



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

NOV 14 2012

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

Re: **Notice of Minor Title V Permit Modification**
District Facility # S-1703
Project # S-1122815

Dear Mr. Rios:

Enclosed for you to review is an application for minor Title V permit modification for the facility identified above. Macpherson Oil Company is proposing a Title V minor permit modification to incorporate the recently issued S-1703-144-15, '-145-10, '-146-10, '-150-10, '-152-9, '-195-2, '-209-1 into the Title V operating permit. Macpherson Oil Company is applying for an Authority to Construct permit for the addition of Tank Interior Cleaning and Tank Preventive Inspection and Maintenance conditions to seven of their existing tanks. In addition to modifying the current permits to allow the vapor recovery unit to be shutdown, or disconnected during power curtailment events.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued S-1703-144-15, '-145-10, '-146-10, '-150-10, '-152-9, '-195-2, '-209-1, emission increases, application, and previous Title V permit. Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter.

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

Sincerely,

David Warner
Director of Permit Services

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
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San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

NOV 14 2012

Jody Butler
Macpherson Oil Company
P.O. Box 5368
Bakersfield, CA 93388

**Re: Notice of Minor Title V Permit Modification
District Facility # S-1703
Project # S-1122815**

Dear Mr. Butler:

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 S-1703-144-15, '-145-10, '-146-10, '-150-10, '-152-9, '-195-2, '-209-1 into the Title V operating permit. Macpherson Oil Company is applying for an Authority to Construct permit for the addition of Tank Interior Cleaning and Tank Preventive Inspection and Maintenance conditions to seven of their existing tanks. In addition to modifying the current permits to allow the vapor recovery unit to be shutdown, or disconnected during power curtailment events.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued S-1703-144-15, '-145-10, '-146-10, '-150-10, '-152-9, '-195-2, '-209-1, emission increases, application, and previous Title V permit. This project will be subject to a 45-day EPA commenting period prior to the District taking final action.

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

Sincerely,

David Warner
Director of Permit Services

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San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Facility Name: Macpherson Oil Company
Mailing Address: P.O. Box 5368
Bakersfield, CA 93388

Date: 10/30/12

Engineer: William Jones

Lead Engineer: Steve Leonard

Contact Person: Jody Butler

Telephone: 661-393-3204 ext. #103

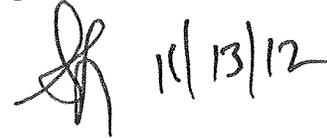
Fax: 661-393-8065

E-Mail: Jody_butler@macphersonoil.com

Application #(s): S-1703-144-15, '-145-10, '-146-10, '-150-10, '-152-9, '-195-2, '-209-1

Project #: S-1122815

Deemed Complete:



I. Proposal

Macpherson Oil Company (MOC) is applying for an Authority to Construct (ATC) permit for the addition of Tank Interior Cleaning and Tank Preventive Inspection and Maintenance conditions.

MOC is currently under contract with their power supplier to allow the supplier to curtail power to the field during power flex alerts. During these curtailment events the entire facility is powered down. Consequently the vapor control units are also powered down, resulting in a violation of the their current permit conditions as pertaining to the vapor control requirements in section 5 of District Rule 4623. However since the subject tanks contain crude oil with a TVP less than 0.5 psi (**See Appendix E** for gas analysis) the mentioned tanks are not subject to the vapor control requirement of section 5 of District Rule 4623. The following conditions will remain or be added to the permits in order to allow the vapor recovery unit to be shutdown, or disconnected during power curtailment events:

- The permittee shall keep written documentation from the power supplier indicating the date, and duration of the curtailment in addition to the beginning and end times. [District Rule 2201]
- The permittee shall maintain a written log of the date and duration of each power curtailment event. [District Rule 2201]

MOC received their Title V Permit on May 11, 2001. This modification can be classified as a Title V minor modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. MOC must apply to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
40 CFR 60	Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4623	Storage of Organic Liquids (5/19/05)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice
Public Resources Code 21000-21177:	California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387:	CEQA Guidelines

III. Project Location

The tank is located in Macpherson's Kern County Heavy Oil Central Stationary Source in the SE/4 of Section 18, Township 28S, Range 29E. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

MOC operates a crude oil production facility which uses thermally enhanced oil recovery techniques. This operation includes a well head casing vent vapor recovery (CVR) system, thermally enhanced crude oil production wells, and three tank battery vapor recovery (TVR) systems.

Crude oil production tank batteries receive produced fluids from enhanced oil recovery operations. These facilities separate the produced water from the crude oil prior to shipment. Produced water is piped to a permitted disposal well or produced water tank and the dehydrated oil is pumped into a sales line for delivery to a refining operation. A slop oil tank is used to collect sand dumps from the FWKO vessel and the discharge of the sample drains from the storage tanks.

MOC is currently under contract with their power provider to allow for multiple unscheduled power curtailments. During power curtailment events the facility is powered down. During this time all crude oil production will cease, and all vapor control parameters are offline. Power curtailment events are expected to last up to 5 hours in duration. These events are not expected to total more than 24 hours per month or 40 hours per year.

Immediately following a curtailment event the facility is powered up, all oil production activities will resume, and all vapor control parameters will be reinstated.

V. Equipment Listing

Pre-Project Equipment Description:

- S-1703-144-14: 2,000 BBL FIXED ROOF PETROLEUM STORAGE TANK #T-240 SERVED BY VAPOR CONTROL SYSTEM SHARED WITH S-1703-145, '-146, '-150, '-152, '-195, AND '-197 VENTING TO VAPOR CONTROL SYSTEM PERMITTED UNDER S-1703-143 AND/OR DIRECTLY TO STEAM GENERATORS S-1703-157, '-158, '-159, '-160, '-161, OR '-162 FOR INCINERATION
- S-1703-145-4: 1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK T-245 VENTING TO VAPOR CONTROL SYSTEM LISTED ON '-144
- S-1703-146-4: 10,000 BBL FIXED ROOF CRUDE OIL WASH TANK T-110 VENTING TO VAPOR CONTROL SYSTEM LISTED ON '-144
- S-1703-150-4: 3,300 BBL FIXED ROOF CRUDE OIL WASH TANK T-220 VENTING TO VAPOR CONTROL SYSTEM LISTED ON '-144
- S-1703-152-3: 105,000 GALLON (2500 BBL) FIXED ROOF SLOP TANK T-320A VENTING TO VAPOR CONTROL SYSTEM LISTED ON '-144
- S-1703-195-1: 10,000 BBL TANK #T-300 SERVED BY VAPOR CONTROL SYSTEM LISTED UNDER S-1703-144

Proposed Modification:

- S-1703-144-15: MODIFICATION OF 2,000 BBL FIXED ROOF PETROLEUM STORAGE TANK #T-240 SERVED BY VAPOR CONTROL SYSTEM SHARED WITH S-1703-145, '-146, '-150, '-152, '-195, AND '-197 VENTING TO VAPOR CONTROL SYSTEM PERMITTED UNDER S-1703-143 AND/OR DIRECTLY TO STEAM GENERATORS S-1703-157, '-158, '-159, '-160, '-161, OR '-162 FOR INCINERATION: ADD RULE 4623 VOLUNTARY TANK CLEANING PROVISIONS AND TANK PREVENTIVE INSPECTION AND MAINTENANCE CONDITIONS, IN ADDITION TO ALLOWING FOR THE VAPOR CONTROL SYSTEM TO BE DISABLED DURING VOLUNTARY POWER CURTAILMENT EVENTS
- S-1703-145-10: MODIFICATION OF 1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK T-245 VENTING TO VAPOR CONTROL SYSTEM LISTED ON '-144: ADD RULE 4623 VOLUNTARY TANK CLEANING PROVISIONS AND TANK PREVENTIVE INSPECTION AND MAINTENANCE CONDITIONS, IN ADDITION TO ALLOWING FOR THE VAPOR CONTROL SYSTEM TO BE DISABLED DURING VOLUNTARY POWER CURTAILMENT EVENTS

- S-1703-146-10: MODIFICATION OF 10,000 BBL FIXED ROOF CRUDE OIL WASH TANK T-110 VENTING TO VAPOR CONTROL SYSTEM LISTED ON '-144: ADD RULE 4623 VOLUNTARY TANK CLEANING PROVISIONS AND TANK PREVENTIVE INSPECTION AND MAINTENANCE CONDITIONS, IN ADDITION TO ALLOWING FOR THE VAPOR CONTROL SYSTEM TO BE DISABLED DURING VOLUNTARY POWER CURTAILMENT EVENTS
- S-1703-150-10: MODIFICATION OF 3,300 BBL FIXED ROOF CRUDE OIL WASH TANK T-220 VENTING TO VAPOR CONTROL SYSTEM LISTED ON '-144: ADD RULE 4623 VOLUNTARY TANK CLEANING PROVISIONS AND TANK PREVENTIVE INSPECTION AND MAINTENANCE CONDITIONS, IN ADDITION TO ALLOWING FOR THE VAPOR CONTROL SYSTEM TO BE DISABLED DURING VOLUNTARY POWER CURTAILMENT EVENTS
- S-1703-152-9: MODIFICATION OF 105,000 GALLON (2500 BBL) FIXED ROOF SLOP TANK T-320A VENTING TO VAPOR CONTROL SYSTEM LISTED ON '-144: ADD RULE 4623 VOLUNTARY TANK CLEANING PROVISIONS AND TANK PREVENTIVE INSPECTION AND MAINTENANCE CONDITIONS, IN ADDITION TO ALLOWING FOR THE VAPOR CONTROL SYSTEM TO BE DISABLED DURING VOLUNTARY POWER CURTAILMENT EVENTS
- S-1703-195-2: MODIFICATION OF 10,000 BBL TANK #T-300 SERVED BY VAPOR CONTROL SYSTEM LISTED UNDER S-1703-144: ADD RULE 4623 VOLUNTARY TANK CLEANING PROVISIONS AND TANK PREVENTIVE INSPECTION AND MAINTENANCE CONDITIONS, IN ADDITION TO ALLOWING FOR THE VAPOR CONTROL SYSTEM TO BE DISABLED DURING VOLUNTARY POWER CURTAILMENT EVENTS
- S-1703-209-1: MODIFICATION OF 6,200 BBL WASH TANK T-220 CONNECTED TO VAPOR RECOVERY SYSTEM LISTED ON '-144: ADD RULE 4623 VOLUNTARY TANK CLEANING PROVISIONS AND TANK PREVENTIVE INSPECTION AND MAINTENANCE CONDITIONS, IN ADDITION TO ALLOWING FOR THE VAPOR CONTROL SYSTEM TO BE DISABLED DURING VOLUNTARY POWER CURTAILMENT EVENTS

Post Project Equipment Description:

- S-1703-144-15: 2,000 BBL FIXED ROOF PETROLEUM STORAGE TANK #T-240 SERVED BY VAPOR CONTROL SYSTEM SHARED WITH S-1703-145, '-146, '-150, '-152, '-195, AND '-197 VENTING TO VAPOR CONTROL SYSTEM PERMITTED UNDER S-1703-143 AND/OR DIRECTLY TO STEAM GENERATORS S-1703-157, '-158, '-159, '-160, '-161, OR '-162 FOR INCINERATION
- S-1703-145-10: 1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK T-245 VENTING TO VAPOR CONTROL SYSTEM LISTED ON '-144

- S-1703-146-10: 10,000 BBL FIXED ROOF CRUDE OIL WASH TANK T-110 VENTING TO VAPOR CONTROL SYSTEM LISTED ON '-144
- S-1703-150-10: 3,300 BBL FIXED ROOF CRUDE OIL WASH TANK T-220 VENTING TO VAPOR CONTROL SYSTEM LISTED ON '-144
- S-1703-152-9: 105,000 GALLON (2500 BBL) FIXED ROOF SLOP TANK T-320A VENTING TO VAPOR CONTROL SYSTEM LISTED ON '-144
- S-1703-195-2: 10,000 BBL TANK #T-300 SERVED BY VAPOR CONTROL SYSTEM LISTED UNDER S-1703-144
- S-1703-209-1: 6,200 BBL WASH TANK T-220 CONNECTED TO VAPOR RECOVERY SYSTEM LISTED ON '-144

VI. Emission Control Technology Evaluation

There are no changes in control methods proposed by the applicant. The emission control device is described in the engineering evaluation for project number S-1103954. No further discussion is necessary.

VII. General Calculations

A. Assumptions

- The VOC content of the vapors in the vapor control systems does not exceed 10% by weight.
- All vapors are controlled by at least 99% prior to discharge (as listed on S-1703-143, TEOR well permit)
- VOC emissions from a vapor controlled tank consist of fugitive emissions from the tank appurtenances and the branch line piping components and connectors to the point where the tank is tied into the existing vapor control system piping (District Practice)
- Only fugitive VOC emissions are emitted from tanks served by vapor control systems
- Greenhouse Gas emission increases ≤ 230 metric tons/year are equal to zero (per APR 2015, Zero Equivalency Policy for Greenhouse Gases. The increases in Greenhouse Gas emission associated with this project are assumed to be negligible.
- During voluntary power curtailment events the crude oil throughput is reduced to 0 gal/hr.
- All Vapor control systems will be disabled during voluntary power curtailment events

B. Emission Factors

For the tank served by a vapor control system, fugitive emissions are calculated pursuant to District Policy SSP 2015, Procedures for Quantifying Fugitive VOC Emissions at Petroleum and SOCMF Facilities. District Policy SSP 2015 states that VOC emissions are not assessed for components handling produced fluids with an API gravity less than 30°, or for components handling fluid streams with a VOC content of less than 10% by weight. Since this is a heavy oil facility, and since the VOC content of the vapor control gas is less

than 10% by weight, VOC emissions will not be assessed from the tank, when the vapor control system is operating. During curtailments, small amounts of breathing losses can occur as shown in the uncontrolled emission calculations (Appendix E). Since the uncontrolled emissions during an power curtailment are less than 0.5lbs/day the uncontrolled emissions are rounded to zero.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Pre-project emissions were copied from the District's PAS database and summarized in the following table:

Pre-Project Potential to Emit [PE1]		
	VOC (lb./day)	VOC (lb. /yr.)
S-1703-144-14	0.0	0
S-1703-145-4	0.0	0
S-1703-146-4	0.0	0
S-1703-150-4	0.0	0
S-1703-152-3	0.0	0
S-1703-195-1	0.0	0
S-1703-209-0	0.0	0

2. Post Project Potential to Emit (PE2)

Since this is a heavy oil facility, and since the VOC content of the vapor control gas is less than 10% by weight, VOC emissions will not be assessed to the tank:

Post-Project Potential to Emit [PE2]		
	VOC (lb./day)	VOC (lb. /yr.)
S-1703-144-15	0.0	0
S-1703-145-10	0.0	0
S-1703-146-10	0.0	0
S-1703-150-10	0.0	0
S-1703-152-9	0.0	0
S-1703-195-2	0.0	0
S-1703-209-1	0.0	0

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary

Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for VOC emissions; therefore, SSPE1 calculations are not necessary.

4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

Since facility emissions are already above the Offset and Major Source Thresholds for VOC emissions, SSPE2 calculations are not necessary.

5. Major Source Determination

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. However, for the purposes of determining major source status, the SSPE2 shall not include the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.”

This source is an existing Major Source for VOC emissions and will remain a Major Source for VOC. No change in other pollutants are proposed or expected as a result of this project.

6. Baseline Emissions (BE)

The BE calculation (in lbs./year) is performed pollutant-by-pollutant for each unit within the project to calculate the QNEC, and if applicable, to determine the amount of offsets required.

Pursuant to District Rule 2201, BE = PE1 for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to District Rule 2201.

As shown in Section VII.C.5 above, the facility is a Major Source for VOC pollutant. However the units included in this project are considered Clean Emissions

Therefore BE=PE1.

S-1703-144 through '-146, '-150-10, '-152, '-195, and '-209:

As calculated in Section VII.C.1 above, PE1 is summarized in the following table:

BE (lb./year)					
	NO_x	SO_x	PM₁₀	CO	VOC
S-1703-144-15	0	0	0	0	0
S-1703-145-10	0	0	0	0	0
S-1703-146-10	0	0	0	0	0
S-1703-150-10	0	0	0	0	0
S-1703-152-9	0	0	0	0	0
S-1703-195-2	0	0	0	0	0
S-1703-209-1	0	0	0	0	0

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this source is not included in the 27 specific source categories specified in 40 CFR 51.165, the, increases in fugitive emissions are not included in the SB 288 Major Modification calculation.

Since this facility is a major source for VOC the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

S-1703-144-15:

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb./year)	Threshold (lb./year)	SB 288 Major Modification Calculation Required?
NO _x	0	50,000	No
SO _x	0	80,000	No
PM ₁₀	0	30,000	No
VOC	0	50,000	No

S-1703-145-10:

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb./year)	Threshold (lb./year)	SB 288 Major Modification Calculation Required?
NO _x	0	50,000	No
SO _x	0	80,000	No
PM ₁₀	0	30,000	No
VOC	0	50,000	No

S-1703-146-10:

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb./year)	Threshold (lb./year)	SB 288 Major Modification Calculation Required?
NO _x	0	50,000	No
SO _x	0	80,000	No
PM ₁₀	0	30,000	No
VOC	0	50,000	No

S-1703-150-10:

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb./year)	Threshold (lb./year)	SB 288 Major Modification Calculation Required?
NO _x	0	50,000	No
SO _x	0	80,000	No
PM ₁₀	0	30,000	No
VOC	0	50,000	No

S-1703-152-9:

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb./year)	Threshold (lb./year)	SB 288 Major Modification Calculation Required?
NO _x	0	50,000	No
SO _x	0	80,000	No
PM ₁₀	0	30,000	No
VOC	0	50,000	No

S-1703-195-2:

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb./year)	Threshold (lb./year)	SB 288 Major Modification Calculation Required?
NO _x	0	50,000	No
SO _x	0	80,000	No
PM ₁₀	0	30,000	No
VOC	0	50,000	No

S-1703-209-1:

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb./year)	Threshold (lb./year)	SB 288 Major Modification Calculation Required?
NO _x	0	50,000	No
SO _x	0	80,000	No
PM ₁₀	0	30,000	No
VOC	0	50,000	No

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a “Major Modification” as defined in 40 CFR 51.165 and part D of Title I of the CAA.

Since this source is not included in the 27 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are not included in the Federal Major Modification determination.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. Emission decreases may not cancel out the increases for this determination.

Step 1

For existing emissions units, the increase in emissions is calculated as follows.

$$\text{Emission Increase} = \text{PAE} - \text{BAE} - \text{UBC}$$

Where: PAE = Projected Actual Emissions, and
BAE = Baseline Actual Emissions
UBC = Unused baseline capacity

If there is no increase in design capacity or potential to emit, the PAE is equal to the annual emission rate at which the unit is projected to emit in any one year, selected by

the operator, within 5 years after the unit resumes normal operation (10 years for existing units with an increase in design capacity or potential to emit). If detailed PAE are not provided, the PAE is equal to the PE2 for each permit unit.

The BAE is calculated based on historical emissions and operating records for any 24 month period, selected by the operator, within the previous 10 year period (5 years for electric utility steam generating units). The BAE must be adjusted to exclude any non-compliant operation emissions and emissions that are no longer allowed due to lower applicable emission limits that were in effect when this application was deemed complete.

UBC: Since this project does not result in an increase in design capacity or potential to emit, and it does not impact the ability of the emission unit to operate at a higher utilization rate, the UBC is the portion of PAE that the emission units could have accommodated during the baseline period.

The project's combined total emission increases are compared to the Federal Major Modification Thresholds in the following table.

S-1703-144-15:

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb./yr.)	Thresholds (lb./yr.)	Federal Major Modification?
NO _x *	0	0	No
VOC*	0	0	No
PM ₁₀	0	30,000	No
PM _{2.5}	0	20,000	No
SO _x	0	80,000	No

S-1703-145-10:

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb./yr.)	Thresholds (lb./yr.)	Federal Major Modification?
NO _x *	0	0	No
VOC*	0	0	No
PM ₁₀	0	30,000	No
PM _{2.5}	0	20,000	No
SO _x	0	80,000	No

S-1703-146-10:

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb./yr.)	Thresholds (lb./yr.)	Federal Major Modification?
NO _x *	0	0	No
VOC*	0	0	No
PM ₁₀	0	30,000	No
PM _{2.5}	0	20,000	No
SO _x	0	80,000	No

S-1703-150-10:

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb./yr.)	Thresholds (lb./yr.)	Federal Major Modification?
NO _x *	0	0	No
VOC*	0	0	No
PM ₁₀	0	30,000	No
PM _{2.5}	0	20,000	No
SO _x	0	80,000	No

S-1703-152-9:

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb./yr.)	Thresholds (lb./yr.)	Federal Major Modification?
NO _x *	0	0	No
VOC*	0	0	No
PM ₁₀	0	30,000	No
PM _{2.5}	0	20,000	No
SO _x	0	80,000	No

S-1703-195-2:

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb./yr.)	Thresholds (lb./yr.)	Federal Major Modification?
NO _x *	0	0	No
VOC*	0	0	No
PM ₁₀	0	30,000	No
PM _{2.5}	0	20,000	No
SO _x	0	80,000	No

S-1703-209-1:

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb./yr.)	Thresholds (lb./yr.)	Federal Major Modification?
NO _x *	0	0	No
VOC*	0	0	No
PM ₁₀	0	30,000	No
PM _{2.5}	0	20,000	No
SO _x	0	80,000	No

*If there is any emission increases in NO_x or VOC, this project is a Federal Major Modification and no further analysis is required.

Since none of the Federal Major Modification Thresholds are being surpassed with this project, this project does not constitute a Federal Major Modification and no further analysis is required.

9. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in Appendix D.

VIII. Compliance

District Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

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

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

As discussed in Section I above, there are no new emissions units associated with this project. Therefore BACT for new units with PE > 2 lb./day purposes is not triggered.

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

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

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

$$\text{AIPE} = \text{PE2} - \text{HAPE}$$

Where,

AIPE = Adjusted Increase in Permitted Emissions, (lb. /day)

PE2 = Post-Project Potential to Emit, (lb. /day)

HAPE = Historically Adjusted Potential to Emit, (lb. /day)

$$\text{HAPE} = \text{PE1} \times (\text{EF2}/\text{EF1})$$

Where,

PE1 = The emissions unit's PE prior to modification or relocation, (lb. /day)

EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1

EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

$$\text{AIPE} = \text{PE2} - (\text{PE1} * (\text{EF2} / \text{EF1}))$$

For the existing tank and vapor control system PE2 = PE1, EF2 = EF1, and only VOC is emitted.

S-1703-144-15

$$\begin{aligned}\text{AIPE} &= 0.0 - (0.0 \times (1/1)) \\ &= 0.0 - 0.0 \\ &= 0.0 \text{ lb.-VOC/day}\end{aligned}$$

S-1703-145-10

$$\begin{aligned}\text{AIPE} &= 0.0 - (0.0 \times (1/1)) \\ &= 0.0 - 0.0 \\ &= 0.0 \text{ lb.-VOC/day}\end{aligned}$$

S-1703-146-10

$$\begin{aligned} \text{AIPE} &= 0.0 - (0.0 \times (1/1)) \\ &= 0.0 - 0.0 \\ &= 0.0 \text{ lb.-VOC/day} \end{aligned}$$

S-1703-150-10

$$\begin{aligned} \text{AIPE} &= 0.0 - (0.0 \times (1/1)) \\ &= 0.0 - 0.0 \\ &= 0.0 \text{ lb.-VOC/day} \end{aligned}$$

S-1703-152-9

$$\begin{aligned} \text{AIPE} &= 0.0 - (0.0 \times (1/1)) \\ &= 0.0 - 0.0 \\ &= 0.0 \text{ lb.-VOC/day} \end{aligned}$$

S-1703-195-2

$$\begin{aligned} \text{AIPE} &= 0.0 - (0.0 \times (1/1)) \\ &= 0.0 - 0.0 \\ &= 0.0 \text{ lb.-VOC/day} \end{aligned}$$

S-1703-209-1

$$\begin{aligned} \text{AIPE} &= 0.0 - (0.0 \times (1/1)) \\ &= 0.0 - 0.0 \\ &= 0.0 \text{ lb.-VOC/day} \end{aligned}$$

As demonstrated above, the AIPE is not greater than 2.0 lb. /day for VOC emissions for any tank. Therefore BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project does not constitute an SB 288 and/or Federal Major Modification for NO_x emissions. Therefore BACT is not triggered for any pollutant.

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb./year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	>20,000	<54,750	>29,200	<200,000	>20,000
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	Yes	No	Yes	No	Yes

2. Quantity of Offsets Required

As seen above, the facility is an existing Major Source for NO_x and the SSPE2 is greater than the offset thresholds. Therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year for NO_x is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb./year) = $(\sum[PE2 - BE] + ICCE) \times DOR$, for all new or modified emissions units in the project,

Where,

PE2 = Post Project Potential to Emit, (lb./year)

BE = Baseline Emissions, (lb./year)

ICCE = Increase in Cargo Carrier Emissions, (lb./year)

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, Located at a Major Source.

otherwise,

BE = HAE

As calculated in Section VII.C.6 above, the BE from this unit are equal to the PE1 since the unit is a Clean Emissions Unit.

There are no increases in cargo carrier emissions. Therefore offsets can be determined as follows:

Offsets Required (lb. /year) = $(PE2 - BE) \times DOR$

S-1703-144-15 (for all pollutants):

$$\begin{aligned}\text{Offsets Required (lb. /year)} &= (0 - 0) \times \text{DOR} \\ &= 0 \times \text{DOR} \\ &= 0 \text{ lb. /year}\end{aligned}$$

S-1703-145-10 (for all pollutants):

$$\begin{aligned}\text{Offsets Required (lb. /year)} &= (0 - 0) \times \text{DOR} \\ &= 0 \times \text{DOR} \\ &= 0 \text{ lb. /year}\end{aligned}$$

S-1703-146-10 (for all pollutants):

$$\begin{aligned}\text{Offsets Required (lb. /year)} &= (0 - 0) \times \text{DOR} \\ &= 0 \times \text{DOR} \\ &= 0 \text{ lb. /year}\end{aligned}$$

S-1703-150-10 (for all pollutants):

$$\begin{aligned}\text{Offsets Required (lb. /year)} &= (0 - 0) \times \text{DOR} \\ &= 0 \times \text{DOR} \\ &= 0 \text{ lb. /year}\end{aligned}$$

S-1703-152-9 (for all pollutants):

$$\begin{aligned}\text{Offsets Required (lb. /year)} &= (0 - 0) \times \text{DOR} \\ &= 0 \times \text{DOR} \\ &= 0 \text{ lb. /year}\end{aligned}$$

S-1703-195-2 (for all pollutants):

$$\begin{aligned}\text{Offsets Required (lb. /year)} &= (0 - 0) \times \text{DOR} \\ &= 0 \times \text{DOR} \\ &= 0 \text{ lb. /year}\end{aligned}$$

S-1703-209-1 (for all pollutants):

$$\begin{aligned}\text{Offsets Required (lb. /year)} &= (0 - 0) \times \text{DOR} \\ &= 0 \times \text{DOR} \\ &= 0 \text{ lb. /year}\end{aligned}$$

As demonstrated in the calculation above, the amount of offsets for all pollutants is zero; therefore, offsets will not be required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:

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

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

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

As demonstrated in VII.C.7, this project does not constitute an SB 288 or Federal Major Modification; therefore, public noticing for SB 288 or Federal Major Modification purposes is not required.

b. PE > 100 lb. /day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. There are no new emissions units associated with this project. Therefore public noticing is not required for this project for PE > 100 lb./day.

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb./year)	SSPE2 (lb./year)	Offset Threshold	Public Notice Required?
NO _x	>20,000	>20,000	20,000 lb./year	No
SO _x	<54,750	<54,750	54,750 lb./year	No
PM ₁₀	>29,200	>29,200	29,200 lb./year	No
CO	<200,000	<200,000	200,000 lb./year	No
VOC	>20,000	>20,000	20,000 lb./year	No

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb. /year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb. /year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. Since there is no increase in emissions associated with this project, SSIPE=0. Therefore public noticing for SSIPE purposes is not required.

2. Public Notice Action

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

D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions:

S-1703-144 through '-146, '-150-10, '-152, '-195, and '-209:

There are no additional nor modified DEL conditions proposed for this unit.

E. Compliance Assurance

1. Source Testing

To maintain the exemption from fugitive emissions (VOC content of the vapors in the tank will be below 10% by weight) regular testing will be required. The following condition will remain on the permit to ensure continued compliance:

- VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]

2. Monitoring

VOC content of the vapors in the tank will be below 10% by weight. Therefore no monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

The permittee will be required to keep records verifying that the vapors stored in the tank remain below 10% by weight of VOC. The following condition will remain on the permit to ensure continued compliance:

- Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201]
- All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2201]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit.

In accordance with Rule 2520, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
 - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
 - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

As discussed above, the facility has applied for a Certificate of Conformity (COC). Therefore, the facility must apply to modify their Title V permit with a minor modification, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment/minor modification application.

Rule 4001 New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart A, section 14, defines the meaning of modification to which the standards are applicable. §60.14, paragraph (e)(5) states that the following will not be considered as a modification: *“the addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or replaced by a system which the Administrator determines to be less environmentally beneficial”*.

No newly constructed, reconstructed, or modified affected facilities are proposed in this project, therefore, the requirements of this Rule do not apply to the project.

Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to storage tank operations.

Rule 4101 Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). Visible emissions are not expected from the tank vapor recovery system. Also, based on past inspections of the facility continued compliance is expected.

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

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

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

Rule 4623 Storage of Organic Liquids

The purpose of this rule is to limit volatile organic compound (VOC) emissions from the storage of organic liquids.

This rule applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held, or stored.

The applicant has requested to include the mentioned tanks in the Voluntary Tank Interior Cleaning Program, therefore the following Organic Liquid Storage Tanks – Cleaning Requirements will be added in accord with District policy SSP 2210.

S-1703-144 through '-146, '-150-10, '-152, '-195, and '-209:

- 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]
- This tank shall be degassed before commencing interior cleaning by following one of the following options: 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) by 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) by 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]
- 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]
- 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]
- 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 having a TVP of 0.5 psia or greater. [District Rule 4623]
- 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 psia or greater is placed, held, or stored in this tank. [District Rule 4623]

- 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]
- 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]
- 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]
- Permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623]
- 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 Rules 4623]
- Permittee shall inspect the primary and secondary seals for compliance with the requirements of this rule every time a tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 48 hours after the tank roof is re-floated. [District Rule 4623]

Per Section 5.7 of Rule 4623 inclusion in the Voluntary Tank Interior Cleaning Program (I&M Program) also requires enrollment into the I&M Program, and compliance with the requirements outlined in that section. Per District policy SSP 2215 the following conditions will be added to the affected permits:

S-1703-144 through '-146, '-150-10, '-152, '-195, and '-209:

- 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]
- 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]

- 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 4623, Table 3]
- 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]
- 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]
- 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]
- 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]

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

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

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;

- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission unit(s) are exempt from Best Available Control Technology (BACT) requirements. Furthermore, the District has determined that potential emission increases would have a less than significant health impact on sensitive receptors.

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

Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

The District's engineering evaluation (this document) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue ATC(s) S-1703-144-15, S-1703-145-10, S-1703-146-10, S-1703-150-10, S-1703-152-9, S-1703-195-2, and S-1703-209-1 subject to the permit conditions on the attached draft ATC(s) in **Appendix B**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1703-144-15	3020-05-D	84,000 gallon tank	\$185.00
S-1703-145-10	3020-05-C	42,000 gallons	\$135.00
S-1703-146-10	3020-05-E	420,000 gallons	\$246.00
S-1703-150-10	3020-05-E	138,600 gallons	\$246.00
S-1703-152-9	3020-05-E	105,000 gallons	\$246.00
S-1703-195-2	3020-05-E	420,000 gallons	\$246.00
S-1703-209-1	3020-05-E	260,000 gallons	\$246.00

Appendixes

- A: Draft ATC
- B: Current PTO(s)
- C: Compliance Certification
- D: Quarterly Net Emissions Change (QNEC)
- E. Gas analysis and Uncontrolled VOC emissions Calculations

**APPENDIX A:
Draft ATC(s)**

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1703-144-15

LEGAL OWNER OR OPERATOR: MACPHERSON OIL COMPANY
MAILING ADDRESS: PO BOX 5368
BAKERSFIELD, CA 93388

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
CA

SECTION: 18 **TOWNSHIP:** 28S **RANGE:** 29E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 2,000 BBL FIXED ROOF PETROLEUM STORAGE TANK #T-240 SERVED BY VAPOR CONTROL SYSTEM SHARED WITH S-1703-145, '-146, '-150, '-152, '-195, AND '-197 VENTING TO VAPOR CONTROL SYSTEM PERMITTED UNDER S-1703-143 AND/OR DIRECTLY TO STEAM GENERATORS S-1703-157, '-158, '-159, '-160, '-161, OR '-162 FOR INCINERATION; ADD RULE 4623 VOLUNTARY TANK CLEANING PROVISIONS AND TANK PREVENTIVE INSPECTION AND MAINTENANCE CONDITIONS, IN ADDITION TO ALLOWING FOR THE VAPOR CONTROL SYSTEM TO BE DISABLED DURING VOLUNTARY POWER CURTAILMENT EVENTS

CONDITIONS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank vapors may be introduced into TEOR system S-1703-143 at either the main trunk line, or immediately upstream of the H2S scrubber system. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained to prevent leaks. The vapors shall be incinerated to reduce the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Section 6.4 of Rule 4623 in any of the following steam generators: S-1703-157, -158, -159, -160, -161, or -162; or vapors shall be injected into DOGGR approved wells listed on permit S-1703-143. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
S-1703-144-15 - Nov 13 2012 3:25PM -- JONESW : Joint Inspection NOT Required

5. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) 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 detection. (c) In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
6. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
7. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
8. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel 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 vessel 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 ft 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 upon detection. [District Rule 2201] Federally Enforceable Through Title V Permit
9. 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]
10. This tank shall be degassed before commencing interior cleaning by following one of the following options: 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) by 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) by 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]
11. 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]
12. 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]
13. 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 having a TVP of 0.5 psia or greater. [District Rule 4623]
14. 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 psia or greater is placed, held, or stored in this tank. [District Rule 4623]
15. 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]

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16. 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]
17. 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]
18. Permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623]
19. 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]
20. Permittee shall inspect the primary and secondary seals for compliance with the requirements of this rule every time a tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 48 hours after the tank roof is re-floated. [District Rule 4623]
21. 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]
22. 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]
23. 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 4623]
24. 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]
25. 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]
26. 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]
27. 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]
28. Before disposal of VOC vapors by well injection, the applicant shall obtain written notification from DOGGR that the wells are approvable for injection. [District Rule 2201] Federally Enforceable Through Title V Permit
29. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

30. 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] Federally Enforceable Through Title V Permit
31. 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] Federally Enforceable Through Title V Permit
32. 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
33. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
35. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
36. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
37. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
38. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
39. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201] Federally Enforceable Through Title V Permit
40. The permittee shall maintain a written log of the date and duration of each power curtailment event. [District Rule 2201]
41. The permittee shall keep written documentation from the power supplier indicating the date, and duration of the curtailment in addition to the beginning and end times. [District Rule 2201]
42. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1703-145-10

LEGAL OWNER OR OPERATOR: MACPHERSON OIL COMPANY
MAILING ADDRESS: PO BOX 5368
BAKERSFIELD, CA 93388

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
CA

SECTION: SE18 **TOWNSHIP:** 28S **RANGE:** 29E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK T-245 VENTING TO VAPOR CONTROL SYSTEM LISTED ON '1-144: ADD RULE 4623 VOLUNTARY TANK CLEANING PROVISIONS AND TANK PREVENTIVE INSPECTION AND MAINTENANCE CONDITIONS, IN ADDITION TO ALLOWING FOR THE VAPOR CONTROL SYSTEM TO BE DISABLED DURING VOLUNTARY POWER CURTAILMENT EVENTS

CONDITIONS

1. 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
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
3. The fugitive VOC emission rate does not include piping and components handling produced fluids having less than 10% VOC by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The fugitive VOC emission rate does not include components in water/oil service (water content of fluids handled greater than 50%). Permittee shall maintain records of annual testing to demonstrate that such fluid streams have at least 50% water by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operator shall conduct quarterly sampling from the tank vapor control system's common header to the vapor control system sample point to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If 8 consecutive quarterly samplings show compliance, then sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services
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6. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel 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 vessel 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 ft 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 upon detection. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) 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 detection. (c) In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
9. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
10. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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]
12. This tank shall be degassed before commencing interior cleaning by following one of the following options: 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) by 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) by 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]
13. 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]
14. 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]
15. 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 having a TVP of 0.5 psia or greater. [District Rule 4623]
16. 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 psia or greater is placed, held, or stored in this tank. [District Rule 4623]

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17. 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]
18. 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]
19. 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]
20. Permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623]
21. 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]
22. Permittee shall inspect the primary and secondary seals for compliance with the requirements of this rule every time a tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 48 hours after the tank roof is re-floated. [District Rule 4623]
23. 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]
24. 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]
25. 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 4623]
26. 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]
27. 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]
28. 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]
29. 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]
30. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

31. 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] Federally Enforceable Through Title V Permit
32. 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] Federally Enforceable Through Title V Permit
33. 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
34. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The permittee shall keep accurate records of each organic liquid stored in the tank including TVP and API gravity. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
36. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
37. The permittee shall maintain a written log of the date and duration of each power curtailment event. [District Rule 2201]
38. The permittee shall keep written documentation from the power supplier indicating the date, and duration of the curtailment in addition to the beginning and end times. [District Rule 2201]
39. Permittee shall maintain a written record of the VOC content of the gas sampled. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1703-146-10

LEGAL OWNER OR OPERATOR: MACPHERSON OIL COMPANY
MAILING ADDRESS: PO BOX 5368
BAKERSFIELD, CA 93388

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
CA

SECTION: SE18 **TOWNSHIP:** 28S **RANGE:** 29E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 10,000 BBL FIXED ROOF CRUDE OIL WASH TANK T-110 VENTING TO VAPOR CONTROL SYSTEM LISTED ON '144: ADD RULE 4623 VOLUNTARY TANK CLEANING PROVISIONS AND TANK PREVENTIVE INSPECTION AND MAINTENANCE CONDITIONS, IN ADDITION TO ALLOWING FOR THE VAPOR CONTROL SYSTEM TO BE DISABLED DURING VOLUNTARY POWER CURTAILMENT EVENTS

CONDITIONS

1. 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
2. The fugitive VOC emission rate does not include piping and components handling produced fluids having less than 10% VOC by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
4. The fugitive VOC emission rate does not include components in water/oil service (water content of fluids handled greater than 50%). Permittee shall maintain records of annual testing to demonstrate that such fluid streams have at least 50% water by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operator shall conduct quarterly sampling from the tank vapor control system's common header to the vapor control system sample point to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If 8 consecutive quarterly samplings show compliance, then sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
S-1703-146-10 : Nov 13 2012 3:25PM -- JONESW : Joint Inspection NOT Required

6. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel 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 vessel 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 ft 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 upon detection. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) 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 detection. (c) In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
9. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
10. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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]
12. This tank shall be degassed before commencing interior cleaning by following one of the following options: 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) by 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) by 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]
13. 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]
14. 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]
15. 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 having a TVP of 0.5 psia or greater. [District Rule 4623]
16. 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 psia or greater is placed, held, or stored in this tank. [District Rule 4623]

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17. 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]
18. 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]
19. 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]
20. Permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623]
21. 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]
22. Permittee shall inspect the primary and secondary seals for compliance with the requirements of this rule every time a tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 48 hours after the tank roof is re-floated. [District Rule 4623]
23. 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]
24. 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]
25. 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 4623]
26. 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]
27. 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]
28. 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]
29. 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]
30. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

31. 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] Federally Enforceable Through Title V Permit
32. 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] Federally Enforceable Through Title V Permit
33. 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
34. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The permittee shall keep accurate records of each organic liquid stored in the tank including TVP and API gravity. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
36. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
37. The permittee shall maintain a written log of the date and duration of each power curtailment event. [District Rule 2201]
38. The permittee shall keep written documentation from the power supplier indicating the date, and duration of the curtailment in addition to the beginning and end times. [District Rule 2201]
39. Permittee shall maintain a written record of the VOC content of the gas sampled. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1703-150-10

LEGAL OWNER OR OPERATOR: MACPHERSON OIL COMPANY
MAILING ADDRESS: PO BOX 5368
BAKERSFIELD, CA 93388

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
CA

SECTION: SE18 **TOWNSHIP:** 28S **RANGE:** 29E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 3,300 BBL FIXED ROOF CRUDE OIL WASH TANK T-220 VENTING TO VAPOR CONTROL SYSTEM LISTED ON '144: ADD RULE 4623 VOLUNTARY TANK CLEANING PROVISIONS AND TANK PREVENTIVE INSPECTION AND MAINTENANCE CONDITIONS, IN ADDITION TO ALLOWING FOR THE VAPOR CONTROL SYSTEM TO BE DISABLED DURING VOLUNTARY POWER CURTAILMENT EVENTS

CONDITIONS

1. 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
2. The fugitive VOC emission rate does not include piping and components handling produced fluids having less than 10% VOC by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
4. The fugitive VOC emission rate does not include components in water/oil service (water content of fluids handled greater than 50%). Permittee shall maintain records of annual testing to demonstrate that such fluid streams have at least 50% water by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operator shall conduct quarterly sampling from the tank vapor control system's common header to the vapor control system sample point to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If 8 consecutive quarterly samplings show compliance, then sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

S-1703-150-10 : Nov 13 2012 3:25PM - JONESW : Joint Inspection NOT Required

6. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel 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 vessel 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 ft 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 upon detection. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) 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 detection. (c) In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
9. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
10. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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]
12. This tank shall be degassed before commencing interior cleaning by following one of the following options: 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) by 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) by 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]
13. 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]
14. 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]
15. 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 having a TVP of 0.5 psia or greater. [District Rule 4623]
16. 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 psia or greater is placed, held, or stored in this tank. [District Rule 4623]

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17. 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]
18. 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]
19. 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]
20. Permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623]
21. 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]
22. Permittee shall inspect the primary and secondary seals for compliance with the requirements of this rule every time a tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 48 hours after the tank roof is re-floated. [District Rule 4623]
23. 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]
24. 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]
25. 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 4623]
26. 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]
27. 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]
28. 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]
29. 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]
30. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

31. 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] Federally Enforceable Through Title V Permit
32. 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] Federally Enforceable Through Title V Permit
33. 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
34. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The permittee shall keep accurate records of each organic liquid stored in the tank including TVP and API gravity. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
36. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
37. The permittee shall maintain a written log of the date and duration of each power curtailment event. [District Rule 2201]
38. The permittee shall keep written documentation from the power supplier indicating the date, and duration of the curtailment in addition to the beginning and end times. [District Rule 2201]
39. Permittee shall maintain a written record of the VOC content of the gas sampled. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1703-152-9

LEGAL OWNER OR OPERATOR: MACPHERSON OIL COMPANY
MAILING ADDRESS: PO BOX 5368
BAKERSFIELD, CA 93388

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
CA

SECTION: SE18 **TOWNSHIP:** 28S **RANGE:** 29E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 105,000 GALLON (2500 BBL) FIXED ROOF SLOP TANK T-320A VENTING TO VAPOR CONTROL SYSTEM LISTED ON '144: ADD RULE 4623 VOLUNTARY TANK CLEANING PROVISIONS AND TANK PREVENTIVE INSPECTION AND MAINTENANCE CONDITIONS, IN ADDITION TO ALLOWING FOR THE VAPOR CONTROL SYSTEM TO BE DISABLED DURING VOLUNTARY POWER CURTAILMENT EVENTS

CONDITIONS

1. 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
2. The fugitive VOC emission rate does not include piping and components handling produced fluids having less than 10% VOC by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
4. The fugitive VOC emission rate does not include components in water/oil service (water content of fluids handled greater than 50%). Permittee shall maintain records of annual testing to demonstrate that such fluid streams have at least 50% water by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operator shall conduct quarterly sampling from the tank vapor control system's common header to the vapor control system sample point to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If 8 consecutive quarterly samplings show compliance, then sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services
S-1703-152-9 : Nov 13 2012 3:25PM -- JONESW : Joint Inspection NOT Required

6. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel 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 vessel 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 ft 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 upon detection. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) 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 detection. (c) In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
9. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
10. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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]
12. This tank shall be degassed before commencing interior cleaning by following one of the following options: 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) by 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) by 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]
13. 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]
14. 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]
15. 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 having a TVP of 0.5 psia or greater. [District Rule 4623]
16. 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 psia or greater is placed, held, or stored in this tank. [District Rule 4623]

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CONDITIONS CONTINUE ON NEXT PAGE

17. 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]
18. 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]
19. 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]
20. Permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623]
21. 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]
22. Permittee shall inspect the primary and secondary seals for compliance with the requirements of this rule every time a tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 48 hours after the tank roof is re-floated. [District Rule 4623]
23. 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]
24. 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]
25. 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 4623]
26. 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]
27. 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]
28. 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]
29. 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]
30. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

31. 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] Federally Enforceable Through Title V Permit
32. 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] Federally Enforceable Through Title V Permit
33. 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
34. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The permittee shall keep accurate records of each organic liquid stored in the tank including TVP and API gravity. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
36. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
37. The permittee shall maintain a written log of the date and duration of each power curtailment event. [District Rule 2201]
38. The permittee shall keep written documentation from the power supplier indicating the date, and duration of the curtailment in addition to the beginning and end times. [District Rule 2201]
39. Permittee shall maintain a written record of the VOC content of the gas sampled. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1703-195-2

LEGAL OWNER OR OPERATOR: MACPHERSON OIL COMPANY
MAILING ADDRESS: PO BOX 5368
BAKERSFIELD, CA 93388

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 10,000 BBL TANK #T-300 SERVED BY VAPOR CONTROL SYSTEM LISTED UNDER S-1703-144:
ADD RULE 4623 VOLUNTARY TANK CLEANING PROVISIONS AND TANK PREVENTIVE INSPECTION AND
MAINTENANCE CONDITIONS, IN ADDITION TO ALLOWING FOR THE VAPOR CONTROL SYSTEM TO BE DISABLED
DURING VOLUNTARY POWER CURTAILMENT EVENTS

CONDITIONS

1. The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. [District Rule 2201]
2. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201]
3. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]
4. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
S-1703-195-2 : Nov 13 2012 3:25PM -- JONESW : Joint Inspection NOT Required

6. 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]
7. 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]
8. 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]
9. This tank shall be degassed before commencing interior cleaning by following one of the following options: 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) by 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) by 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]
10. 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]
11. 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]
12. 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 having a TVP of 0.5 psia or greater. [District Rule 4623]
13. 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 psia or greater is placed, held, or stored in this tank. [District Rule 4623]
14. 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]
15. 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]
16. 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]
17. Permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623]
18. 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]
19. Permittee shall inspect the primary and secondary seals for compliance with the requirements of this rule every time a tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 48 hours after the tank roof is re-floated. [District Rule 4623]

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20. 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]
21. 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]
22. 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 4623]
23. 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]
24. 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]
25. 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]
26. 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]
27. 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]
28. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623]
29. The permittee shall keep accurate records of each organic liquid stored in the tank including TVP and API gravity. [District Rule 4623, 6.3.6]
30. 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. [District Rule 4623]
31. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201]
32. The permittee shall maintain a written log of the date and duration of each power curtailment event. [District Rule 2201]
33. The permittee shall keep written documentation from the power supplier indicating the date, and duration of the curtailment in addition to the beginning and end times. [District Rule 2201]
34. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1703-209-1

LEGAL OWNER OR OPERATOR: MACPHERSON OIL COMPANY
MAILING ADDRESS: PO BOX 5368
BAKERSFIELD, CA 93388

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 6,200 BBL WASH TANK T-220 CONNECTED TO VAPOR RECOVERY SYSTEM LISTED ON '144:
ADD RULE 4623 VOLUNTARY TANK CLEANING PROVISIONS AND TANK PREVENTIVE INSPECTION AND
MAINTENANCE CONDITIONS, IN ADDITION TO ALLOWING FOR THE VAPOR CONTROL SYSTEM TO BE DISABLED
DURING VOLUNTARY POWER CURTAILMENT EVENTS

CONDITIONS

1. The permittee shall maintain a written log of the date and duration of each power curtailment event. [District Rule 2201]
2. The permittee shall keep written documentation from the power supplier indicating the date, and duration of the curtailment in addition to the beginning and end times. [District Rule 2201]
3. {1829} The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
4. Permit S-1703-150 shall be canceled upon implementation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
S-1703-209-1 : Nov 9 2012 12:52PM - JONESW : Joint Inspection NOT Required

8. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
9. 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]
10. This tank shall be degassed before commencing interior cleaning by following one of the following options: 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) by 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) by 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]
11. 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]
12. 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]
13. 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 having a TVP of 0.5 psia or greater. [District Rule 4623]
14. 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 psia or greater is placed, held, or stored in this tank. [District Rule 4623]
15. 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]
16. 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]
17. 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]
18. Permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623]
19. 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]
20. Permittee shall inspect the primary and secondary seals for compliance with the requirements of this rule every time a tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 48 hours after the tank roof is re-floated. [District Rule 4623]
21. 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]

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22. 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]
23. 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 4623]
24. 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]
25. 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]
26. 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]
27. 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]
28. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
29. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel 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 vessel 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 ft 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 upon detection. [District Rule 2201] Federally Enforceable Through Title V Permit
30. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) 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 detection. (c) In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
31. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
32. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

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33. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
34. 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] Federally Enforceable Through Title V Permit
35. 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] Federally Enforceable Through Title V Permit
36. 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
37. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
38. The permittee shall keep accurate records of each organic liquid stored in the tank including TVP and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
39. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
40. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201] Federally Enforceable Through Title V Permit
41. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

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**APPENDIX B:
Current PTO(s)**

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1703-145-4

EXPIRATION DATE: 07/31/2016

SECTION: SE18 **TOWNSHIP:** 28S **RANGE:** 29E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK T-245 VENTING TO VAPOR CONTROL SYSTEM LISTED ON '144

PERMIT UNIT REQUIREMENTS

1. 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
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
3. The fugitive VOC emission rate does not include piping and components handling produced fluids having less than 10% VOC by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The fugitive VOC emission rate does not include components in water/oil service (water content of fluids handled greater than 50%). Permittee shall maintain records of annual testing to demonstrate that such fluid streams have at least 50% water by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operator shall conduct quarterly sampling from the tank vapor control system's common header to the vapor control system sample point to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If 8 consecutive quarterly samplings show compliance, then sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel 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 vessel 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 ft 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 upon detection. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) 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 detection. (c) In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

9. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
10. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
12. 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] Federally Enforceable Through Title V Permit
13. 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] 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. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The permittee shall keep accurate records of each organic liquid stored in the tank including TVP and API gravity. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
17. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Permittee shall maintain a written record of the VOC content of the gas sampled. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1703-146-4

EXPIRATION DATE: 07/31/2016

SECTION: SE18 **TOWNSHIP:** 28S **RANGE:** 29E

EQUIPMENT DESCRIPTION:

10,000 BBL FIXED ROOF CRUDE OIL WASH TANK T-110 VENTING TO VAPOR CONTROL SYSTEM LISTED ON '144

PERMIT UNIT REQUIREMENTS

1. 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
2. The fugitive VOC emission rate does not include piping and components handling produced fluids having less than 10% VOC by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
4. The fugitive VOC emission rate does not include components in water/oil service (water content of fluids handled greater than 50%). Permittee shall maintain records of annual testing to demonstrate that such fluid streams have at least 50% water by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operator shall conduct quarterly sampling from the tank vapor control system's common header to the vapor control system sample point to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If 8 consecutive quarterly samplings show compliance, then sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel 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 vessel 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 ft 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 upon detection. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) 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 detection. (c) In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

Facility Name: MACPHERSON OIL COMPANY

Location: HEAVY OIL CENTRAL STATIONARY SOURCE, CA

S-1703-146-4 : Nov 9 2012 1:44PM -- JONESW

9. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
10. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
12. 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] Federally Enforceable Through Title V Permit
13. 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] 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. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The permittee shall keep accurate records of each organic liquid stored in the tank including TVP and API gravity. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
17. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Permittee shall maintain a written record of the VOC content of the gas sampled. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1703-150-4

EXPIRATION DATE: 07/31/2016

SECTION: SE18 **TOWNSHIP:** 28S **RANGE:** 29E

EQUIPMENT DESCRIPTION:

3,300 BBL FIXED ROOF CRUDE OIL WASH TANK T-220 VENTING TO VAPOR CONTROL SYSTEM LISTED ON '-144

PERMIT UNIT REQUIREMENTS

1. 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
2. The fugitive VOC emission rate does not include piping and components handling produced fluids having less than 10% VOC by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
4. The fugitive VOC emission rate does not include components in water/oil service (water content of fluids handled greater than 50%). Permittee shall maintain records of annual testing to demonstrate that such fluid streams have at least 50% water by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operator shall conduct quarterly sampling from the tank vapor control system's common header to the vapor control system sample point to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If 8 consecutive quarterly samplings show compliance, then sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel 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 vessel 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 ft 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 upon detection. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) 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 detection. (c) In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

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

9. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
10. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
12. 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] Federally Enforceable Through Title V Permit
13. 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] 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. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The permittee shall keep accurate records of each organic liquid stored in the tank including TVP and API gravity. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
17. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Permittee shall maintain a written record of the VOC content of the gas sampled. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1703-152-3

EXPIRATION DATE: 07/31/2016

SECTION: SE18 **TOWNSHIP:** 28S **RANGE:** 29E

EQUIPMENT DESCRIPTION:

105,000 GALLON (2500 BBL) FIXED ROOF SLOP TANK T-320A VENTING TO VAPOR CONTROL SYSTEM LISTED ON
'-144

PERMIT UNIT REQUIREMENTS

1. 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
2. The fugitive VOC emission rate does not include piping and components handling produced fluids having less than 10% VOC by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
4. The fugitive VOC emission rate does not include components in water/oil service (water content of fluids handled greater than 50%). Permittee shall maintain records of annual testing to demonstrate that such fluid streams have at least 50% water by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operator shall conduct quarterly sampling from the tank vapor control system's common header to the vapor control system sample point to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If 8 consecutive quarterly samplings show compliance, then sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel 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 vessel 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 ft 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 upon detection. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) 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 detection. (c) In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

9. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
10. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
12. 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] Federally Enforceable Through Title V Permit
13. 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] 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. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The permittee shall keep accurate records of each organic liquid stored in the tank including TVP and API gravity. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
17. 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. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Permittee shall maintain a written record of the VOC content of the gas sampled. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1703-195-1

EXPIRATION DATE: 07/31/2016

EQUIPMENT DESCRIPTION:

10,000 BBL TANK #T-300 SERVED BY VAPOR CONTROL SYSTEM LISTED UNDER S-1703-144

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. [District Rule 2201]
2. Maximum VOC content of vapor in the tank vapor control system shall not exceed 10% by weight. [District Rule 2201]
3. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]
4. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
6. 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]
7. 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]
8. 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]
9. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank including TVP and API gravity. [District Rule 4623, 6.3.6]
11. 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. [District Rule 4623]
12. Permittee shall maintain records of the VOC content of vapor in the tank vapor control system, including date and test results. [District Rule 2201]
13. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

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

**APPENDIX C:
Compliance Certification**

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

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

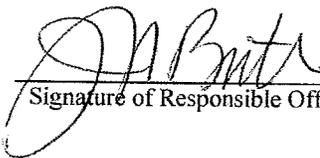
- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

COMPANY NAME: Macpherson Oil Company		FACILITY ID: S - 1703	
1. Type of Organization:	<input checked="" type="checkbox"/> Corporation	<input type="checkbox"/> Sole Ownership	<input type="checkbox"/> Government
	<input type="checkbox"/> Partnership	<input type="checkbox"/> Utility	
2. Owner's Name:			
3. Agent to the Owner:			

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

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

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


Signature of Responsible Official

7-18-12
Date

Jody Butler
Name of Responsible Official (please print)

Operations Superintendent
Title of Responsible Official (please print)

Add cleaning provisions to Section 18 Storage Tanks.

**APPENDIX D:
Quarterly Net Emissions Change (QNEC)**

Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

QNEC = PE2 - BE, where:

- QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
- PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
- BE = Baseline Emissions (per Rule 2201) for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, PE2_{quarterly} and BE_{quarterly} can be calculated as follows:

S-1703-144-15

Quarterly Post-Project Emissions		
Pollutant	PE2 Total (lb./yr.)	Quarterly PE2 (lb./qtr.)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0	0

$$\begin{aligned}
 BE_{\text{quarterly}} &= BE_{\text{annual}} \div 4 \text{ quarters/year} \\
 &= 0 \text{ lb/year} \div 4 \text{ qtr/year} \\
 &= 0 \text{ lb/qtr (for all criteria pollutants)}
 \end{aligned}$$

Quarterly Baseline Emissions		
Pollutant	BE Total (lb./yr.)	Quarterly BE (lb./qtr.)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0	0

QNEC			
Pollutant	Quarterly PE2 (lb./qtr.)	Quarterly BE (lb./qtr.)	QNEC (lb/qtr.)
NO _x	0	0	0
SO _x	0	0	0
PM ₁₀	0	0	0
CO	0	0	0
VOC	0	0	0

S-1703-145-10

Quarterly Post-Project Emissions		
Pollutant	PE2 Total (lb./yr.)	Quarterly PE2 (lb./qtr.)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0	0

$BE_{quarterly} = BE_{annual} \div 4 \text{ quarters/year}$
 $= 0 \text{ lb/year} \div 4 \text{ qtr/year}$
 $= 0 \text{ lb/qtr (for all criteria pollutants)}$

Quarterly Baseline Emissions		
Pollutant	BE Total (lb./yr.)	Quarterly BE (lb./qtr.)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0	0

QNEC			
Pollutant	Quarterly PE2 (lb./qtr.)	Quarterly BE (lb./qtr.)	QNEC (lb./qtr.)
NO _x	0	0	0
SO _x	0	0	0
PM ₁₀	0	0	0
CO	0	0	0
VOC	0	0	0

S-1703-146-10

Quarterly Post-Project Emissions		
Pollutant	PE2 Total (lb./yr.)	Quarterly PE2 (lb./qtr.)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0	0

$BE_{quarterly} = BE_{annual} \div 4 \text{ quarters/year}$
 $= 0 \text{ lb/year} \div 4 \text{ qtr/year}$
 $= 0 \text{ lb/qtr (for all criteria pollutants)}$

Quarterly Baseline Emissions		
Pollutant	BE Total (lb./yr.)	Quarterly BE (lb./qtr.)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0	0

QNEC			
Pollutant	Quarterly PE2 (lb./qtr.)	Quarterly BE (lb./qtr.)	QNEC (lb/qtr.)
NO _x	0	0	0
SO _x	0	0	0
PM ₁₀	0	0	0
CO	0	0	0
VOC	0	0	0

S-1703-150-10

Quarterly Post-Project Emissions		
Pollutant	PE2 Total (lb./yr.)	Quarterly PE2 (lb./qtr.)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0	0

$BE_{\text{quarterly}} = BE_{\text{annual}} \div 4 \text{ quarters/year}$
 $= 0 \text{ lb./year} \div 4 \text{ qtr./year}$
 $= 0 \text{ lb./qtr. (for all criteria pollutants)}$

Quarterly Baseline Emissions		
Pollutant	BE Total (lb./yr.)	Quarterly BE (lb./qtr.)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0	0

QNEC			
Pollutant	Quarterly PE2 (lb./qtr.)	Quarterly BE (lb./qtr.)	QNEC (lb./qtr)
NO _x	0	0	0
SO _x	0	0	0
PM ₁₀	0	0	0
CO	0	0	0
VOC	0	0	0

S-1703-152-9

Quarterly Post-Project Emissions		
Pollutant	PE2 Total (lb./yr.)	Quarterly PE2 (lb./qtr.)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0	0

$$\begin{aligned}
 BE_{\text{quarterly}} &= BE_{\text{annual}} \div 4 \text{ quarters/year} \\
 &= 0 \text{ lb./year} \div 4 \text{ qtr./year} \\
 &= 0 \text{ lb./qtr. (for all criteria pollutants)}
 \end{aligned}$$

Quarterly Baseline Emissions		
Pollutant	BE Total (lb./yr.)	Quarterly BE (lb./qtr.)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0	0

QNEC			
Pollutant	Quarterly PE2 (lb./qtr.)	Quarterly BE (lb./qtr.)	QNEC (lb./qtr.)
NO _x	0	0	0
SO _x	0	0	0
PM ₁₀	0	0	0
CO	0	0	0
VOC	0	0	0

S-1703-195-2

Quarterly Post-Project Emissions		
Pollutant	PE2 Total (lb./yr.)	Quarterly PE2 (lb./qtr.)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0	0

$$\begin{aligned}
 BE_{\text{quarterly}} &= BE_{\text{annual}} \div 4 \text{ quarters/year} \\
 &= 0 \text{ lb./year} \div 4 \text{ qtr./year} \\
 &= 0 \text{ lb./qtr. (for all criteria pollutants)}
 \end{aligned}$$

Quarterly Baseline Emissions		
Pollutant	BE Total (lb./yr.)	Quarterly BE (lb./qtr.)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0	0

QNEC			
Pollutant	Quarterly PE2 (lb./qtr.)	Quarterly BE (lb./qtr.)	QNEC (lb./qtr.)
NO _x	0	0	0
SO _x	0	0	0
PM ₁₀	0	0	0
CO	0	0	0
VOC	0	0	0

S-1703-209-1

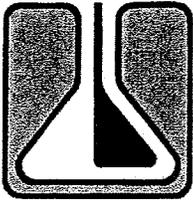
Quarterly Post-Project Emissions		
Pollutant	PE2 Total (lb./yr.)	Quarterly PE2 (lb./qtr.)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0	0

$BE_{quarterly} = BE_{annual} \div 4 \text{ quarters/year}$
 $= 0 \text{ lb./year} \div 4 \text{ qtr./year}$
 $= 0 \text{ lb./qtr. (for all criteria pollutants)}$

Quarterly Baseline Emissions		
Pollutant	BE Total (lb./yr.)	Quarterly BE (lb./qtr.)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0	0

QNEC			
Pollutant	Quarterly PE2 (lb./qtr.)	Quarterly BE (lb./qtr.)	QNEC (lb./qtr.)
NO _x	0	0	0
SO _x	0	0	0
PM ₁₀	0	0	0
CO	0	0	0
VOC	0	0	0

APPENDIX E.
Gas analysis and
Uncontrolled VOC emissions Calculations



ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

Macpherson Oil Company PO Box 5368 Bakersfield, CA 93388	Project: Master Project #: Attention: Justin Lawson	Work Order No.: 1109254 Reported: 09/28/2011 Received: 09/16/2011 16:59
--	---	---

Lab Sample ID: 1109254-03 Client Sample ID: Sec 18, FWKO Tk T-110	Collected By: Rick Ogletree Date Collected: 9/16/2011 11:47:00AM
--	---

Analyte	Results	PQL	Units	Flag	Method	Date Prepared	Date Analyzed	Init.
Petroleum Chemistry								
API Gravity @ 60F, Hydrometer	15.9		°API		ASTM D 287	9/22/11	9/23/11	JAH
Total Vapor Pressure, Reactive Organic Compounds (ROCs)								
Total Vapor Pressure, ROCs	0.04	0.01	psia		LBNL	9/19/11	9/19/11	LTB
Total Vapor Pressure, ROCs Test Conditions								
Tank Temperature	144		°F		LBNL	9/19/11	9/19/11	LTB
Test, Atmospheric Pressure	14.43		psia		LBNL	9/19/11	9/19/11	LTB
Test, Barometric Pressure	29.37		in. of Hg		LBNL	9/19/11	9/19/11	LTB
Test Temperature	144.8		°F		LBNL	9/19/11	9/19/11	LTB

Section 12		
Permit (S- 1703)	Tank Size (bbl)	Emissions per Event
184-9	10,000	0.24
186-5	2,000	0.09
187-3	500	0.02
193-0	10,000	0.24
200-0	10,000	0.24
203-0	1,000	0.04
Totals =		0.87

Section 18		
Permit (S- 1703)	Tank Size (bbl)	Emissions per Event
144-14	2,000	0.09
145-5	1,000	0.04
146-4	10,000	0.24
150-4	3,300	0.2
152-3	2,500	0.08
197-1	10,000	0.24
209-0	6,200	0.26
		1.15

Section 20		
Permit (S- 1703)	Tank Size (bbl)	Emissions per Event
139-10	10,000	0.24
140-3	6,000	0.26
170-3	3,400	0.15
171-3	100	0.01
191-2	500	0.02
205-0	1,000	0.04
206-0	500	0.02
Total		2.76
		per Event
		2.76

Tank Input Data	
permit number (S-xxxx-xx-xx)	
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.04
liquid bulk storage temperature, Tb (°F)	150
is this a constant-level tank? {yes, no}	no
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	15
capacity of tank (bbl)	500
conical or dome roof? {c, d}	c
shell height of tank (feet)	16
average liquid height (feet)	8
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	3
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	3
-----This row only used if shell is different color from roof-----	1

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		-
maximum annual fluid throughput (bbl)		0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		-
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	125.2	1.9707
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	114.4	1.4614
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	119.8	1.6868
roof outage, H _{ro} (feet)		0.1563
vapor space volume, V _v (cubic feet)		1441.33
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0006
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.1086

Results	lb/year	lb/day
Standing Storage Loss	37	0.10
Working Loss	0	0.00
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	37	0.1
At 50 hours per year and 5 hours per event =	0.21	0.02

Tank Input Data	
permit number (S-xxxx-xx-xx)	
facility tank I.D.	
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.04
liquid bulk storage temperature, Tb (°F)	150
is this a constant-level tank? {yes, no}	no
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	21.5
capacity of tank (bbl)	1,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	16
average liquid height (feet)	9
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	3
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		
maximum annual fluid throughput (bbl)		0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		-
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insolation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	125.2	1.9707
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	114.4	1.4614
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	119.8	1.6868
roof outage, H _{ro} (feet)		0.2240
vapor space volume, V _v (cubic feet)		2622.66
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0006
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.1086

Results	lb/year	lb/day
Standing Storage Loss	67	0.18
Working Loss	0	0.00
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	67	0.2
At 50 hours per year and 5 hours per event =	0.38	0.04

Tank Input Data	
permit number (S-xxxx-xx-xx)	
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.04
liquid bulk storage temperature, Tb (°F)	150
is this a constant-level tank? {yes, no}	no
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	25
capacity of tank (bbl)	2,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	24
average liquid height (feet)	12
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	3
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		-
maximum annual fluid throughput (bbl)		0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		-
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insolation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	125.2	1.9707
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	114.4	1.4614
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	119.8	1.6868
roof outage, H _{ro} (feet)		0.2604
vapor space volume, V _v (cubic feet)		6018.32
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0006
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.1086

Results	lb/year	lb/day
Standing Storage Loss	153	0.42
Working Loss	0	0.00
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	153	0.4
At 50 hours per year and 5 hours per event =	0.88	0.09

Tank Input Data	
permit number (S-xxxx-xx-xx)	
facility tank I.D.	--
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.04
liquid bulk storage temperature, Tb (°F)	150
is this a constant-level tank? {yes, no}	no
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	27
capacity of tank (bbl)	2,500
conical or dome roof? {c, d}	c
shell height of tank (feet)	24
average liquid height (feet)	15
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	3
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		929
maximum annual fluid throughput (bbl)		339,085
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		-
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, Pa (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{ix}), P _{vx} (psia)	125.2	1.9707
water vapor pressure at daily minimum liquid surface temperature (T _{in}), P _{vn} (psia)	114.4	1.4614
water vapor pressure at average liquid surface temperature (T _{ia}), P _{va} (psia)	119.8	1.6868
roof outage, H _{ro} (feet)		0.2813
vapor space volume, V _v (cubic feet)		5314.03
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0006
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.1086

Results	lb/year	lb/day
Standing Storage Loss	135	0.37
Working Loss	1,356	3.72
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	1,492	4.1
At 50 hours per year and 5 hours per event =	0.77	0.08

Tank Input Data	
permit number (S-xxxx-xx-xx)	
facility tank I.D.	
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.04
liquid bulk storage temperature, Tb (°F)	150
is this a constant-level tank? {yes, no}	no
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	48
capacity of tank (bbl)	3,300
conical or dome roof? {c, d}	c
shell height of tank (feet)	16
average liquid height (feet)	9
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	3
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		-
maximum annual fluid throughput (bbl)		0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		-
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insolation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	125.2	1.9707
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	114.4	1.4614
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	119.8	1.6868
roof outage, H _{ro} (feet)		0.5000
vapor space volume, V _v (cubic feet)		13571.68
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0006
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.1086

Results	lb/year	lb/day
Standing Storage Loss	346	0.95
Working Loss	0	0.00
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	346	0.9
At 50 hours per year and 5 hours per event =	1.97	0.20

Tank Input Data	
permit number (S-xxxx-xx-xx)	
facility tank I.D.	
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.04
liquid bulk storage temperature, Tb (°F)	150
is this a constant-level tank? {yes, no}	no
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	28
capacity of tank (bbbl)	3,400
conical or dome roof? {c, d}	c
shell height of tank (feet)	32
average liquid height (feet)	16
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	3
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbbl)		-
maximum annual fluid throughput (bbbl)		0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		-
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insolation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	125.2	1.9707
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	114.4	1.4614
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	119.8	1.6868
roof outage, H _{ro} (feet)		0.2917
vapor space volume, V _v (cubic feet)		10031.63
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0006
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.1086

Results	lb/year	lb/day
Standing Storage Loss	256	0.70
Working Loss	0	0.00
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	256	0.7
At 50 hours per year and 5 hours per event =	1.46	0.15

Tank Input Data	
permit number (S-xxxx-xx-xx)	
facility tank I.D.	
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.04
liquid bulk storage temperature, Tb (°F)	150
is this a constant-level tank? {yes, no}	no
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	37
capacity of tank (bbl)	6,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	32
average liquid height (feet)	16
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	3
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		927
maximum annual fluid throughput (bbl)		338,355
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		-
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	125.2	1.9707
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	114.4	1.4614
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	119.8	1.6868
roof outage, H _{ro} (feet)		0.3854
vapor space volume, V _v (cubic feet)		17617.77
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0006
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.1086

Results	lb/year	lb/day
Standing Storage Loss	449	1.23
Working Loss	1,353	3.71
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	1,802	4.9
At 50 hours per year and 5 hours per event =	2.56	0.26

Tank Input Data	
permit number (S-xxxx-xx-xx)	
facility tank I.D.	
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.04
liquid bulk storage temperature, Tb (°F)	150
is this a constant-level tank? {yes, no}	no
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	56
capacity of tank (bbl)	10,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	24
average liquid height (feet)	18
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	3
condition {1: Good, 2: Poor}	1
-----This row only used if shell is different color from roof-----	
-----This row only used if shell is different color from roof-----	

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		-
maximum annual fluid throughput (bbl)		0
-----This row only used if flashing losses occur in this tank-----		
-----This row only used if flashing losses occur in this tank-----		-
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insulation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psia)	125.2	1.9707
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psia)	114.4	1.4614
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	119.8	1.6868
roof outage, H _{ro} (feet)		0.5833
vapor space volume, V _v (cubic feet)		16214.81
paint factor, alpha		0.54
vapor density, W _v (lb/cubic foot)		0.0006
daily vapor temperature range, delta T _v (degrees Rankine)		42.57
vapor space expansion factor, K _e		0.1086

Results	lb/year	lb/day
Standing Storage Loss	413	1.13
Working Loss	0	0.00
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	413	1.1
At 50 hours per year and 5 hours per event =	2.36	0.24