid leak and drips liquid at a rate of more than three drops per minute, except for seal lubricant. [District Rule 4401] Y

### Section 4.0, Exemptions

Section 4.1 states that any steam-enhanced crude oil production well undergoing service or repair during the time the well is not producing is exempt from the requirements of this rule as stated in the following ATC condition:

- 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]

Section 4.7 states that requirements of Section 5.4.1 through Section 5.4.7 of this rule shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight or less ( $\leq 10$  wt.%), as determined by the test methods in Section 6.3.4. as stated in the following ATC condition:

- VOC content of gas collected by the CVR system shall not exceed 10% by weight. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. Permittee may use test results obtained from S-1326-263 to demonstrate compliance. [District NSR Rule and District Rule 4401] Y

- Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201 and 4401]

### Section 5.1 Vapor Control System Requirements

- 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]

### Section 5.2 Determination of Compliance with Leak Standards:

- An operator shall be in violation of this rule if any District inspection demonstrates that the following conditions in Section 5.2.2 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 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines. [District Rule 4401]
- 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: 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]

### Section 5.3 Operating Requirements

- 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 5.2.2 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 5.5 of Rule 4401. [District Rule 4401 5.3.1]
- 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 5.3.2]
- 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 5.3.3]

### Section 5.4 Inspection and Re-Inspection Requirements:

Section 4.7 states that requirements of Section 5.4.1 through Section 5.4.7 of this rule shall not apply to 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.

Therefore, inspections and re-inspections are not required by this rule and the following conditions will be removed from the Permit:

- Permittee 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] N
- The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. [District Rules 2520, 9.4.2 and 4401, 6.3.3] Y
- Portable hydrocarbon detection instrument shall be operated and calibrated in accordance with recommendations in CAPCOA/CARB's California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities (February, 1999). [District NSR Rule] Y
- All polish rod stuffing boxes shall be inspected and screened for leaks using EPA method 21 at least quarterly. If less than two percent of the polish rod stuffing boxes are found to leak during each of five consecutive quarterly inspections, the inspection frequency may be changed from quarterly to annually. If any annual inspection shows that more than 2 percent of the polish rod stuffing boxes are leaking, then quarterly inspections shall be resumed. Any polish rod leaking greater than 10,000 ppmv, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA method 21 or leaking at a rate of greater than 3 drops of liquid per minute shall be repaired consistent with the procedures specified in Section 5.3.1 of Rule 4401. [District NSR Rule] Y
- Permittee shall inspect audio-visually (by hearing and by sight) for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service at least once each calendar week. [District Rule 4401] N
- Permittee shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] N
- 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 Rule 4401 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] N
- Except for pipes and unsafe-to-monitor components, permittee 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 Rule 4401 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] N
- Permittee 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. Permittee 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. [District Rule 4401] N
- Permittee shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] N
- Except for PRDs, permittee 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] N

## Section 5.5, Leak Repair Requirements

The following conditions will be placed on the permit to ensure leaks are repaired in accordance with this rule:

- Permittee shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak. The following information shall be included on the tag: 1) the date and time of leak detection; 2) the date and time of leak measurement; 3) leak concentration in ppmv for a gaseous leak; 4) description of whether it is a major liquid leak or a minor liquid leak; and 5) whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] N
- Permittee shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of Rule 4401. [District Rule 4401] N
- Permittee 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] N
- Except for leaking critical components or leaking essential components, if the operator has minimized a leak but the leak still exceeds the applicable leak limits, the 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: 1) repair or replace the leaking component; 2) vent the leaking component to a VOC collection and control system; or 3) remove the leaking component from operation. [District Rule 4401] N
- The leak rate, measured after leak minimization has been performed, shall be used to determine the applicable repair period specified in Table 3 of Rule 4401 and the time of initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401] N
- 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] N
- Well casings, casing vents, any casing vent piping and fluid piping associated with these wells shall be screened and inspected for leaks at least quarterly with a minimum of 25% of the wells tested per quarter. Any leak greater than 5000 ppm, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Section 5.3.1 of Rule 4401. [District NSR Rule] Y
- Components to be screened shall be identified and categorized according to the following equipment types: connectors, flanges, open-ended lines, pump seals, valves with visible actuators, polished rods stuffing boxes and other (pressure relief devices, compressor seals, meters, etc.). [District NSR Rule] Y
- Flanges shall be monitored with a portable hydrocarbon detection instrument along the entire circumference of the flange-gasket interface. Threaded connections, tubing fittings, and other types of non-permanent joints shall be monitored along the entire circumference of joint interface. [District NSR Rule] Y
- Valves shall be monitored with a portable hydrocarbon detection instrument where the stem comes through the packing gland, and at any attached or connected body flange(s), bonnet flange(s), or plug(s). [District NSR Rule] Y

- All other components such as diaphragms, dump arms, instruments, meters shall be monitored at all points of possible emissions. [District NSR Rule] Y

### Section 6.1, Recordkeeping and Submissions

Section 6.1 requires that an operator shall maintain the records required by Sections 6.1 and 6.2 for a period of five (5) years. These records shall be made available to the APCO upon request. The following condition will be listed on the ATC to ensure compliance:

- 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]
- 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]
- Permittee shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request.
- Operator shall keep a list of all gauge tanks, as defined in Section 3.0. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401]
- The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401]
- 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]

### Section 6.2, Compliance Source Testing

- 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]
- 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]
- 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]
- 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 and ARB objects to such approval in writing within 45 days of the receipt of the APCO request. [District Rule 4401 6.2.4]

- An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.0 of Rule 4401: 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 6.2.3]

### Section 6.3, Test Methods

Section 6.3.1 specifies that 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.

- 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. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 4401]

### Section 6.4 Inspection Log

Section 6.4 of the Rule requires the operator to maintain an inspection log. However, the operation is exempt for inspections and re-inspections because the VOC content of the gas is less than 10% by weight. Therefore the Inspection log is not required and the following condition will be removed from the permit:

### Section 6.5 Employee Training Program

Section 6.5 requires the operator to establish and implement an employee training program for inspection and repairing components and recordkeeping procedures. However, inspections are not required by this rule and the following condition will be removed:

- Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Permittee shall maintain at the facility the copies of the training records of the training program. [District Rules 4401] N

### Section 6.6, Compliance Schedule

The operator is required to maintain an Operator Management Plan. The following conditions will be placed on the permit to ensure compliance.

- Permittee shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] N
- By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] N

## Section 7.0, Compliance Schedule

Section 7.0 establishes a compliance schedule for existing and new steam-enhanced crude oil production wells. The wells in this project are expected to operate in compliance with the requirements of this rule. Therefore, no further discussion is required.

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, 6.7]

Continued compliance is expected.

### **California Health & Safety Code 42301.6 (School Notice)**

The District has verified that this site is located within 1,000 feet of a school. However, pursuant to California Health and Safety Code 42301.6, since this project will not result in an increase in emissions, a school notice is not required.

### **California Environmental Quality Act (CEQA)**

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission unit(s) are exempt from Best Available Control Technology (BACT) requirements. Furthermore, the District conducted a Risk Management Review and concludes that potential health impacts are less than significant.

Issuance of permits for emissions units not subject to BACT requirements and with health impact less than significant is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or deliberation. Thus, the District concludes that this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

**IX. RECOMMENDATION**

Compliance with all applicable rules and regulations is expected. Issue Authority to Construct S-1326-287-10 subject to the permit conditions on the attached draft Authorities to Construct in Attachment C.

**X. BILLING INFORMATION**

Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1326-287-10	3020-09-A	1085 Wells	\$10,133.90

**Attachments:**

- Attachment A: Current Permit
- Attachment B: Certificate of Compliance
- Attachment C: Draft Authority to Construct

Attachment A

Current Permit

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1326-287-7

EXPIRATION DATE: 03/31/2016

SECTION: SW23 TOWNSHIP: 28S RANGE: 27E

## EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 305 STEAM ENHANCED PRODUCTION WELLS CONNECTED TO WELL HEAD CASING VENT VAPOR RECOVERY SYSTEM (CVR) VENTING VAPORS TO SECTION 23 TANK VAPOR RECOVERY SYSTEM (S-1326-263)

## PERMIT UNIT REQUIREMENTS

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1. Well casing vents shall remain closed, connected to well produced fluids lines, or connected to a well vent VOC collection and control system at all times except during periods of actual service or repair when wells are not producing. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit
2. Collected CVR vapor shall be piped to tank vapor recovery system (TVR) serving S-1326-263. [District NSR Rule] Federally Enforceable Through Title V Permit
3. VOC content of gas collected by the CVR system shall not exceed 10% by weight. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. Permittee may use test results obtained from S-1326-263 to demonstrate compliance. [District NSR Rule and District Rule 1070] Federally Enforceable Through Title V Permit
4. Fluids produced from these steam enhanced wells shall be introduced only to tanks listed on permit S-1326-263 that are vented to an approved vapor collection and control system achieving 99% control. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Permittee shall maintain a current list of all steam enhanced wells authorized by this permit and shall update the list whenever a well is added, replaced, or deleted. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Steam enhanced production wells covered by this permit shall each have a visible identification number. Field personnel shall be provided with written instructions concerning proper operation and maintenance of these wells. [District NSR Rule] Federally Enforceable Through Title V Permit
7. 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
8. Total combined fugitive emissions from all components associated with this TEOR operation shall not exceed 0.0 lb VOC/ day. [District NSR Rule] Federally Enforceable Through Title V Permit
9. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 14, 2006). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
10. 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
11. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. 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
13. Permittee 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]
14. The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. [District Rules 2520, 9.4.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit
15. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv as methane; and 2) A minor gas leak is a detection of 400 to 10,000 ppmv as methane for pressure relief devices (PRDs) and 2,000 to 10,000 for components other than PRDs. [District Rule 4401]
16. A liquid leak is defined as the dripping of VOC-containing liquid. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak that is not a major liquid leak and drips liquid at a rate of more than three drops per minute, except for seal lubricant. [District Rule 4401]
17. Portable hydrocarbon detection instrument shall be operated and calibrated in accordance with recommendations in CAPCOA/CARB's California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities (February, 1999). [District NSR Rule] Federally Enforceable Through Title V Permit
18. All polish rod stuffing boxes shall be inspected and screened for leaks using EPA method 21 at least quarterly. If less than two percent of the polish rod stuffing boxes are found to leak during each of five consecutive quarterly inspections, the inspection frequency may be changed from quarterly to annually. If any annual inspection shows that more than 2 percent of the polish rod stuffing boxes are leaking, then quarterly inspections shall be resumed. Any polish rod leaking greater than 10,000 ppmv, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA method 21 or leaking at a rate of greater than 3 drops of liquid per minute shall be repaired consistent with the procedures specified in Section 5.3.1 of Rule 4401. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
20. The permittee shall not use any components that leak in excess of the applicable leak standards as specified in this permit. Components that have been found leaking in excess of the applicable leak standards of this rule may be used provided such leaking components have been identified with a tag for repair, are repaired, or are awaiting re-inspection after being repaired, within the applicable time period specified in this permit. [District Rule 4401]
21. Permittee shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401]
22. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401]
23. During District compliance inspection, the following conditions shall be used to determination of a violation: 1) 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 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; 2) Existence of a component with a major liquid leak; 3) Existence of a component with a gas leak greater than 50,000 ppmv; or 4) Existence of a component leak consisting of a minor liquid or gas leak, or a gas leak greater than 10,000 ppmv up to 50,000 ppmv, in excess of the allowable number of leaks specified in Table 3 of Rule 4401. [District Rule 4401]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

24. Permittee shall keep all hatches 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]
25. Except for pipes and unsafe-to-monitor components, permittee 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 Rule 4401 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]
26. Permittee shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401]
27. Permittee shall inspect audio-visually (by hearing and by sight) for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service at least once each calendar week. [District Rule 4401]
28. 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 Rule 4401 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]
29. Permittee 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. Permittee 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. [District Rule 4401]
30. Permittee shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401]
31. Except for PRDs, permittee 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]
32. Permittee shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak. The following information shall be included on the tag: 1) the date and time of leak detection; 2) the date and time of leak measurement; 3) leak concentration in ppmv for a gaseous leak; 4) description of whether it is a major liquid leak or a minor liquid leak; and 5) whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401]
33. Permittee shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of Rule 4401. [District Rule 4401]
34. Permittee 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]
35. Except for leaking critical components or leaking essential components, if the operator has minimized a leak but the leak still exceeds the applicable leak limits, the 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: 1) repair or replace the leaking component; 2) vent the leaking component to a VOC collection and control system; or 3) remove the leaking component from operation. [District Rule 4401]
36. The leak rate, measured after leak minimization has been performed, shall be used to determine the applicable repair period specified in Table 4 of Rule 4401 and the time of initial leak detection shall be the start of the repair period specified in Table 4 of Rule 4401. [District Rule 4401]
37. 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

38. Permittee shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded 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 liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The 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; 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 one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's 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]
39. Well casings, casing vents, any casing vent piping and fluid piping associated with these wells shall be screened and inspected for leaks at least quarterly with a minimum of 25% of the wells tested per quarter. Any leak greater than 5000 ppm, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Section 5.3.1 of Rule 4401. [District NSR Rule] Federally Enforceable Through Title V Permit
40. Components to be screened shall be identified and categorized according to the following equipment types: connectors, flanges, open-ended lines, pump seals, valves with visible actuators, polished rods stuffing boxes and other (pressure relief devices, compressor seals, meters, etc.). [District NSR Rule] Federally Enforceable Through Title V Permit
41. Flanges shall be monitored with a portable hydrocarbon detection instrument along the entire circumference of the flange-gasket interface. Threaded connections, tubing fittings, and other types of non-permanent joints shall be monitored along the entire circumference of joint interface. [District NSR Rule] Federally Enforceable Through Title V Permit
42. Valves shall be monitored with a portable hydrocarbon detection instrument where the stem comes through the packing gland, and at any attached or connected body flange(s), bonnet flange(s), or plug(s). [District NSR Rule] Federally Enforceable Through Title V Permit
43. All other components such as diaphragms, dump arms, instruments, meters shall be monitored at all points of possible emissions. [District NSR Rule] Federally Enforceable Through Title V Permit
44. 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
45. 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
46. 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
47. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Permittee shall maintain at the facility the copies of the training records of the training program. [District Rule 4401]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

48. 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 source testers certified by the California Air Resources Board (CARB) 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 annual testing 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 incinerated in fuel burning equipment, an internal combustion engine 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
49. The control efficiency of the vapor collection and control system used to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on most stringent of a source test, USEPA approved emission factors, or Air Pollution (AP)-42 emission factors for components and number of components; and the efficiency of destruction devices determined by USEPA Method 25, 25a, or 25b as applicable. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
50. VOC content shall be determined using ASTM Method E168, E169, or E260 as applicable, or equivalent test method with prior District approval. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
51. 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
52. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended January 15, 1998), 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
53. 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
54. Permittee shall maintain an accurate component count for the well vent collection and control system serving this operation, in accordance with CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit
55. Permittee shall keep the steam-enhanced crude oil production well vents closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) shall be connected to a VOC collection and control system. 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. [District Rule 4401]
56. For a period of at least five years, permittee shall maintain records of the component inspections required by this permit, including the components inspected, date of inspection, leak screening level concentration values recorded and manner and date of repair and reinspection of identified leaking components. Records shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
57. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401]
58. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4401]

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

# Attachment B

## Certificate of Compliance

RECEIVED  
APR 09 2012  
SJVAPCD  
Southern Region

# San Joaquin Valley Unified Air Pollution Control District

## TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

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

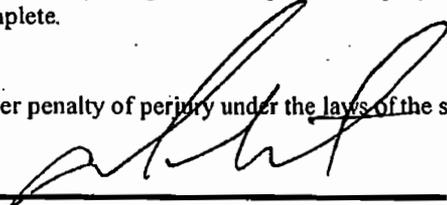
- SIGNIFICANT PERMIT MODIFICATION                       ADMINISTRATIVE AMENDMENT  
 MINOR PERMIT MODIFICATION

COMPANY NAME: VINTAGE PRODUCTION CA	FACILITY ID: S - 1326
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:	
3. Agent to the Owner:	

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

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

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



Signature of Responsible Official

04/09/12

Date

Alan E. White

Name of Responsible Official (please print)

Operations Manager

Title of Responsible Official (please print)

# Attachment C

## Draft Authority to Construct

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

**PERMIT NO:** S-1326-287-10

**LEGAL OWNER OR OPERATOR:** VINTAGE PRODUCTION CALIFORNIA LLC  
**MAILING ADDRESS:** 9600 MING AVE, SUITE 300  
BAKERSFIELD, CA 93311

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

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 305 STEAM ENHANCED PRODUCTION WELLS CONNECTED TO WELL HEAD CASING VENT VAPOR RECOVERY SYSTEM (CVR) VENTING VAPORS TO SECTION 23 TANK VAPOR RECOVERY SYSTEM (S-1326-263); REMOVE RULE 4401 INSPECTION CONDITIONS, ADD 780 WELLS AND EXPAND TEOR OPERATION TO INCLUDE THE FOLLOWING LOCATIONS: SECTION 24, 25 AND 26, TOWNSHIP: 28S, RANGE: 27E

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The TEOR operation shall be located within Sections: 23, 24, 25 and 26, Township: 28S, Range: 27E [District Rule 2201] Federally Enforceable Through Title V Permit
4. Well casing vents shall remain closed, connected to well produced fluids lines, or connected to a well vent VOC collection and control system at all times except during periods of actual service or repair when wells are not producing. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit
5. Collected CVR vapor shall be piped to tank vapor recovery system (TVR) serving S-1326-263. [District NSR Rule] Federally Enforceable Through Title V Permit

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**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

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6. VOC content of gas collected by the CVR system shall not exceed 10% by weight. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. Permittee may use test results obtained from S-1326-263 to demonstrate compliance. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201 and 4401] Federally Enforceable Through Title V Permit
8. Fluids produced from these steam enhanced wells shall be introduced only to tanks listed on permit S-1326-263 that are vented to an approved vapor collection and control system achieving 99% control. [District NSR Rule] Federally Enforceable Through Title V Permit
9. 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] Federally Enforceable Through Title V Permit
10. Steam enhanced production wells covered by this permit shall each have a visible identification number. Field personnel shall be provided with written instructions concerning proper operation and maintenance of these wells. [District NSR Rule] Federally Enforceable Through Title V Permit
11. 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] Federally Enforceable Through Title V Permit
12. Total combined fugitive emissions from all components associated with this TEOR operation shall not exceed 0.0 lb VOC/ day. [District NSR Rule] Federally Enforceable Through Title V Permit
13. 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 June 16, 2011). [District Rule 4401] Federally Enforceable Through Title V Permit
14. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
15. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule] Federally Enforceable Through Title V Permit
16. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv as methane; and 2) A minor gas leak is a detection of 400 to 10,000 ppmv as methane for pressure relief devices (PRDs) and 2,000 to 10,000 for components other than PRDs. [District Rule 4401] Federally Enforceable Through Title V Permit
17. A liquid leak is defined as the dripping of VOC-containing liquid. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak that is not a major liquid leak and drips liquid at a rate of more than three drops per minute, except for seal lubricant. [District Rule 4401] Federally Enforceable Through Title V Permit
18. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401] Federally Enforceable Through Title V Permit

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19. 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 5.2.2 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 5.5 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
20. 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] Federally Enforceable Through Title V Permit
21. An operator shall be in violation of this rule if any District inspection demonstrates that the following conditions in Section 5.2.2 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 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines. [District Rule 4401] Federally Enforceable Through Title V Permit
22. 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: 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] Federally Enforceable Through Title V Permit
23. 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] Federally Enforceable Through Title V Permit
24. Permittee shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak. The following information shall be included on the tag: 1) the date and time of leak detection; 2) the date and time of leak measurement; 3) leak concentration in ppmv for a gaseous leak; 4) description of whether it is a major liquid leak or a minor liquid leak; and 5) whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
25. Permittee shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
26. Permittee 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] Federally Enforceable Through Title V Permit
27. Except for leaking critical components or leaking essential components, if the operator has minimized a leak but the leak still exceeds the applicable leak limits, the 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: 1) repair or replace the leaking component; 2) vent the leaking component to a VOC collection and control system; or 3) remove the leaking component from operation. [District Rule 4401] Federally Enforceable Through Title V Permit
28. The leak rate, measured after leak minimization has been performed, shall be used to determine the applicable repair period specified in Table 4 of Rule 4401 and the time of initial leak detection shall be the start of the repair period specified in Table 4 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
29. 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] Federally Enforceable Through Title V Permit
30. Flanges shall be monitored with a portable hydrocarbon detection instrument along the entire circumference of the flange-gasket interface. Threaded connections, tubing fittings, and other types of non-permanent joints shall be monitored along the entire circumference of joint interface. [District NSR Rule] Federally Enforceable Through Title V Permit

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31. Valves shall be monitored with a portable hydrocarbon detection instrument where the stem comes through the packing gland, and at any attached or connected body flange(s), bonnet flange(s), or plug(s). [District NSR Rule] Federally Enforceable Through Title V Permit
32. All other components such as diaphragms, dump arms, instruments, meters shall be monitored at all points of possible emissions. [District NSR Rule] Federally Enforceable Through Title V Permit
33. In lieu of conducting annual source tests of 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, all uncondensed VOC emissions collected by a vapor collection and control system shall be incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare. [District Rule 4401] Federally Enforceable Through Title V Permit
34. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.0 of Rule 4401: 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] Federally Enforceable Through Title V Permit
35. The control efficiency of the vapor collection and control system used to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on most stringent of a source test, USEPA approved emission factors, or Air Pollution (AP)-42 emission factors for components and number of components; and the efficiency of destruction devices determined by USEPA Method 25, 25a, or 25b as applicable. [District Rule 4401] Federally Enforceable Through Title V Permit
36. 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. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
37. 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] Federally Enforceable Through Title V Permit
38. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended January 15, 1998), 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] Federally Enforceable Through Title V Permit
39. 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] Federally Enforceable Through Title V Permit
40. Permittee shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
41. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
42. Permittee shall maintain a current list of all steam enhanced wells authorized by this permit and shall update the list whenever a well is added, replaced, or deleted. [District NSR Rule] Federally Enforceable Through Title V Permit
43. Permittee shall maintain an accurate component count for the well vent collection and control system serving this operation, in accordance with CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

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44. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4401] Federally Enforceable Through Title V Permit

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