



**JUL 11 2013**

Mr. Jason Donchin  
Chevron USA Inc  
PO Box 1392  
Bakersfield, CA 93302

**Re: Notice of Minor Title V Permit Modification**  
**District Facility # C-311**  
**Project # 1132049**

Dear Mr. Donchin:

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 (ATCs) C-311-146-13, '-147-8, '-150-8, '-163-8, '-164-8, '-165-8, '-166-8, '-167-8, '-168-8, '-169-8, '-170-8, '-177-10, '-196-8, '-197-8, '-198-8, and '-236-2 into the Title V operating permit. These ATCs updated tank cleaning permit conditions for sixteen (16) crude oil tanks.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued Authorities to Construct (ATCs) C-311-146-13, '-147-8, '-150-8, '-163-8, '-164-8, '-165-8, '-166-8, '-167-8, '-168-8, '-169-8, '-170-8, '-177-10, '-196-8, '-197-8, '-198-8, and '-236-2, 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.

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

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

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

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061

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



JUL 11 2013

Mr. Jason Donchin  
Page 2

Thank you for your cooperation in this matter.

Sincerely,

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

David Warner  
Director of Permit Services

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email



# TITLE V APPLICATION REVIEW

Minor Modification  
Project #: C-1132049

Engineer: Richard Edgehill  
Date: July 10, 2013

Facility Number: C-311  
Facility Name: Chevron USA Inc  
Mailing Address: PO Box 1392  
Bakersfield, CA 93302

Contact Name: Jason Donchin and Lance Ericksen  
Phone: (661) 665-7145 (LE)  
Title: HES Manager

Responsible Official: Albert Richardson  
Lead Engineer: Allan Phillips *ASURE ADE*

JUN 10 2013

## I. PROPOSAL

Chevron USA Inc (CUSA) is proposing a Title V minor permit modification to incorporate the recently issued Authorities to Construct (ATCs) C-311-146-13, '-147-8, '-150-8, '-163-8, '-164-8, '-165-8, '-166-8, '-167-8, '-168-8, '-169-8, '-170-8, '-177-10, '-196-8, '-197-8, '-198-8, and '-236-2 into the Title V permit. The projects 1030226 and 1030227 revised tank cleaning conditions as described in Section VI below.

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

C-311-146, '-147, '-150, '-196, '-197, '-198, and '-236

13D OCP tank setting in Western Coalinga Oilfield, in Section 13, Township 20S, Range 14E MDB&M in CUSA's Fresno County heavy oil stationary source.

C-311-163, 164, 165, 166, 167, 168, 169, 170, and 177

25D OCP tank setting in Section 25, Township 20S, Range 14E MDB&M in the Western Coalinga Oilfield included in CUSA's Fresno County heavy oil stationary source.

### III. EQUIPMENT DESCRIPTION

- ATC C-311-146-14 2,013 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#13-23), 30'D X 16'H, EQUIPPED WITH VAPOR RECOVERY SYSTEM INCLUDING (2) 50 HP COMPRESSOR, REGULATOR, AND PIPING TO DISTRICT APPROVED STEAM GENERATORS FOR INCINERATION SERVED BY SHARED VAPOR RECOVERY SYSTEM FOR PERMIT UNITS C-311-112, -146, -147, -150, -196, -197, -198 and -236
- PTO C-311-147-9 TANK #13-22: 84,546 GALLON (2,013 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146
- PTO C-311-150-9 5,103 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#13-18), 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146
- PTO C-311-163-9 4,697 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#25-31), 40'D X 21'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177
- PTO C-311-164-9 4,697 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#25-32), 40'D X 21'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177
- PTO C-311-165-9 5,592 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#25-29), 50'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177
- PTO C-311-166-9 5,592 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#25-30), 50'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177
- PTO C-311-167-9 3,579 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#25-33), 40'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177
- PTO C-311-168-9 3,579 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#25-34), 40'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177
- PTO C-311-169-9 1,424 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#25-60), 26.5'D X 14.5'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

- 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**

- I. Proposed Modified Title V Operating Permits
- II. Authorities to Construct
- III. Application
- IV. Previous Title V Operating Permits



- PTO C-311-170-9 1,901 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#25-37), 40'D X 8.5'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177
- PTO C-311-177-11 5,047 BBL FIXED ROOF FREE WATER KNOCK OUT TANK (#25-42), 47.5'D X 16'H, EQUIPPED WITH VAPOR RECOVERY SYSTEM INCLUDING 50 HP COMPRESSOR AND 50 HP BACKUP COMPRESSOR, TWO VERTICAL SCRUBBERS, FIN FAN COOLER, REGULATOR, AND PIPING TO DISTRICT APPROVED STEAM GENERATORS FOR INCINERATION SERVED BY SHARED VAPOR RECOVERY SYSTEM WITH PERMIT UNITS C-311-163, -164, -165, -166, -167, -168, -169, -170 AND -177
- PTO C-311-196-9: TANK #13-29: 210,000 GALLON (5,000 BBL) FIXED ROOF WASH TANK, 38.37' D X 24' H, SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146
- PTO C-311-197-9 5,000 BBL FIXED ROOF CRUDE OIL WASH TANK (#13-20), 38.75' D X 24'H, SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146
- PTO C-311-198-9 269 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#13-13) SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146
- ATC C-311-236-3 5,100 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#13-19) SERVED BY SHARED VAPOR CONTROL SYSTEM LISTED ON PERMIT UNIT C-311-146

#### **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

The project replaces two existing obsolete tank cleaning and maintenance conditions with one current District standard condition from SJVAPCD Policy SSP-2210<sup>1</sup>.

The two conditions being removed (e.g. PTO C-311-163-7 conditions 22 and 53) follow:

~~When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7]~~

~~When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080]~~

The following District-approved standard condition will be added (SJVAPCD Policy SSP-2210):

After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7]

## 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

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<sup>1</sup> SSP-2210, Organic Liquid Storage Tanks – Cleaning Requirements, Section IV.b “Tank degassing requirements”. Consistent with Rule 4623, 5.7.5.4.10.

## Attachment A

### Proposed Modified Title V Operating Permits



# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-311-146-14

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 13 **TOWNSHIP:** 20S **RANGE:** 14E

## **EQUIPMENT DESCRIPTION:**

TANK #13-23: 84,546 GALLON (2,013 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 16'H, EQUIPPED WITH VAPOR RECOVERY SYSTEM INCLUDING (2) 50 HP COMPRESSOR, REGULATOR, AND PIPING TO DISTRICT APPROVED STEAM GENERATORS FOR INCINERATION SERVED BY SHARED VAPOR RECOVERY SYSTEM FOR PERMIT UNITS C-311-112, -146, -147, -150, -196, -197, -198, AND -236

## **PERMIT UNIT REQUIREMENTS**

1. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
3. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. The tank vapor recovery system shall be connected to tanks permitted as PTO #C-311-146, '-147, '-150, '-196, '-197, '-198 and -236. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Collected VOC vapors shall be incinerated in steam generators C-311-19, '-20, '-27, '-28, '-30, -36, '-37, '-38, '-39, '-40 and '-41, or disposed of in Department of Oil, Gas, and Geothermal Resources (DOGGR) approved vapor disposal well(s). [District NSR Rule] Federally Enforceable Through Title V Permit
6. The vapor recovery system may control the recovered well casing vapors from permit units C-311-77, '-78, '-83 and '-111 during operation of the casing collection system as a casing balance system. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit
7. The 13D system (C-311-77, '-78, '-83 and '-111) may be operated as a vapor balance system and/or an active well vent vapor recovery system. When operated as a vapor balance system, valves associated with the 13D system (C-311-77, '-78, '-83 and '-111) may be closed to allow condensate and noncondensable gas to be displaced to the reservoir through wells served by the system. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Operation of the casing collection system as a casing balance system shall not cause gas flow rates at the 6C, 13D and/or 25D Oil Cleaning Plant in excess of the design capacity of the tank vapor recovery compressor. [District NSR Rule] Federally Enforceable Through Title V Permit
9. VOC fugitive emissions from the components in gas and liquid service for the storage tank shall not exceed 16.3 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

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

10. VOC fugitive emissions from the components in gas and liquid service for the vapor control system shall not exceed 31.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Fugitive VOC emissions shall be calculated using EPA's "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission Factors. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Permittee shall maintain records of the number and type of components installed and the calculated fugitive emissions. Permittee shall update such records when new components are installed or removed. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
14. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
15. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
16. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
17. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit
19. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
20. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] 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.

21. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
22. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
25. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
28. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] 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.

30. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] 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.

38. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
39. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
40. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
41. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
42. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
43. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
44. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
45. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
46. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] 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.

50. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
51. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
52. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship:  $t = 2.3 V / Q$ , where  $t$  = time,  $V$  = tank volume (cubic feet), and  $Q$  = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
53. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit
54. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
55. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
56. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
57. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
58. {1740} This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
59. {1741} This unit does not store organic materials which are liquid at standard conditions and which are used as solvents, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended May 16, 2002) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-311-147-9

EXPIRATION DATE: 12/31/2016

SECTION: 13 TOWNSHIP: 20S RANGE: 14E

## EQUIPMENT DESCRIPTION:

TANK #13-22: 84,546 GALLON (2,013 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

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

8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 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.

17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. {941} The operator of a fixed roof tank 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, 9.4.2] Federally Enforceable Through Title V Permit
41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
45. This tank shall only store crude oil with a true vapor pressure (TVP) of less than 11.0 psia. [District NSR Rule] Federally Enforceable Through Title V Permit
46. Collected vapors are to be incinerated in gas fired steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit
47. Permittee shall record annual throughput of crude oil. Records shall be retained for five years and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
50. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] 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.

51. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
52. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit
53. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
54. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-311-150-9

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 13 **TOWNSHIP:** 20S **RANGE:** 14

**EQUIPMENT DESCRIPTION:**

TANK #13-18: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. {941} The operator of a fixed roof tank 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, 9.4.2] Federally Enforceable Through Title V Permit
41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
45. Collected vapors are to be incinerated in gas fired steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit
46. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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50. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit
51. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
52. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
53. Permittee shall record annual throughput of crude oil. Records shall be retained for five years and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-311-163-9

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 25 **TOWNSHIP:** 20S **RANGE:** 14E

**EQUIPMENT DESCRIPTION:**

TANK #25-31: 197,274 GALLON (4,697 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 21'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
24. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
30. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. {941} The operator of a fixed roof tank 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, 9.4.2] Federally Enforceable Through Title V Permit
40. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit
44. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
45. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
46. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
50. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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51. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
52. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
53. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-311-164-9

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 25 **TOWNSHIP:** 20S **RANGE:** 14E

**EQUIPMENT DESCRIPTION:**

TANK #25-32: 197,274 GALLON (4,697 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 21'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
24. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
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31. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
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34. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. {941} The operator of a fixed roof tank 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, 9.4.2] Federally Enforceable Through Title V Permit
40. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit
44. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
45. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
46. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
50. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] 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.

51. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
52. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
53. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-311-165-9

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 25 **TOWNSHIP:** 20S **RANGE:** 14E

**EQUIPMENT DESCRIPTION:**

TANK #25-29: 234,864 GALLON (5,592 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 50'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)". Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. {941} The operator of a fixed roof tank 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, 9.4.2] Federally Enforceable Through Title V Permit
41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit
45. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
46. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] 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.

50. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
51. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit
52. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
53. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
54. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-311-166-9

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 25 **TOWNSHIP:** 20S **RANGE:** 14E

**EQUIPMENT DESCRIPTION:**

TANK #25-30: 234,864 GALLON (5,592 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 50'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. {941} The operator of a fixed roof tank 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, 9.4.2] Federally Enforceable Through Title V Permit
41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit
45. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
46. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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50. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
51. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit
52. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
53. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
54. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-311-167-9

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 25 **TOWNSHIP:** 20S **RANGE:** 14E

**EQUIPMENT DESCRIPTION:**

TANK #25-33: 150,318 GALLON (3,579 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
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19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. {941} The operator of a fixed roof tank 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, 9.4.2] Federally Enforceable Through Title V Permit
41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
45. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
46. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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49. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
50. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-311-168-9

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 25 **TOWNSHIP:** 20S **RANGE:** 14E

**EQUIPMENT DESCRIPTION:**

TANK #25-34: 150,318 GALLON (3,579 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 16'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
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34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. {941} The operator of a fixed roof tank 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, 9.4.2] Federally Enforceable Through Title V Permit
41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
45. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
46. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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49. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
50. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] 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:** C-311-169-9

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 25 **TOWNSHIP:** 20S **RANGE:** 14E

**EQUIPMENT DESCRIPTION:**

TANK #25-60: 59,808 GALLON (1,424 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 26.5'D X 14.5'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

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## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. {941} The operator of a fixed roof tank 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, 9.4.2] Federally Enforceable Through Title V Permit
41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit
45. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
46. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] 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.

50. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
51. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit
52. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
53. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
54. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] 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:** C-311-170-9

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 25 **TOWNSHIP:** 20S **RANGE:** 14E

**EQUIPMENT DESCRIPTION:**

TANK #25-37: 79,842 GALLON (1,901 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 8.5'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. {941} The operator of a fixed roof tank 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, 9.4.2] Federally Enforceable Through Title V Permit
41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. Collected vapors are to be incinerated in steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit
45. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
46. All equipment shall be maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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50. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
51. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit
52. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
53. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
54. The permittee shall record annual throughput of crude oil. Records shall be maintained five years and provided to the District upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-311-177-11

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 25 **TOWNSHIP:** 20S **RANGE:** 14E

## **EQUIPMENT DESCRIPTION:**

TANK #25-42: 210,000 GALLON (5,047 BBL) FIXED ROOF FREE WATER KNOCK OUT TANK, 47.5'D X 16'H, EQUIPPED WITH VAPOR RECOVERY SYSTEM INCLUDING 50 HP COMPRESSOR AND 50 HP BACKUP COMPRESSOR, TWO VERTICAL SCRUBBERS, FIN FAN COOLER, REGULATOR, AND PIPING TO DISTRICT APPROVED STEAM GENERATORS FOR INCINERATION SERVED BY SHARED VAPOR RECOVERY SYSTEM WITH PERMIT UNITS C-311-163, -164, -165, -166, -167, -168, -169, -170 AND -177

## **PERMIT UNIT REQUIREMENTS**

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
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34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. Collected vapor shall be incinerated in steam generators approved by the District for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit
41. {941} The operator of a fixed roof tank 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, 9.4.2] Federally Enforceable Through Title V Permit
42. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
45. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
46. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] 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.

50. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
51. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
52. The vapor recovery system shall control the tanks identified in permit units C-311-163, -164, -165, -166, -167, -168, -169, -170 and -177. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit
53. The vapor recovery system may control the recovered well casing vapors from permit unit C-311-79 during operation of the casing collection system as a casing balance system. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit
54. The 25D system (C-311-79) may be operated as a vapor balance system and/or an active well vent vapor recovery system. When operated as a vapor balance system valves associated with the 25D system (C-311-79) may be closed to allow condensate and noncondensable gas to be displaced to the reservoir through wells served by the system. [District NSR Rule] Federally Enforceable Through Title V Permit
55. Collected VOC vapors shall be incinerated in steam generators C-311-36, '-37, '-38, '-39, '-40 and '-41 or disposed of in Department of Oil, Gas, and Geothermal Resources (DOGGR) approved vapor disposal well(s). [District NSR Rule] Federally Enforceable Through Title V Permit
56. Operation of the casing collection system as a casing balance system shall not cause gas flow rates at the 6C, 13D and/or 25D Oil Cleaning Plant in excess of the design capacity of the tank vapor recovery compressor. [District NSR Rule] 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:** C-311-196-9

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 13D **TOWNSHIP:** 20S **RANGE:** 14E

**EQUIPMENT DESCRIPTION:**

TANK #13-29: 210,000 GALLON (5,000 BBL) FIXED ROOF WASH TANK, 38.37' D X 24' H, SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] 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.

28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] 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.

37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. {941} The operator of a fixed roof tank 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, 9.4.2] Federally Enforceable Through Title V Permit
41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
45. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
46. Collected vapors are to be incinerated in gas fired steam generators. [District Rule 4623] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] 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.

50. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
51. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit
52. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100 degrees F true vapor pressure shall be determined by Reid vapor pressure at 100 degrees F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
53. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
54. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
55. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] 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:** C-311-197-9

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 13D **TOWNSHIP:** 20S **RANGE:** 14E

**EQUIPMENT DESCRIPTION:**

TANK #13-30: 5,000 BBL FIXED ROOF WASH TANK, 38.75' D X 24'H, SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 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.

17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. {941} The operator of a fixed roof tank 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, 9.4.2] Federally Enforceable Through Title V Permit
41. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {983} The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. {984} The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
45. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
46. Collected vapors are to be incinerated in gas fired steam generators. [District Rule 4623] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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50. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
51. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit
52. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
53. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
54. Records of annual throughput of crude oil shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-311-198-9

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 13D **TOWNSHIP:** 20S **RANGE:** 14E

**EQUIPMENT DESCRIPTION:**

TANK #13-13: 11,300 GALLON FIXED ROOF SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

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## PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
30. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. {941} The operator of a fixed roof tank 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, 9.4.2] Federally Enforceable Through Title V Permit
40. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
41. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
42. Collected vapors are to be incinerated in gas fired steam generators. [District Rule 4623, 5.3.1] Federally Enforceable Through Title V Permit
43. Throughput of crude oil shall not exceed 200 bbl per day. [District NSR Rule] Federally Enforceable Through Title V Permit
44. True vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
45. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
46. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit
50. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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51. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
52. Permittee shall record average daily throughput of crude oil. Records shall be retained for five years and provided to the District upon request. [District NSR Rule and 2520, 9.5.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-311-236-3

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 13 **TOWNSHIP:** 20S **RANGE:** 14E

**EQUIPMENT DESCRIPTION:**

TANK 13-19: NOMINALLY SIZED 214,200 GALLON (5,100 BBL) FIXED ROOF CRUDE OIL STORAGE TANK SERVED BY SHARED VAPOR CONTROL SYSTEM LISTED ON PERMIT UNIT C-311-146

## PERMIT UNIT REQUIREMENTS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
5. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. Except as otherwise provided for on this permit, this tank shall only vent to the vapor control system listed on C-311-146. [District Rule 4623] Federally Enforceable Through Title V Permit
7. VOC fugitive emissions from the components in gas and liquid service for the storage tank shall not exceed 14.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Fugitive VOC emissions shall be calculated using EPA's "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission Factors. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Permittee shall maintain records of the number and type of components installed and the calculated fugitive emissions. Permittee shall update such records when new components are installed or removed. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Except as otherwise provided on this permit, this tank shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
11. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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12. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
13. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
14. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit
16. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
17. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
18. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
19. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
20. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
25. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
28. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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31. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
37. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
38. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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39. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
40. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
41. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
42. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
43. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
44. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
45. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
46. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship:  $t = 2.3 V / Q$ , where  $t$  = time,  $V$  = tank volume (cubic feet), and  $Q$  = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
50. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] 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.

51. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
52. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
53. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
54. {982} Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
55. {1740} This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
56. {1741} This unit does not store organic materials which are liquid at standard conditions and which are used as solvents, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended May 16, 2002) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

DRAFT

Attachment C  
Application



C-311-146-14, 150-9, 163-9, 164-9, 165-9, 166-9, 167-9, 168-9, 169-9, 170-9, 171-11, 172-11, 173-11, 174-11, 175-11, 176-11, 177-11, 178-11, 179-11, 180-11, 181-11, 182-11, 183-11, 184-11, 185-11, 186-11, 187-11, 188-11, 189-11, 190-11, 191-11, 192-11, 193-11, 194-11, 195-11, 196-11, 197-11, 198-11, 199-11, 200-11, 201-11, 202-11, 203-11, 204-11, 205-11, 206-11, 207-11, 208-11, 209-11, 210-11, 211-11, 212-11, 213-11, 214-11, 215-11, 216-11, 217-11, 218-11, 219-11, 220-11, 221-11, 222-11, 223-11, 224-11, 225-11, 226-11, 227-11, 228-11, 229-11, 230-11, 231-11, 232-11, 233-11, 234-11, 235-11, 236-11, 237-11, 238-11, 239-11, 240-11, 241-11, 242-11, 243-11, 244-11, 245-11, 246-11, 247-11, 248-11, 249-11, 250-11, 251-11, 252-11, 253-11, 254-11, 255-11, 256-11, 257-11, 258-11, 259-11, 260-11, 261-11, 262-11, 263-11, 264-11, 265-11, 266-11, 267-11, 268-11, 269-11, 270-11, 271-11, 272-11, 273-11, 274-11, 275-11, 276-11, 277-11, 278-11, 279-11, 280-11, 281-11, 282-11, 283-11, 284-11, 285-11, 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# San Joaquin Valley Air Pollution Control District

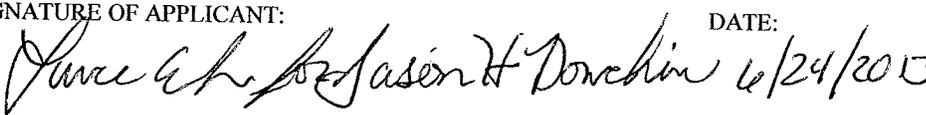
www.valleyair.org

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JUN 24 2013

SJVAPCD  
Southern Region

## Permit Application For:

[ ] ADMINISTRATIVE AMENDMENT    [ X ] MINOR MODIFICATION    [ ] SIGNIFICANT MODIFICATION

|   |   |
|---|---|
| 1. PERMIT TO BE ISSUED TO:<br><p style="text-align: center;"><b>CHEVRON U.S.A. INC.</b></p>   |   |
| 2. MAILING ADDRESS:<br><br>STREET/P.O. BOX: <u>PO BOX 1392</u><br><br>CITY: <u>BAKERSFIELD</u> STATE: <u>CA</u> 9-DIGIT ZIP CODE: <u>93302</u>  |   |
| 3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED:<br><br>STREET: <u>Fresno Heavy Oil Source</u> CITY: <u>Coalinga</u><br><br>_____ 1/4 SECTION _____ TOWNSHIP _____ RANGE _____   | INSTALLATION DATE:  |
| 4. GENERAL NATURE OF BUSINESS:<br><b>CRUDE OIL AND GAS PRODUCTION</b>   |   |
| 5. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE<br>(include Permit #'s if known, and use additional sheets if necessary)<br><br><b>Implementation of ATCs <sup>C</sup> 8-311-146-13, '148-8, '150-8, '197-8, '198-8, '236-2, '163-8, '164-8, '165-8, '166-8, '167-8, '168-8, '169-8, '170-8 and '177-10 to revise tank degassing and other minor clean-up</b> |   |
| 6. TYPE OR PRINT NAME OF APPLICANT:<br><b>Jason H. Donchin</b>  | TITLE OF APPLICANT:<br><b>HES Manager</b>   |
| 7. SIGNATURE OF APPLICANT:<br> DATE: <u>6/24/2013</u>   | PHONE: (661) 654-7145<br>FAX: (661) 654-7606<br>EMAIL: Lance.Ericksen@chevron.com |

**For APCD Use Only:**

|            |  |
|------------|--|
| DATE STAMP | FILING FEE RECEIVED: \$ _____ CHECK#: _____            |
|            | DATE PAID: _____                                       |
|            | PROJECT NO: <u>C-1132049</u> FACILITY ID: <u>C-311</u> |

San Joaquin Valley  
Unified Air Pollution Control District

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JUN 24 2013  
SJVAPCD  
Southern Region

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION                       ADMINISTRATIVE  
 MINOR PERMIT MODIFICATION                                       AMENDMENT

|  |                           |
|--|---------------------------|
| COMPANY NAME: <b>CHEVRON U.S.A. INC.</b>   | FACILITY ID: <b>C-311</b> |
| 1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility |                           |
| 2. Owner's Name: <b>CHEVRON U.S.A. INC.</b>  |                           |
| 3. Agent to the Owner: <b>N/A</b>  |                           |

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

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

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

Albert E. Richardson  
Signature of Responsible Official

6/21/13  
Date

Albert Richardson  
Name of Responsible Official (please print)

Change tank cleaning conditions on tanks  
C-311-146-13, '148-8, '150-8, '196-8, '197-8, '198-8, '236-2  
163-8, 164-8, 165-8, 166-8, 167-8, 168-8, 169-8, 170-8 & 177-10

Operations Supervisor  
Title of Responsible Official (please print)

## Attachment D

### Previous Title V Operating Permits



# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-311-146-9

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 13 **TOWNSHIP:** 20S **RANGE:** 14E

**EQUIPMENT DESCRIPTION:**

TANK #13-23: 84,546 GALLON (2,013 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 30'D X 16'H, EQUIPPED WITH VAPOR RECOVERY SYSTEM INCLUDING (2) 50 HP COMPRESSOR, REGULATOR, AND PIPING TO DISTRICT APPROVED STEAM GENERATORS FOR INCINERATION SERVED BY SHARED VAPOR RECOVERY SYSTEM FOR PERMIT UNITS C-311-112, -146, -147, -150, -196, -197, -198, AND -236

## PERMIT UNIT REQUIREMENTS

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1. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
3. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. The tank vapor recovery system shall be connected to tanks permitted as PTO #C-311-146, '-147, '-150, '-196, '-197, '-198 and -236. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Collected VOC vapors shall be incinerated in steam generators C-311-19, '-20, '-27, '-28, '-30, -36, '-37, '-38, '-39, '-40 and '-41, or disposed of in Department of Oil, Gas, and Geothermal Resources (DOGGR) approved vapor disposal well(s). [District NSR Rule] Federally Enforceable Through Title V Permit
6. The vapor recovery system may control the recovered well casing vapors from permit units C-311-77, '-78, '-83 and '-111 during operation of the casing collection system as a casing balance system. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit
7. The 13D system (C-311-77, '-78, '-83 and '-111) may be operated as a vapor balance system and/or an active well vent vapor recovery system. When operated as a vapor balance system, valves associated with the 13D system (C-311-77, '-78, '-83 and '-111) may be closed to allow condensate and noncondensable gas to be displaced to the reservoir through wells served by the system. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Operation of the casing collection system as a casing balance system shall not cause gas flow rates at the 6C, 13D and/or 25D Oil Cleaning Plant in excess of the design capacity of the tank vapor recovery compressor. [District NSR Rule] Federally Enforceable Through Title V Permit
9. VOC fugitive emissions from the components in gas and liquid service for the storage tank shall not exceed 16.3 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. VOC fugitive emissions from the components in gas and liquid service for the vapor control system shall not exceed 31.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Fugitive VOC emissions shall be calculated using EPA's "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission Factors. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Permittee shall maintain records of the number and type of components installed and the calculated fugitive emissions. Permittee shall update such records when new components are installed or removed. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
14. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
15. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
16. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
17. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit
19. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
20. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
22. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
25. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
28. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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30. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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38. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
39. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
40. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
41. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
42. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
43. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
44. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
45. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
46. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]
48. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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50. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
51. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
52. When storing liquids of TVP equal to or greater than 0.5 psia, prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship:  $t = 2.3 V / Q$ , where  $t$  = time,  $V$  = tank volume (cubic feet), and  $Q$  = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
53. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit
54. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
55. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit
56. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
57. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
58. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
59. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
60. This unit does not store organic materials which are liquid at standard conditions and which are used as solvents, viscosity reducers, or cleaning agents. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of District Rules 4661 (as amended May 16, 2002) and 4801 (as amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-311-150-7

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 13 **TOWNSHIP:** 20S **RANGE:** 14

**EQUIPMENT DESCRIPTION:**

TANK #13-18: 214,326 GALLON (5,103 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 39'D X 24'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-146

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]
31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. When storing organic liquids of TVP less than 0.5 psia, if the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired 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. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When storing organic liquids of TVP less than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. Except during tank cleaning and maintenance operations, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. The operator of a fixed roof tank 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, 9.4.2] Federally Enforceable Through Title V Permit
41. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 17, 1992). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. The requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. The requirements of SJVUAPCD Rule 4661 (Amended December 17, 1992) and Rule 4801 (Amended December 17, 1992) do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
45. Collected vapors are to be incinerated in gas fired steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit
46. When storing organic liquids of TVP less than 0.5 psia, permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
47. When storing organic liquids of TVP less than 0.5 psia, tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
48. When storing organic liquids of TVP less than 0.5 psia, permittee shall notify the District Compliance division at least 48 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit
49. When storing organic liquids of TVP less than 0.5 psia, permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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50. When storing organic liquids of TVP less than 0.5 psia, the tank shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020 (amended 12/19/02). [District Rule 2080] Federally Enforceable Through Title V Permit
51. When storing organic liquids of TVP less than 0.5 psia, steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
52. When storing organic liquids of TVP less than 0.5 psia, prior to reintroducing crude oil/water to the tank, the tank shall be filled to the maximum possible level with water, the tank vapor control system shall be reactivated and pressure/relief valves closed, and the liquid level shall be adjusted as necessary. [District Rule 2080] Federally Enforceable Through Title V Permit
53. When storing organic liquids of TVP less than 0.5 psia, within 48 hours after refilling the tank, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA Method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
54. Permittee shall record annual throughput of crude oil. Records shall be retained for five years and made available for District inspection upon request. [District Rule 1070, and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-311-163-7

**EXPIRATION DATE:** 12/31/2016

**SECTION:** 25 **TOWNSHIP:** 20S **RANGE:** 14E

**EQUIPMENT DESCRIPTION:**

TANK #25-31: 197,274 GALLON (4,697 BBL) FIXED ROOF CRUDE OIL STORAGE TANK, 40'D X 21'H SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT C-311-177

## PERMIT UNIT REQUIREMENTS

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1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight. [District Rule 4623, 5.1.1 and 5.6] Federally Enforceable Through Title V Permit
2. Except as otherwise provided on this permit, this tank and vapor control system shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3 and 5.6] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. [District Rule 4623, 3.11 and 3.17] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
5. The operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in this permit and District Rule 4623. Determinations shall be made annually during the summer and whenever there is a change in the source or type of petroleum entering the tank. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. This determination is to be done so that proper inspection, maintenance and tank cleaning procedures can be made per District Rule 4623, Section 5.7, prior to storing liquids in any permitted tank with a TVP equal to or greater than 0.5 psia. Determination can be made using representative sampling of common sources in the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells. [District NSR Rule and District Rules 2520, 9.3.2 and 4623, 5.7] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)". Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. For crude oil with an API gravity greater than 26 degrees, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in District Rule 4623, Appendix B. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
10. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US 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 the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
11. An operator whose tanks are subject to the requirements of District Rule 4623, shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, Reid/TVP as appropriate and API gravity of petroleum liquids stored in this unit to determine which oils are from the Heavy Oil source. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
12. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. When storing organic liquids of TVP equal to or greater than 0.5 psia, upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. When storing organic liquids of TVP equal to or greater than 0.5 psia, components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. When storing organic liquids of TVP equal to or greater than 0.5 psia, leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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17. When storing organic liquids of TVP equal to or greater than 0.5 psia, if a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. When storing organic liquids of TVP equal to or greater than 0.5 psia, any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
19. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
20. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
21. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
23. When storing organic liquids of TVP of equal to or greater than 0.5 psia, to facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
24. When storing organic liquids of TVP of equal to or greater than 0.5 psia, this tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. When storing organic liquids of TVP of equal to or greater than 0.5 psia, after a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid is placed, held, or stored in this tank. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
26. When storing organic liquids of TVP of equal to or greater than 0.5 psia, while performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
27. When storing organic liquids of TVP of equal to or greater than 0.5 psia, steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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28. When storing organic liquids of TVP of equal to or greater than 0.5 psia, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
29. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
30. When storing organic liquids of TVP of equal to or greater than 0.5 psia, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7]
31. When storing organic liquids of TVP equal to or greater than 0.5 psia, operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Identification and location of essential process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When storing organic liquids of TVP less than 0.5 psia, all piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. When storing organic liquids of TVP less than 0.5 psia, a facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When storing organic liquids of TVP less than 0.5 psia, an operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When storing organic liquids of TVP less than 0.5 psia, emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When storing organic liquids of TVP less than 0.5 psia, any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 or 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 or 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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