San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

NOV - 9 2012

Mr. Jeff Randel
Phillips 66 Pipeline LLC
256 E. Polk St.
Coalinga, CA 93210

Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # S-1518
Project # S-1122222

Dear Mr. Randel:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Phillips 66 Pipeline LLC located at 14990 State Highway 46 in Lost Hills, CA. Phillips 66 Pipeline LLC is proposing to increase the maximum allowable TVP limit of product stored in their Crude Oil Storage tanks to 11 psia for product stored in tanks numbers 2, 5 and 31, in addition to reducing the maximum allowable annual throughput on Crude Oil Storage Tank number 7 to 291 turnovers per year.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the Authorities to Construct will be issued to the facility with Certificates of Conformity. Prior to operating with modifications authorized by the Authorities to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

The public notice will be published approximately three days from the date of this letter. Please submit your written comments within the 30-day public comment period which begins on the date of publication of the public notice.

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

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW: WJ/cp

Enclosures

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

NOV - 9 2012

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

Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # S-1518
Project # S-1122222

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Phillips 66 Pipeline LLC located at 14990 State Highway 46 in Lost Hills, CA, which has been issued a Title V permit. Phillips 66 Pipeline LLC is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. Phillips 66 Pipeline LLC is proposing to increase the maximum allowable TVP limit of product stored in their Crude Oil Storage tanks to 11 psia for product stored in tanks numbers 2, 5 and 31, in addition to reducing the maximum allowable annual throughput on Crude Oil Storage Tank number 7 to 291 turnovers per year.

Enclosed is the engineering evaluation of this application, along with the current Title V permit, and proposed Authorities to Construct # S-1518-2-4, '-5-6, '-7-5, '-31-5 with Certificates of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

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

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW: WJ/cp

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

HEALTHY AIR LIVING™

NOV - 9 2012

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

Re: **Notice of Preliminary Decision - ATC / Certificate of Conformity**
Facility # S-1518
Project # S-1122222

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Phillips 66 Pipeline LLC located at 14990 State Highway 46 in Lost Hills, CA. Phillips 66 Pipeline LLC is proposing to increase the maximum allowable TVP limit of product stored in their Crude Oil Storage tanks to 11 psia for product stored in tanks numbers 2, 5 and 31, in addition to reducing the maximum allowable annual throughput on Crude Oil Storage Tank number 7 to 291 turnovers per year.

The public notice will be published approximately three days from the date of this letter. Please submit your written comments within the 30-day public comment period which begins on the date of publication of the public notice.

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

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW: WJ/cp

Enclosures

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www.valleyair.org www.healthyairliving.com

Bakersfield Californian

**NOTICE OF PRELIMINARY DECISION
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT AND
THE PROPOSED MINOR MODIFICATION OF FEDERALLY
MANDATED OPERATING PERMIT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed issuance of Authority To Construct to Phillips 66 Pipeline LLC for its Heavy Oil Production Facility located at 14990 State Highway 46 in Lost Hills, California. Phillips 66 Pipeline LLC is proposing to increase the maximum allowable TVP limit of product stored in their Crude Oil Storage tanks to 11 psia for product stored in tanks numbers 2, 5 and 31, in addition to reducing the maximum allowable annual throughput on Crude Oil Storage Tank number 7 to 291 turnovers per year.

The analysis of the regulatory basis for these proposed actions, Project #S-1122222, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E. GETTYSBURG AVE, FRESNO, CA 93726-0244.**

San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Floating Roof Oil Storage Tanks

Facility Name:	Phillips 66 Pipeline LLC	Date:	10/10/12
Mailing Address:	256 E. Polk St. Coalinga CA, 93210	Engineer:	William Jones
		Lead Engineer:	Daniel Klevann
Contact Person:	Jeff Randel		
Telephone:	562-290-1502		
Fax:			
E-Mail:	j.a.adams@p66.com		
Application #(s):	S-1122222		
Project #:	S-1518-2-4, '-5-6, '-7-5, '-31-5		
Deemed Complete:	6/18/12		

I. Proposal

Phillips 66 Pipeline LLC. has submitted an Authority to Construct (ATC) application for the following:

- Modify existing 110,000 BBL WELDED EXTERNAL FLOATING ROOF TANK (S-1518-2-3) (see **Appendix B** for current permit requirements) increase the allowable TVP to 11 psia.
- Modify existing 110,000 BBL WELDED EXTERNAL FLOATING ROOF TANK (S-1518-5-5) (see **Appendix B** for current permit requirements) increase the allowable TVP to 11 psia.
- Modify existing 110,000 BBL WELDED EXTERNAL FLOATING ROOF TANK (S-1518-7-4) (see **Appendix B** for current permit requirements) decrease the allowable annual turnovers.
- Modify existing 110,000 BBL WELDED EXTERNAL FLOATING ROOF TANK (S-1518-31-4) (see **Appendix B** for current permit requirements) increase the allowable TVP to 11 psia.

Phillips 66 Pipeline LLC received their Title V Permit on January 31, 2005. 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. Phillips 66 Pipeline LLC must apply to administratively amend their Title V permit.

II. Applicable Rules

District Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
District Rule 2520	Federally Mandated Operating Permits (6/21/01)
District Rule 4001	New Source Performance Standards (4/14/99)
District Rule 4101	Visible Emissions (2/17/05)
District Rule 4102	Nuisance (12/17/92)
District Rule 4201	Particulate Matter Concentration (12/17/92)
District 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 facility, referred to as Junction Pump Station, is located at 14990 State Highway 46, approximately six miles northwest of the intersection of State Highway 46 and State Highway 33 in Lost Hills, CA (Appendix A). This site is not within 1,000 feet of any 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

Crude oil enters the pipeline from various tanks throughout the area and is routed to one of many pump stations. Floating roof tanks are employed to accommodate variations in supply pipeline volume flow rate and provide a steady volume to the rest of the pipeline.

Current Permits to Operate are included in **Appendix B**

V. Equipment Listing

Pre-Project Equipment Description:

S-1518-2-3: 4,620,000 GALLON WELDED EXTERNAL FLOATING ROOF TANK (#110022) WITH METALLIC SHOE PRIMARY AND SECONDARY WIPER SEAL

S-1518-5-5: 110,000 BBL CRUDE OIL STORAGE TANK (#110024) INCLUDING EXTERNAL FLOATING ROOF WITH METALLIC SHOE TYPE PRIMARY SEAL AND WIPER TYPE SECONDARY SEAL

S-1518-7-4: 110,000 BBL WELDED EXTERNAL FLOATING ROOF TANK (#110020) WITH METALLIC SHOE PRIMARY AND WIPER TYPE SECONDARY SEALS

S-1518-31-4: 110,000 BBL CRUDE OIL STORAGE TANK (#110026) INCLUDING EXTERNAL FLOATING ROOF WITH METALLIC SHOE TYPE PRIMARY SEAL AND WIPER TYPE SECONDARY SEAL

Proposed Modification:

Increase the allowable TVP to 11 psia for all four tanks, reduce the allowable annual turnover for tank S-1518-7-4 to 291 turnovers per year.

S-1518-2-4: MODIFICATION OF 110,000 BBL WELDED EXTERNAL FLOATING ROOF TANK (#110022) WITH METALLIC SHOE PRIMARY AND SECONDARY WIPER SEAL: INCREASE THE ALLOWABLE TVP TO 11 PSIA

S-1518-5-6: MODIFICATION OF 110,000 BBL CRUDE OIL STORAGE TANK (#110024) INCLUDING EXTERNAL FLOATING ROOF WITH METALLIC SHOE TYPE PRIMARY SEAL AND WIPER TYPE SECONDARY SEAL: INCREASE THE ALLOWABLE TVP TO 11 PSIA

S-1518-7-5: MODIFICATION OF 110,000 BBL WELDED EXTERNAL FLOATING ROOF TANK (#110020) WITH METALLIC SHOE PRIMARY AND WIPER TYPE SECONDARY SEALS: REDUCE THE ANNUAL TURNOVER TO 291

S-1518-31-5: MODIFICATION OF 110,000 BBL CRUDE OIL STORAGE TANK (#110026) INCLUDING EXTERNAL FLOATING ROOF WITH METALLIC SHOE TYPE PRIMARY SEAL AND WIPER TYPE SECONDARY SEAL: INCREASE THE ALLOWABLE TVP TO 11 PSIA

Post Project Equipment Description:

S-1518-2-4: 110,000 BBL WELDED EXTERNAL FLOATING ROOF TANK (#110022) WITH METALLIC SHOE PRIMARY AND SECONDARY WIPER SEAL

S-1518-5-6: 110,000 BBL CRUDE OIL STORAGE TANK (#110024) INCLUDING EXTERNAL FLOATING ROOF WITH METALLIC SHOE TYPE PRIMARY SEAL AND WIPER TYPE SECONDARY SEAL

S-1518-7-5: 110,000 BBL WELDED EXTERNAL FLOATING ROOF TANK (#110020) WITH METALLIC SHOE PRIMARY AND WIPER TYPE SECONDARY SEALS

S-1518-31-5: 110,000 BBL CRUDE OIL STORAGE TANK (#110026) INCLUDING EXTERNAL FLOATING ROOF WITH METALLIC SHOE TYPE PRIMARY SEAL AND WIPER TYPE SECONDARY SEAL

VI. Emission Control Technology Evaluation

The floating roof design of the tank minimizes the headspace that is created when oil is removed from the tank, thereby reducing the amount of VOCs that are released.

VII. General Calculations

A. Assumptions

- Fitting count is based off actual count submitted by applicant
- The equipment's maximum operating schedule is 24 hr. /day and 365 day/ yr.
- Volatile organic compounds (VOCs) are the only pollutants emitted from the tanks.

S-1518-2-4:

- Tank may store organic liquid of up to TVP 10 psia (pre-project)
- Tank may store organic liquid of up to TVP 11 psia (post-project)
- Pre and post project tank throughput is 14,000,000 bbl. /year (127 turnovers/ year). (current PTO)

S-1518-5-6:

- Tank may store organic liquid of up to TVP 9.5 psia (pre-project)
- Tank may store organic liquid of up to TVP 11 psia (post-project)
- Pre and post project tank throughput is 30,250,000 bbl. /yr. (275 turnovers/yr.) (current PTO)

S-1518-7-5:

- Tank may store organic liquid of up to TVP 11 psia (pre and post-project)
- Pre project tank throughput is 55,000,000 bbl./yr. (500 turnovers) (current PTO)
- Post project tank throughput is 32,010,000 bbl. /yr. (275 turnovers)

S-1518-31-5:

- Tank may store organic liquid of up to TVP 5.35 psia (pre-project)
- Tank may store organic liquid of up to TVP 11 psia (post-project)
- Pre and post project tank throughput is 27,371,300 bbl. /yr. (249 turnovers). (current PTO)

B. Emission Factors

Permit Units S-1518-2, '-5-6, '-7-5, '-31-5

Emission factors are from US EPA's TANKS 4.0.9d program. See **Appendix H**

C. Calculations

1. Pre-Project Potential to Emit (PE1)

The potential to emit for the operation is calculated as follows, and summarized below:

S-1518-2 (See **Appendix H**):

Daily PE1 = 28.8 lb.-VOC/day
Annual PE1 = 10,512 lb.-VOC/year

S-1518-5 (See project S-1104897):

Daily PE1 = 48.7 lb-VOC/day
Annual PE1 = 17,758 lb-VOC/year

S-1518-7 (See project S-1054851):

Daily PE1 = 91.0 lb.-VOC/day and
Annual PE1 = 33,197 lb.-VOC/year

S-1518-31 (See project S-1104897):

Daily PE1 = 36.1 lb.-VOC/day
Annual PE1 = 13,186 lb.-VOC/year

PE1(VOC Emissions)		
	Daily Emissions (lb./day)	Annual Emissions (lb./year)
S-1518-2-3	28.8	10,512
S-1518-5-5	48.7	17,758
S-1518-7-4	91	33,197
S-1518-31-4	36	13,186

2. Post Project Potential to Emit (PE2)

The potential to emit for the each tank is calculated through the use of Tanks 4.0. The emissions are summarized below:

S-1518-3 (See **Appendix H**):

Daily PE2 = 37.6 lb.-VOC/day
Annual PE2 = 13,712 lb.-VOC/year

S-1518-5 (See **Appendix H**):

Daily PE2 = 54 lb-VOC/day
Annual PE2 = 19,696 lb-VOC/year

S-1518-7 (See **Appendix H**):

Daily PE2 = 52.3 lb.-VOC/day and
Annual PE2 = 19,078 lb.-VOC/year

S-1518-31 (See **Appendix H**):

Daily PE2 = 51 lb.-VOC/day
Annual PE2 = 18,597 lb.-VOC/year

PE2(VOC Emissions)		
	Daily Emissions (lb./day)	Annual Emissions (lb./year)
S-1518-2-4	37.6	13,712
S-1518-5-6	54.0	19,696
S-1518-7-5	52.3	19,078
S-1518-31-5	51.0	18,597

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.

This facility is a Major Source for VOC emissions. However, the tanks included in this project are considered Clean Emissions Units located at a Major Source, as they meet BACT Guideline 7.3.3 for floating roof tanks. BACT Guideline 7.3.3 requires floating roof tanks to have at least 95% control of VOC emissions by employing the use of a primary metal shoe seal with wiper secondary seal. The tanks in this project are equipped with these types of seals. There has not been another more stringent BACT determination performed for this source category in the last five years.

See **Appendix I** for actual historic emissions calculations based on the historic TVP.

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 included in the 28 specific source categories specified in 40 CFR 51.165, the, increases in fugitive emissions are 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.

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	71,083	50,000	Yes

Since the project's PE2 surpasses the SB 288 Major Modification Thresholds for VOC the Net Emissions Increase (NEI) will be compared to the SB 288 Major Modification thresholds in order to determine if this project constitutes an SB 288 Major Modification.

The NEI is the total of emission increases for every permit unit addressed in this project and is calculated as follows:

NEI = PE2 – BAE

Where: PE2 = the sum of all the PE2s for each permit unit in this project
BAE = for units that are fully offset, the BAE = the PE1 for every unit, otherwise, the BAE is the actual annual emissions averaged over the baseline period for every unit. However these tank emissions are not fully offset therefore BAE is equal to the actual historic emissions.

The PE2 is used to calculate the NEI and make the SB 288 Major Modification determination in the following table.

SB 288 Major Modification Calculation and Determination					
Pollutant	PE2 (lb./yr.)	PE1 (lb./yr.)	NEI (lb./yr.)	Thresholds (lb./yr.)	SB2 88 Major Modification?
NO_x	0	0	0	50,000	No
SO_x	0	0	0	80,000	No
PM_{10}	0	0	0	30,000	No
VOC	71,083	9,508	61,575	50,000	Yes

As demonstrated in the preceding table, this project does constitute an SB 288 Major Modification. See Appendix I for Calculations.

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 included in the 28 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are 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.

Net Emission Increase =NEI = PAE – BAE - UBC

Where: PAE = Projected Actual Emissions, and
BAE = Baseline Actual Emissions

UBC = Unused Baseline Capacity = PE1-BAE
PE1 = Pre-Project Maximum Potential Emissions
PE2 = Post-Project Maximum Potential Emissions

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.

The applicant has provided the required historical and projected operation data (see **Appendix I**).

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

Federal Major Modification Thresholds for Emission Increases						
Permit Number	PE1	BAE	PE2	PAE	UBC	NEI
S-1518-2-4	10,512	1,813	13,712	7,961	8,699	-2,551
S-1518-5-6	17,758	3,462	19,696	6,734	14,296	-11,024
S-1518-7-5	33,197	2,188	19,078	7,177	31,009	-26,020
S-1518-31-5	13,186	2,045	18,597	8,095	11,141	-5,091
Total	74,653	9,508	71,083	29,967	65,145	-44,686

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*	-44,686	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 the Federal Major Modification Thresholds is not being surpassed with this project, this project does not constitute a Federal Major Modification.

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 F.**

VIII. Compliance

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

AIPE = PE2 – 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)

HAPE = PE1 x (EF2/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

AIPE = PE2 – (PE1 * (EF2 / EF1))

S-1518-2-4:

AIPE = 37.6 – (33.8 * (1/1))
= 37.6 – 33.8 * 1
= 3.8 lb. /day

S-1518-5-6:

AIPE = 54.0 – (48.7 * (1/1))
= 54.0 – 48.7 * 1
= 5.3 lb. /day

S-1518-7-5:

AIPE = 52.3 – (91 * (1/1))
= 52.3 – 91 * 1
= -38.7 lb. /day

S-1518-31-5:

AIPE = 52.3 – (38.6 * (1/1))
= 52.3 – 38.6 * 1
= 13.7 lb. /day

As demonstrated above, the AIPE is greater than 2.0 lb./day for VOC emissions. Therefore BACT is triggered.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project does constitute an SB 288 for VOC emissions. Therefore BACT is triggered.

2. BACT Guideline

BACT Guideline 7.3.3, applies to the Petroleum and Petrochemical Production - Floating Roof Organic Liquid Storage or Processing Tank, = or > 471 bbl. Tank capacity, = or > 0.5 psia TVP (See **Appendix C)**

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see **Appendix D**), BACT has been satisfied with the following:

VOC: 95% Control (Dual wiper seal with drip curtain or primary metal shoe seal with secondary wiper seal, or equal.)

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	13,946	3,778	3,270	113,460	113,329
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	No	No	No	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) = (Σ[PE2 – BE] + ICCE) x 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 four emissions unit associated with this project and there are no increases in cargo carrier emissions. Therefore offsets can be determined as follows:

Offsets Required (lb./year) = ($\sum$[PE2 – BE] + ICCE) x DOR

PE2 (VOC) = 71,083 lb. /year
BE (VOC) = 74,653 lb. /year
ICCE = 0 lb/year

Offsets Required (lb./year) = ([13,712 + 19,696 + 19,078 + 18,597] – [10,512 + 17,758 + 33,197 + 13,186] + 0) x DOR
= ([71,083 – 74,653] + 0) x DOR
= ([-3,570] + 0) x DOR
= 0 lb. VOC/year

As demonstrated in the calculation above, the amount of offsets 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 SSIPE of greater than 20,000 lb/year for any pollutant.

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

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

As demonstrated in VII.C.7, this project does constitute an SB 288; therefore, public noticing for SB 288 or Federal Major Modification purposes is 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

Public notification is required if the Pre-Project Stationary Source Potential to Emit (SSPE1) is increased from a level below the offset threshold to a level exceeding the emissions offset threshold, for any pollutant. Since ConocoPhillips is already a Major Source for VOC emissions, and the only pollutant of concern in this project is VOCs, the offset threshold was not surpassed in this project. Public noticing for surpassing the offset threshold is not required.

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. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_x	13,946	13,946	0	20,000 lb/year	No
SO_x	3,778	3,778	0	20,000 lb/year	No
PM_{10}	3,270	3,270	0	20,000 lb/year	No
CO	113,460	113,460	0	20,000 lb/year	No
VOC	113,329	109,759	-3,570	20,000 lb/year	No

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

2. Public Notice Action

As discussed above, this project constitutes a SB 288 and Federal Major Modification. Therefore, public notice will 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.

For both tank units, the DEL is in the form of TVP limits and will be expressed on an annual throughput limit:

S-1518-2-4:

- The true vapor pressure (TVP) of any organic liquid placed or stored shall be less than or equal to 11 psia. [District Rules 2201 and 4623]
- The maximum amount of material introduced into this tank shall not exceed 14,000,000 bbl. /year (127 turnovers/ year). [District Rule 2201]

S-1518-5-6:

- The true vapor pressure (TVP) of any organic liquid placed or stored shall be less than or equal to 11 psia. [District Rules 2201 and 4623]
- The maximum amount of material introduced into this tank shall not exceed 30,250,000 bbl. /yr. (275 turnovers/ year). [District Rule 2201]

S-1518-7-5:

- The true vapor pressure (TVP) of any organic liquid placed or stored shall be less than or equal to 11 psia. [District Rules 2201 and 4623]
- The maximum amount of material introduced into this tank shall not exceed 32,010,000 bbl. /yr. (275 turnovers/ year). [District Rule 2201]

S-1518-31-5:

- The true vapor pressure (TVP) of any organic liquid placed or stored shall be less than or equal to 11 psia. [District Rules 2201 and 4623]

- The maximum amount of material introduced into this tank shall not exceed 27,371,300 bbl. /yr. (249 turnovers/ year). [District Rule 2201]

E. Compliance Assurance

1. Source Testing

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

2. Monitoring

The tank DELs are based on TVP and throughput. The ATCs will include a requirement for annual testing of TVP as discussed in the rule compliance section below.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following condition(s) are listed on the permit to operate:

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 an administrative amendment, 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)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60.

Permit Unit S-1518-2-4, '-5-6, '-7-5 and '-31-5

These units are already in compliance; therefore, continued compliance is expected and the existing conditions on the permit will be carried over to the ATC.

Rule 4101 Visible Emissions

Rule 4101 states that 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). Tank VOC emissions are the only criteria pollutant in this project. Therefore, 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.

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (**Appendix E**), the total facility prioritization score including this project was less than or equal to one. Therefore, no future analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy is expected.

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is not required for this project because the HRA indicates that the risk is not above the District's thresholds for triggering T-BACT requirements; therefore, compliance with the District's Risk Management Policy is expected.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District's significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 10 in a million). As outlined by the HRA Summary in Appendix E of this report, the emissions increases for this project was determined to be less than significant.

Rule 4623 Storage of Organic Liquids

Please note that several requirements from this rule overlap with the requirements of 40 CFR Part 60 Subpart Kb as discussed previously. Where these overlaps occur, both regulations will be cited.

Section 5.1.1 outlines control requirements based on the vapor pressure of the liquid stored. Since the tank involved in this project has an external floating roof and store crude oil with TVP less than 11 psia, compliance is assured.

Section 5.1.2 applies only to small producers and therefore is not applicable. Section 5.1.3 requires the tanks to be "leak-free" and seals and fitting to comply with the rule. (See discussion under Section 5.5.1 below).

Section 5.3.1 applies to external floating roof tanks and requires 1) a cover that rests on the surface of the liquid, 2) primary and secondary seals, 3) and the roof to be floating at all times except during initial and subsequent fills until the roof is lifted off the leg supports. The following conditions ensure compliance:

- {2504} This tank shall be equipped with a closure device between the tank shell and roof edge consisting of two seals mounted one above the other; the one below shall be referred to as the primary seal, and the one above shall be referred as the secondary seal. [District Rule 4623]

- Modified{2505} The external floating roof shall float on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on it's legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land on its legs. [District Rule 4623, 5.3.1 and 40 CFR 60.112a(a)(1)]

Section 5.3.2.1 provides specifications for welded external floating roof tanks with primary metallic-shoe type seals. The following conditions ensure compliance.

- Accumulated area of gaps between tank wall and the secondary seal shall not exceed 1.0 sq in. per foot of tank diameter and the width of any portion of any gap shall not exceed 1/2 inch. [District Rule 4623, 5.3.2.1.2 and 40 CFR 60.112a(a)(1)(i)(B)]

- {2507} The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623]

- {2508} The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623]

- {2509} No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623]

- {2511} The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623]

- Modified{2512} The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 24 inches above the stored liquid surface. [District Rule 4623, 5.3.2.1.3 and 40 CFR 60.112a(a)(1)(i)(C)]

- {2513} The geometry of the metallic-shoe type seal shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623]

- Modified{2514} There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623, 5.3.2.1.5; 40 CFR 60.112a(a)(1)(i)(D); and 40 CFR 60.112a(a)(1)(ii)(C)]

- {2515} The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623]

- {2516} The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623]

Section 5.3.2.2 provides specifications for riveted external floating roof tanks. Since the tank involved in this project is not riveted and does not have an external floating roof, this section is not applicable.

Section 5.3.2.3 provides specifications for tanks with resilient toroid seals. Since the tank involved in this project does not contain resilient toroid seals, this section is not applicable.

Section 5.3.2.4 provides specifications for approved alternative seals, which are not used for this project. Therefore, this section is not applicable.

Section 5.4 provides specifications for internal floating roof tanks and requires 1) seals that meet all the requirements set forth in Section, 5.3 except for Section 5.3.2.1.3; 2) metallic-shoe type seals to be installed so that one end of the shoe extends into the stored liquid, and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface; and 3) compliance with the floating roof landing requirements in Section 5.3.1.3. Since the tank involved in this project is an external floating roof tank, this section is not applicable.

Section 5.5 specifies requirements for floating roof deck fittings. Section 5.5.1 requires all openings in roofs used for sampling or gauging, except pressure-vacuum valves complying with Section 5.2, to provide a projection below the liquid surface, and all covers and seals must be closed at all times, with no visible gaps and leak-free, except when in use. The following conditions will ensure continued compliance:

- Modified{2517} All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be leak-free, except when the device or appurtenance is in use. [District Rule 4623, 5.5.1 and 40 CFR 60.112a(a)(1)(iii)]

- Modified{2501} A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623]

Section 5.5.2.1 outlines requirements for internal floating roof deck fittings. Since the tank involved in this project is an external floating roof tank, this section is not applicable.

Section 5.5.2.2 outlines requirements for external floating roof deck fittings. The following conditions ensure compliance:

- Modified{2518} Except for automatic bleeder vents, rim vents, and pressure relief vents, each opening in a non-contact external floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.2.1 and 40 CFR 60.112a(a)(1)(iii)]

- Modified{2519} Except for automatic bleeder vents and rim vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid that shall be maintained in a closed position at all times (i.e., no visible gap) except when in actual use. [District Rule 4623, 5.5.2.1.2 and 40 CFR 60.112a(a)(1)(iii)]

- Modified{2520} Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or

is being landed on the roof leg supports. [District Rule 4623, 5.5.2.1.3 and 40 CFR 60.112a(a)(1)(iii)]

- Modified{2521} Rim vents shall be equipped with a gasket and shall be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. [District Rule 4623, 5.5.2.1.4 and 40 CFR 60.112a(a)(1)(iii)]

- Modified{2522} Each emergency roof drain shall be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening. The fabric cover must be impermeable if the liquid is drained into the contents of the tanks. [District Rule 4623, 5.5.2.2.5 and 40 CFR 60.112a(a)(1)(iv)]

- {2523} External floating roof legs shall be equipped with vapor socks or vapor barriers in order to maintain a gas-tight condition so as to prevent VOC emissions from escaping through the roof leg opening. [District Rule 4623]

Section 5.5.2.3 outlines requirements for solid guide poles. The following conditions ensure compliance.

- {2524} All wells and similar fixed projections through the floating roof shall provide a projection below the liquid surface. [District Rule 4623]

- {2525} The solid guide pole well shall be equipped with a pole wiper and a gasketed cover, seal or lid which shall be in a closed position at all times (i.e., no visible gap) except when the well is in use. [District Rule 4623]

- {2526} The gap between the pole wiper and the solid guide pole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/2 inch. [District Rule 4623]

Section 5.5.2.4 outlines requirements for slotted guide poles. Since this tank does not use slotted guide poles, this section is not applicable.

Section 5.6 outlines vapor recovery system requirements for fixed roof tanks. The tank involved in this project is not a fixed roof tank; therefore, this section is not applicable.

Section 5.7 outlines the provisions for voluntary tank preventative inspection and maintenance, and tank interior cleaning program. The operator has not elected to participate in this program; therefore, no conditions are required to ensure compliance.

Section 6 outlines recordkeeping requirements and requires accurate record retention for a period of five years. Compliance is assured by the following condition and the remaining sections:

- All records required for monitoring data and support information for inspection shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Y

Section 6.1.1 requires the operator of external floating roof tanks to make the primary seal envelope available for unobstructed inspection by the APCO on an annual basis. A minimum of eight locations is required for riveted tanks with toroid-type seals, and a minimum of four locations is required for other cases. Since the tank involved in this project is a welded tank, the following conditions ensure compliance:

- {2529} The permittee shall make the primary seal envelope available for unobstructed inspection by the APCO on an annual basis at locations selected along its circumference at random by the APCO. In the case of riveted tanks with toroid-type seals, a minimum of eight locations shall be made available; in all other cases, a minimum of four locations shall be made available. If the APCO suspects a violation may exist the APCO may require such further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. [District Rule 4623]

Section 6.1.2 requires the operator of floating roof tanks to submit a tank inspection plan to the APCO for approval. The following condition ensures compliance:

- Operators of floating roof tanks shall submit a tank inspection plan to the APCO for approval. The plan shall include an inventory of the tanks subject to this rule and a tank inspection schedule. A copy of the operator's tank safety procedures shall be made available to the APCO upon request. The tank inventory shall include tank's identification number, PTO number, maximum tank capacity, dimensions of tank (height and diameter), organic liquid stored, type of primary and secondary seal, type of floating roof (internal or external floating roof), construction date of tank, and location of tank. Any revision to a previously approved tank inspection schedule shall be submitted to the APCO for approval prior to conducting an inspection. [District Rule 4623]

Section 6.1.3 requires external floating roof tanks to be inspected at least once every 12 months, or every time a tank is emptied or degassed. The actual gap measurements must be recorded and submitted to the APCO as specified in Section 6.3.5. The following conditions ensure compliance:

- The permittee shall inspect all floating roof tanks within 60 days of the initial fill with petroleum liquid and at least once every 12 months thereafter to determine compliance with the requirements of Rule 4623. The actual gap measurements of the floating roof primary and secondary seals shall be recorded. The inspection results shall be submitted to the APCO as specified in Section 6.3.5. [District Rule 4623, 6.1.3.1.1 and 40 CFR 60.113a(a)(1)(i)(B)]

- {2531} The 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 24 hours after the tank roof is re-floated. [District Rule 4623]

Section 6.1.4 requires internal floating roof tanks to be inspected at least once every 12 months after a tank is initially filled, or prior to refilling if the tank is newly constructed, repaired, or rebuilt. In addition, actual gap measurements of the primary seal and/or secondary seal

must be conducted at least once every 60 months. The tank involved in this project is not an internal floating roof tank; therefore, this section is not applicable.

Section 6.2 outlines requirements for TVP and API gravity testing for uncontrolled fixed roof tanks. Section 6.3.1 does not apply to floating roof tanks and fixed roof tanks with vapor recovery systems. Section 6.3.2 only applies to emergency standby tanks. Section 6.3.3 only applies to temporary tanks. Section 6.3.4 only applies to small producers. Therefore, the requirements for these sections are not applicable.

Section 6.3.5 requires the inspection reports of floating roof tanks to be submitted to the APCO within five calendar days after the inspection for tanks that failed. For tanks that demonstrated compliance the inspection reports do not need to be submitted but must remain on-site and made available upon request by the APCO. In addition, this section also outlines the required information. The following conditions ensure compliance:

- Modified{2532} Permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623]

Section 6.3.6 requires submittal of TVP and API gravity records as required by Section 6.2; however, the tank in this project is not subject to 6.2. Therefore, this section is not applicable.

Section 6.3.7 requires the operator to maintain the records of floating roof landing activities pursuant to Section 5.3.1.3 and 5.4.3. The following conditions ensure compliance:

- Modified{2533} Permittee shall maintain the records of the external floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623, 6.3.7 and 40 CFR 60.115a(a)]

Section 6.4 outlines approved test methods for analysis of halogenated exempt compounds, API gravity, TVP, control efficiency of VOC destruction device, and gas leak concentration.

Since the facility will now be required to test and record API gravity and TVP, the following testing conditions will be added:

- A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623]

- The API gravity of crude oil or petroleum distillate shall be determine by using ASTM Method D 287 el "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 Rules 2201 and 4623]

- 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 Rules 2201 and 4623]

- For any organic liquid, except crude oil with an API gravity of 26 degrees or less, the true vapor pressure (TVP) shall be determined by measuring Reid Vapor Pressure (RVP) with ASTM Method D 323 and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rules 2201 and 4623]

Section 7 requires that any tank installed or constructed on and after May 19, 2005 be in full compliance upon initial operation, and any previously exempt tank must be in full compliance upon the date the exemption status is lost. The tanks involved in this project is in full compliance, as discussed in the previous sections. Therefore, compliance is assured.

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.

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-1518-2-4, '-5-6, '-7-5, '-31-5 subject to the permit conditions on the attached draft ATC in **Appendix C.**

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1518-2-4	3020-05-G	4,620,000 gallons	$382.00
S-1518-5-6	3020-05-G	4,620,000 gallons	$382.00
S-1518-7-5	3020-05-G	4,620,000 gallons	$382.00
S-1518-31-5	3020-05-G	4,620,000 gallons	$382.00

Appendixes

A: Draft ATC
B: Current PTO(s)
C: BACT Guideline
D: BACT Analysis
E: HRA Summary
F: Quarterly Net Emissions Change
G: Emission Profile(s)
H PE1/PE2 Emissions Calculation
I: Historical and Projected operation data
J: Compliance Certification

APPENDIX A:
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-1518-2-4

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: PHILLIPS 66 PIPELINE LLC
MAILING ADDRESS: JUNCTION PUMP STATION
14990 HWY 46
LOST HILLS, CA 93249

LOCATION: JUNCTION PUMP STATION
14990 HWY 46
LOST HILLS, CA 93249

SECTION: SE19 **TOWNSHIP:** 26S **RANGE:** 19E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 4,620,000 GALLON WELDED EXTERNAL FLOATING ROOF TANK (#110022) WITH METALLIC SHOE PRIMARY AND SECONDARY WIPER SEAL: INCREASE TVP LIMIT TO 11.0 PSIA

CONDITIONS

1. Authority to Construct S-1518-7-5 shall be implemented prior to or concurrently with this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
2. {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
3. Throughput of material for this tank shall not exceed 14,000,000 bbl/year. [District Rule 2201, 4623] Federally Enforceable Through Title V Permit
4. True vapor pressure of the organic liquid stored shall be less than 11 psia. [District 2201 Rule] Federally Enforceable Through Title V Permit
5. {2736} The tank shall be equipped with a floating roof consisting of a pan type that was installed before December 20, 2001, pontoon-type or double-deck-type cover which rests upon the surface of the liquid being stored and is equipped with a closure device between the tank shell and roof edge consisting of a primary and a secondary seal. [District Rule 4623, 5.3.1 and 40 CFR 60.112b(a)(2) & (i)] 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

DRAFT

DAVID WARNER, Director of Permit Services
S-1518-2-4 : Nov 6 2012 3:36PM – JONESW : Joint Inspection NOT Required

6. {2737} The external floating roof shall float on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on it's legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land on its legs. [District Rule 4623, 5.3.1.3 and 40CFR 60.112b(a)(2)(iii)] Federally Enforceable Through Title V Permit
7. This tank shall be equipped with a closure device between the tank shell and roof edge consisting of two seals mounted one above the other; the one below shall be referred to as the primary seal, and the one above shall be referred as the secondary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
8. {2738} Primary seal (lower seal) shall be either a mechanical shoe seal or a liquid-mounted seal. [40CFR 60.112b(a)(2)(i) and 60.112b(a)(2)(i)(A)] Federally Enforceable Through Title V Permit
9. Operators of floating roof tanks shall submit a tank inspection plan to the APCO for approval. The plan shall include an inventory of the tanks subject to this rule and a tank inspection schedule. A copy of the operator's tank safety procedures shall be made available to the APCO upon request. The tank inventory shall include tank's identification number, PTO number, maximum tank capacity, dimensions of tank (height and diameter), organic liquid stored, type of primary and secondary seal, type of floating roof (internal or external floating roof), construction date of tank, and location of tank. Any revision to a previously approved tank inspection schedule shall be submitted to the APCO for approval prior to conducting an inspection. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm2 per meter (10.01 in2 per foot) of tank diameter, and the width of any gap shall not exceed 3.81 cm (1.5 inches). [40CFR 60.113b(b)(4)(i)] Federally Enforceable Through Title V Permit
11. {2656} Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
12. {2657} The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
13. {2658} The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
14. {2659} No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
15. Accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm2 per meter (1.00 in2 per foot) of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm (1/2 inch). [District Rule 4623, 5.3.2.1.2 and 40CFR 60.113b(b)(4)(ii)(B)] Federally Enforceable Through Title V Permit
16. {2661} The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623, 5.3.2.1.2] Federally Enforceable Through Title V Permit
17. {2662} The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 24 inches above the stored liquid surface. [District Rule 4623, 5.3.2.1.3] Federally Enforceable Through Title V Permit
18. {2663} The geometry of the metallic-shoe type seal shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623, 5.3.2.1.4] Federally Enforceable Through Title V Permit
19. {2741} There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623, 5.3.2.1.5 and 40 CFR 60.112b(b)(4)(ii)(C)] Federally Enforceable Through Title V Permit
20. {2665} The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623, 5.3.2.1.6] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. {2666} The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623, 5.3.2.1.7] Federally Enforceable Through Title V Permit

22. {2742} Secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion. [40CFR 60.112b(a)(2)(i)(B)] Federally Enforceable Through Title V Permit

23. {2687} All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use [District Rule 4623, 5.5.1] Federally Enforceable Through Title V Permit

24. A leak free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit

25. Except for automatic bleeder vents, rim vents, and pressure relief vents, each opening in a non-contact external floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.2.1] Federally Enforceable Through Title V Permit

26. Except for automatic bleeder vents and rim vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid that shall be maintained in a closed position at all times (i.e., no visible gap) except when in actual use. [District Rule 4623, 5.5.2.2.2] Federally Enforceable Through Title V Permit

27. {2749} Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [District Rule 4623, 5.5.2.2.3, 5.5.2.1.3 and 40CFR 60.112b(a)(2)(ii)]] Federally Enforceable Through Title V Permit

28. {2750} Rim vents shall be equipped with a gasket and shall be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. [District Rule 4623, 5.5.2.2.4 and 40CFR 60.112b(a)(2)(ii)] Federally Enforceable Through Title V Permit

29. Each roof drain that drains rainwater into the contents of the tank shall be provided with an impermeable slotted membrane fabric cover that covers at least 90 percent of the area of the opening. [District Rule 4623, 5.5.2.2.5] Federally Enforceable Through Title V Permit

30. External floating roof legs shall be equipped with vapor socks or vapor barriers in order to maintain a gas-tight condition so as to prevent VOC emissions from escaping through the roof leg opening. [District Rule 4623, 5.5.2.2.6] Federally Enforceable Through Title V Permit

31. All wells and similar fixed projections through the floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.3.1] Federally Enforceable Through Title V Permit

32. The solid guidepole well shall be equipped with a pole wiper and a gasketed cover, seal or lid which shall be in a closed position at all times (i.e., no visible gap) except when the well is in use. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

33. The gap between the pole wiper and the solid guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/2 inch. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

34. The slotted guidepole well on the external floating roof shall be equipped with the following: a sliding cover, a well gasket, a pole sleeve, a pole wiper, and an internal float and float wiper designed to minimize the gap between the float and the well, and provided the gap shall not exceed 1/8 inch; or shall be equipped with a well gasket, a zero gap pole wiper seal and a pole sleeve that projects below the liquid surface. [District Rule 4623, 5.5.2.4.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

35. The gap between the pole wiper and the slotted guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/8 inch. [District Rule 4623, 5.5.2.4.3] Federally Enforceable Through Title V Permit

36. {2699} The permittee shall make the primary seal envelope available for unobstructed inspection by the APCO on an annual basis at locations selected along its circumference at random by the APCO. In the case of riveted tanks with toroid-type seals, a minimum of eight locations shall be made available; in all other cases, a minimum of four locations shall be made available. If the APCO suspects a violation may exist the APCO may require such further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. [District Rule 4623, 6.1.1] Federally Enforceable Through Title V Permit

37. {2751} Operator shall perform gap measurements on primary and secondary seals within 60 days of the initial fill and at least once every year thereafter to determine compliance with the requirements of Rule 4623. The actual gap measurements of the floating roof primary and secondary seals shall be recorded. The inspection results shall be submitted to the APCO as specified in Section 6.3.5. [District Rule 4623, 6.1.3.1.1 and 40 CFR 60.113b(b)(1)(i) & (ii)] Federally Enforceable Through Title V Permit

38. {2752} Operator shall also perform gap measurements on primary seals during hydrostatic testing of the vessel. [40CFR 60.113b(b)(1)(i)] Federally Enforceable Through Title V Permit

39. {2753} If unit is out of service for a period of one year or more, subsequent refilling with volatile organic liquid shall be considered initial fill in accordance with the conditions of this permit. [40CFR60.113b(b)(1)(iii)] Federally Enforceable Through Title V Permit

40. The permittee shall inspect the primary and secondary seals for compliance with the requirements of Rule 4623 every time this tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 24 hours after the tank roof is re-floated. [District Rule 4623, 6.1.3.1.2 and 40CFR 60.113b(b)(6)] Federally Enforceable Through Title V Permit

41. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623, 6.3.5] Federally Enforceable Through Title V Permit

42. {2755} Permittee shall maintain the records of the external floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the maximum true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623, 6.3.7 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

43. {2728} All covers, seals and lids covering openings in the roof used for sampling and gauging, except pressure-vacuum valves set to within 10 percent of the maximum allowable working pressure of the roof, shall be inspected annually by the facility operator to ensure compliance with the provisions of this permit. However, if one or more of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If none of the components of that type are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

44. {2619} Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [40 CFR 60.112b(a)(3)(i)] Federally Enforceable Through Title V Permit

45. {2605} 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. Leaks over 10,000 ppmv shall be reported as a deviation. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

46. {2756} Operator shall notify the APCO 30 days in advance of any gap measurements required by this permit to afford the APCO opportunity to have an observer present. [40CFR 60.113b(b)(5)] Federally Enforceable Through Title V Permit

47. {2757} If the external floating roof has defects, or the primary seal or secondary seal has holes, tears, or other openings in the seal or seal fabric, the operator shall repair the items as necessary so that none of these conditions exist before filling or refilling the storage vessel with VOL. [40CFR 60.113b(b)(6)(i)] Federally Enforceable Through Title V Permit

48. {2758} For all visual inspections required by this permit, the operator shall notify the APCO in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the APCO the opportunity to inspect the storage vessel prior to refilling, except when notification is specifically allowed otherwise by this permit. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

49. {2759} If a visual inspection required by this permit is not planned and the operator could not have known about the inspection 30 days in advance of refilling the tank, the operator shall notify the APCO at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so it is received by the APCO at least 7 days prior to the refilling. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

50. {2760} Operator shall record the vessel on which the measurement was performed, date of the seal gap measurement, raw data obtained in the measurement process in accordance with the conditions of this permit. [40CFR 60.115b(b)(3)] Federally Enforceable Through Title V Permit

51. {2761} Within 60 days of performing the seal gap measurements required by this permit, the operator shall furnish the APCO with a report containing the date of measurement, raw data obtained in the measurement process, and all such gap calculations as required by this permit. [40CFR 60.115b(b)(2)] Federally Enforceable Through Title V Permit

52. {2762} After each seal gap measurement that detects gaps exceeding any limit of this permit, the operator shall submit a report to the APCO within 30 days of the inspection. The report will identify the vessel and contain the date of measurement, raw data obtained in the measurement process, all such gap calculations as required by this permit, and the date the vessel was emptied or the repairs made and the date of repair. [40CFR 60.115b(b)(4)] Federally Enforceable Through Title V Permit

53. {2763} If the seals do not meet the required specifications of this permit, operator shall repair or empty the storage vessel within 45 days of identification. [40CFR 60.113b(b)(4)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

54. {2630} Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit

55. {2624} Operator shall determine the true vapor pressure of each type of crude oil with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method from available data and record if the true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)(ii)] Federally Enforceable Through Title V Permit

56. {2626} Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)(iii)] Federally Enforceable Through Title V Permit

57. {2627} For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] Federally Enforceable Through Title V Permit

58. {2623} Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit

59. {2764} Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit

60. Operator shall determine the true vapor pressure of each type of crude oil, with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method, using available data and record if the estimated maximum true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)] Federally Enforceable Through Title V Permit

61. {2706} Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

62. {2592} As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

63. The API gravity of crude oil or petroleum distillate shall be determine by using ASTM Method D 287 el "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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

64. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

65. For any organic liquid, except crude oil with an API gravity of 26 degrees or less, the true vapor pressure (TVP) shall be determined by measuring Reid Vapor Pressure (RVP) with ASTM Method D 323 and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

66. Permittee shall maintain accurate records of true vapor pressure (TVP), storage temperature, type of liquids stored, and daily tank throughput. [District Rules 2201 and 4623 and 40 CFR 60.115a(a)] Federally Enforceable Through Title V Permit

67. 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 Rules 1070 and 2201] Federally Enforceable Through Title V Permit

68. Permittee shall keep annual records of the throughput of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

69. All records required for monitoring data and support information for inspection shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

70. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m3 (19,813 gallons) but less than 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-1518-5-6

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: PHILLIPS 66 PIPELINE LLC
MAILING ADDRESS: JUNCTION PUMP STATION
14990 HWY 46
LOST HILLS, CA 93249

LOCATION: JUNCTION PUMP STATION
14990 HWY 46
LOST HILLS, CA 93249

SECTION: SE19 **TOWNSHIP:** 26S **RANGE:** 19E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 110,000 BBL CRUDE OIL STORAGE TANK (#110024) INCLUDING EXTERNAL FLOATING ROOF WITH METALLIC SHOE TYPE PRIMARY SEAL AND WIPER TYPE SECONDARY SEAL: INCREASE TVP LIMIT TO 11.0 PSIA

CONDITIONS

1. Authority to Construct S-1518-7-5 shall be implemented prior to or concurrently with this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
2. {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
3. The true vapor pressure (TVP) of the organic liquid placed or stored shall not exceed 11 psia. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The maximum amount of material introduced into this tank shall not exceed 30,250,000 bbl/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {2736} The tank shall be equipped with a floating roof consisting of a pan type that was installed before December 20, 2001, pontoon-type or double-deck-type cover which rests upon the surface of the liquid being stored and is equipped with a closure device between the tank shell and roof edge consisting of a primary and a secondary seal. [District Rule 4623, 5.3.1 and 40 CFR 60.112b(a)(2) & (i)] 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

DRAFT

DAVID WARNER, Director of Permit Services
S-1518-5-6 : Nov 8 2012 3:36PM – JONESW : Joint Inspection NOT Required

6. {2737} The external floating roof shall float on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on it's legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land on its legs. [District Rule 4623, 5.3.1.3 and 40CFR 60.112b(a)(2)(iii)] Federally Enforceable Through Title V Permit
7. This tank shall be equipped with a closure device between the tank shell and roof edge consisting of two seals mounted one above the other; the one below shall be referred to as the primary seal, and the one above shall be referred as the secondary seal. [District Rule 4623, 5.3] Federally Enforceable Through Title V Permit
8. {2738} Primary seal (lower seal) shall be either a mechanical shoe seal or a liquid-mounted seal. [40CFR 60.112b(a)(2)(i) and 60.112b(a)(2)(i)(A)] Federally Enforceable Through Title V Permit
9. Operators of floating roof tanks shall submit a tank inspection plan to the APCO for approval. The plan shall include an inventory of the tanks subject to this rule and a tank inspection schedule. A copy of the operator's tank safety procedures shall be made available to the APCO upon request. The tank inventory shall include tank's identification number, PTO number, maximum tank capacity, dimensions of tank (height and diameter), organic liquid stored, type of primary and secondary seal, type of floating roof (internal or external floating roof), construction date of tank, and location of tank. Any revision to a previously approved tank inspection schedule shall be submitted to the APCO for approval prior to conducting an inspection. [District Rule 4623, 6.1] Federally Enforceable Through Title V Permit
10. Accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm2 per meter (10.01 in2 per foot) of tank diameter, and the width of any gap shall not exceed 3.81 cm (1.5 inches). [40CFR 60.113b(b)(4)(i)] Federally Enforceable Through Title V Permit
11. {2656} Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
12. {2657} The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
13. {2658} The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
14. {2659} No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
15. Accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm2 per meter (1.00 in2 per foot) of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm (1/2 inch). [District Rule 4623, 5.3.2.1.2 and 40CFR 60.113b(b)(4)(ii)(B)] Federally Enforceable Through Title V Permit
16. {2661} The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623, 5.3.2.1.2] Federally Enforceable Through Title V Permit
17. {2662} The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 24 inches above the stored liquid surface. [District Rule 4623, 5.3.2.1.3] Federally Enforceable Through Title V Permit
18. {2663} The geometry of the metallic-shoe type seal shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623, 5.3.2.1.4] Federally Enforceable Through Title V Permit
19. {2741} There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623, 5.3.2.1.5 and 40 CFR 60.112b(b)(4)(ii)(C)] Federally Enforceable Through Title V Permit
20. {2665} The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623, 5.3.2.1.6] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. {2666} The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623, 5.3.2.1.7] Federally Enforceable Through Title V Permit

22. {2742} Secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion. [40CFR 60.112b(a)(2)(i)(B)] Federally Enforceable Through Title V Permit

23. All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be leak-free, except when the device or appurtenance is in use [District Rule 4623, 5.5.1] Federally Enforceable Through Title V Permit

24. A leak- free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623, 3.11, 3.17 and 6.4.8] Federally Enforceable Through Title V Permit

25. Except for automatic bleeder vents, rim vents, and pressure relief vents, each opening in a non-contact external floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.2.1] Federally Enforceable Through Title V Permit

26. Except for automatic bleeder vents and rim vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid that shall be maintained in a closed position at all times (i.e., no visible gap) except when in actual use. [District Rule 4623, 5.5.2.2.2] Federally Enforceable Through Title V Permit

27. {2749} Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [District Rule 4623, 5.5.2.2.3, 5.5.2.1.3 and 40CFR 60.112b(a)(2)(ii)]] Federally Enforceable Through Title V Permit

28. {2750} Rim vents shall be equipped with a gasket and shall be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. [District Rule 4623, 5.5.2.2.4 and 40CFR 60.112b(a)(2)(ii)] Federally Enforceable Through Title V Permit

29. Each roof drain that drains rainwater into the contents of the tank shall be provided with an impermeable slotted membrane fabric cover that covers at least 90 percent of the area of the opening. [District Rule 4623, 5.5.2.2.5] Federally Enforceable Through Title V Permit

30. External floating roof legs shall be equipped with vapor socks or vapor barriers in order to maintain a gas-tight condition so as to prevent VOC emissions from escaping through the roof leg opening. [District Rule 4623, 5.5.2.2.6] Federally Enforceable Through Title V Permit

31. All wells and similar fixed projections through the floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.3.1] Federally Enforceable Through Title V Permit

32. The solid guidepole well shall be equipped with a pole wiper and a gasketed cover, seal or lid which shall be in a closed position at all times (i.e., no visible gap) except when the well is in use. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

33. The gap between the pole wiper and the solid guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/2 inch. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

34. The slotted guidepole well on the external floating roof shall be equipped with the following: a sliding cover, a well gasket, a pole sleeve, a pole wiper, and an internal float and float wiper designed to minimize the gap between the float and the well, and provided the gap shall not exceed 1/8 inch; or shall be equipped with a well gasket, a zero gap pole wiper seal and a pole sleeve that projects below the liquid surface. [District Rule 4623, 5.5.2.4.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

35. The gap between the pole wiper and the slotted guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/8 inch. [District Rule 4623, 5.5.2.4.3] Federally Enforceable Through Title V Permit

36. {2699} The permittee shall make the primary seal envelope available for unobstructed inspection by the APCO on an annual basis at locations selected along its circumference at random by the APCO. In the case of riveted tanks with toroid-type seals, a minimum of eight locations shall be made available; in all other cases, a minimum of four locations shall be made available. If the APCO suspects a violation may exist the APCO may require such further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. [District Rule 4623, 6.1.1] Federally Enforceable Through Title V Permit

37. {2751} Operator shall perform gap measurements on primary and secondary seals within 60 days of the initial fill and at least once every year thereafter to determine compliance with the requirements of Rule 4623. The actual gap measurements of the floating roof primary and secondary seals shall be recorded. The inspection results shall be submitted to the APCO as specified in Section 6.3.5. [District Rule 4623, 6.1.3.1.1 and 40 CFR 60.113b(b)(1)(i) & (ii)] Federally Enforceable Through Title V Permit

38. {2752} Operator shall also perform gap measurements on primary seals during hydrostatic testing of the vessel. [40CFR 60.113b(b)(1)(i)] Federally Enforceable Through Title V Permit

39. {2753} If unit is out of service for a period of one year or more, subsequent refilling with volatile organic liquid shall be considered initial fill in accordance with the conditions of this permit. [40CFR60.113b(b)(1)(iii)] Federally Enforceable Through Title V Permit

40. The permittee shall inspect the primary and secondary seals for compliance with the requirements of Rule 4623 every time this tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 24 hours after the tank roof is re-floated. [District Rule 4623, 6.1.3.1.2 and 40CFR 60.113b(b)(6)] Federally Enforceable Through Title V Permit

41. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623, 6.3.5] Federally Enforceable Through Title V Permit

42. {2755} Permittee shall maintain the records of the external floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the maximum true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623, 6.3.7 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

43. {2728} All covers, seals and lids covering openings in the roof used for sampling and gauging, except pressure-vacuum valves set to within 10 percent of the maximum allowable working pressure of the roof, shall be inspected annually by the facility operator to ensure compliance with the provisions of this permit. However, if one or more of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If none of the components of that type are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

44. {2619} Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [40 CFR 60.112b(a)(3)(i)] Federally Enforceable Through Title V Permit

45. {2605} 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. Leaks over 10,000 ppmv shall be reported as a deviation. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

46. {2756} Operator shall notify the APCO 30 days in advance of any gap measurements required by this permit to afford the APCO opportunity to have an observer present. [40CFR 60.113b(b)(5)] Federally Enforceable Through Title V Permit

47. {2757} If the external floating roof has defects, or the primary seal or secondary seal has holes, tears, or other openings in the seal or seal fabric, the operator shall repair the items as necessary so that none of these conditions exist before filling or refilling the storage vessel with VOL. [40CFR 60.113b(b)(6)(i)] Federally Enforceable Through Title V Permit

48. {2758} For all visual inspections required by this permit, the operator shall notify the APCO in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the APCO the opportunity to inspect the storage vessel prior to refilling, except when notification is specifically allowed otherwise by this permit. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

49. {2759} If a visual inspection required by this permit is not planned and the operator could not have known about the inspection 30 days in advance of refilling the tank, the operator shall notify the APCO at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so it is received by the APCO at least 7 days prior to the refilling. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

50. {2760} Operator shall record the vessel on which the measurement was performed, date of the seal gap measurement, raw data obtained in the measurement process in accordance with the conditions of this permit. [40CFR 60.115b(b)(3)] Federally Enforceable Through Title V Permit

51. {2761} Within 60 days of performing the seal gap measurements required by this permit, the operator shall furnish the APCO with a report containing the date of measurement, raw data obtained in the measurement process, and all such gap calculations as required by this permit. [40CFR 60.115b(b)(2)] Federally Enforceable Through Title V Permit

52. {2762} After each seal gap measurement that detects gaps exceeding any limit of this permit, the operator shall submit a report to the APCO within 30 days of the inspection. The report will identify the vessel and contain the date of measurement, raw data obtained in the measurement process, all such gap calculations as required by this permit, and the date the vessel was emptied or the repairs made and the date of repair. [40CFR 60.115b(b)(4)] Federally Enforceable Through Title V Permit

53. {2763} If the seals do not meet the required specifications of this permit, operator shall repair or empty the storage vessel within 45 days of identification. [40CFR 60.113b(b)(4)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

54. {2630} Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit

55. {2626} Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)(iii)] Federally Enforceable Through Title V Permit

56. {2627} For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] Federally Enforceable Through Title V Permit

57. {2623} Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit

58. {2764} Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit

59. Operator shall determine the true vapor pressure of each type of crude oil, with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method, using available data and record if the estimated maximum true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)] Federally Enforceable Through Title V Permit

60. {2706} Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

61. {2592} As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

62. The API gravity of crude oil or petroleum distillate shall be determine by using ASTM Method D 287 el "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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

63. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

64. For any organic liquid, except crude oil with an API gravity of 26 degrees or less, the true vapor pressure (TVP) shall be determined by measuring Reid Vapor Pressure (RVP) with ASTM Method D 323 and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

65. Permittee shall maintain accurate records of true vapor pressure (TVP), storage temperature, type of liquids stored, and daily tank throughput. [District Rules 2201 and 4623 and 40 CFR 60.115a(a)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

66. 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 Rules 1070 and 2201] Federally Enforceable Through Title V Permit

67. Permittee shall keep annual records of the throughput of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

68. All records required for monitoring data and support information for inspection shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

69. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m3 (19,813 gallons) but less than 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-1518-7-5 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: PHILLIPS 66 PIPELINE LLC
MAILING ADDRESS: JUNCTION PUMP STATION
14990 HWY 46
LOST HILLS, CA 93249

LOCATION: JUNCTION PUMP STATION
14990 HWY 46
LOST HILLS, CA 93249

SECTION: SE19 **TOWNSHIP:** 26S **RANGE:** 19E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 110,000 BBL WELDED EXTERNAL FLOATING ROOF TANK (#110020) WITH METALLIC SHOE PRIMARY AND WIPER TYPE SECONDARY SEALS: REDUCE ANNUAL THROUGHPUT TO 32.01 MILLION BBL/YR

CONDITIONS

1. {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
2. True vapor pressure of the organic liquid stored shall be less than 11 psia. [District Rule 2201, and 4623] Federally Enforceable Through Title V Permit
3. Annual throughput of this tank shall not exceed 32,010,000 barrels per year. [District Rule 2201] Federally Enforceable Through Title V Permit
4. {2736} The tank shall be equipped with a floating roof consisting of a pan type that was installed before December 20, 2001, pontoon-type or double-deck-type cover which rests upon the surface of the liquid being stored and is equipped with a closure device between the tank shell and roof edge consisting of a primary and a secondary seal. [District Rule 4623, 5.3.1 and 40 CFR 60.112b(a)(2) & (i)] 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

DRAFT

DAVID WARNER, Director of Permit Services
S-1518-7-5 : Nov 8 2012 3:38PM -- JONESW : Joint Inspection NOT Required

5. {2737} The external floating roof shall float on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on it's legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land on its legs. [District Rule 4623, 5.3.1.3 and 40CFR 60.112b(a)(2)(iii)] Federally Enforceable Through Title V Permit
6. This tank shall be equipped with a closure device between the tank shell and roof edge consisting of two seals mounted one above the other; the one below shall be referred to as the primary seal, and the one above shall be referred as the secondary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
7. {2738} Primary seal (lower seal) shall be either a mechanical shoe seal or a liquid-mounted seal. [40CFR 60.112b(a)(2)(i) and 60.112b(a)(2)(i)(A)] Federally Enforceable Through Title V Permit
8. Operators of floating roof tanks shall submit a tank inspection plan to the APCO for approval. The plan shall include an inventory of the tanks subject to this rule and a tank inspection schedule. A copy of the operator's tank safety procedures shall be made available to the APCO upon request. The tank inventory shall include tank's identification number, PTO number, maximum tank capacity, dimensions of tank (height and diameter), organic liquid stored, type of primary and secondary seal, type of floating roof (internal or external floating roof), construction date of tank, and location of tank. Any revision to a previously approved tank inspection schedule shall be submitted to the APCO for approval prior to conducting an inspection. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm2 per meter (10.01 in2 per foot) of tank diameter, and the width of any gap shall not exceed 3.81 cm (1.5 inches). [40CFR 60.113b(b)(4)(i)] Federally Enforceable Through Title V Permit
10. {2656} Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
11. {2657} The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
12. {2658} The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
13. {2659} No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
14. Accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm2 per meter (1.00 in2 per foot) of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm (1/2 inch). [District Rule 4623, 5.3.2.1.2 and 40CFR 60.113b(b)(4)(ii)(B)] Federally Enforceable Through Title V Permit
15. {2661} The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623, 5.3.2.1.2] Federally Enforceable Through Title V Permit
16. {2662} The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 24 inches above the stored liquid surface. [District Rule 4623, 5.3.2.1.3] Federally Enforceable Through Title V Permit
17. {2663} The geometry of the metallic-shoe type seal shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623, 5.3.2.1.4] Federally Enforceable Through Title V Permit
18. {2741} There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623, 5.3.2.1.5 and 40 CFR 60.112b(b)(4)(ii)(C)] Federally Enforceable Through Title V Permit
19. {2665} The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623, 5.3.2.1.6] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. {2666} The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623, 5.3.2.1.7] Federally Enforceable Through Title V Permit

21. {2742} Secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion. [40CFR 60.112b(a)(2)(i)(B)] Federally Enforceable Through Title V Permit

22. {2687} All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use [District Rule 4623, 5.5.1] Federally Enforceable Through Title V Permit

23. A leak free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit

24. Except for automatic bleeder vents, rim vents, and pressure relief vents, each opening in a non-contact external floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.2.1] Federally Enforceable Through Title V Permit

25. Except for automatic bleeder vents and rim vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid that shall be maintained in a closed position at all times (i.e., no visible gap) except when in actual use. [District Rule 4623, 5.5.2.2.2] Federally Enforceable Through Title V Permit

26. {2749} Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [District Rule 4623, 5.5.2.2.3, 5.5.2.1.3 and 40CFR 60.112b(a)(2)(ii)]] Federally Enforceable Through Title V Permit

27. {2750} Rim vents shall be equipped with a gasket and shall be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. [District Rule 4623, 5.5.2.2.4 and 40CFR 60.112b(a)(2)(ii)] Federally Enforceable Through Title V Permit

28. Each roof drain that drains rainwater into the contents of the tank shall be provided with an impermeable slotted membrane fabric cover that covers at least 90 percent of the area of the opening. [District Rule 4623, 5.5.2.2.5] Federally Enforceable Through Title V Permit

29. External floating roof legs shall be equipped with vapor socks or vapor barriers in order to maintain a gas-tight condition so as to prevent VOC emissions from escaping through the roof leg opening. [District Rule 4623, 5.5.2.2.6] Federally Enforceable Through Title V Permit

30. All wells and similar fixed projections through the floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.3.1] Federally Enforceable Through Title V Permit

31. The solid guidepole well shall be equipped with a pole wiper and a gasketed cover, seal or lid which shall be in a closed position at all times (i.e., no visible gap) except when the well is in use. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

32. The gap between the pole wiper and the solid guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/2 inch. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

33. The slotted guidepole well on the external floating roof shall be equipped with the following: a sliding cover, a well gasket, a pole sleeve, a pole wiper, and an internal float and float wiper designed to minimize the gap between the float and the well, and provided the gap shall not exceed 1/8 inch; or shall be equipped with a well gasket, a zero gap pole wiper seal and a pole sleeve that projects below the liquid surface. [District Rule 4623, 5.5.2.4.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

34. The gap between the pole wiper and the slotted guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/8 inch. [District Rule 4623, 5.5.2.4.3] Federally Enforceable Through Title V Permit

35. {2699} The permittee shall make the primary seal envelope available for unobstructed inspection by the APCO on an annual basis at locations selected along its circumference at random by the APCO. In the case of riveted tanks with toroid-type seals, a minimum of eight locations shall be made available; in all other cases, a minimum of four locations shall be made available. If the APCO suspects a violation may exist the APCO may require such further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. [District Rule 4623, 6.1.1] Federally Enforceable Through Title V Permit

36. {2751} Operator shall perform gap measurements on primary and secondary seals within 60 days of the initial fill and at least once every year thereafter to determine compliance with the requirements of Rule 4623. The actual gap measurements of the floating roof primary and secondary seals shall be recorded. The inspection results shall be submitted to the APCO as specified in Section 6.3.5. [District Rule 4623, 6.1.3.1.1 and 40 CFR 60.113b(b)(1)(i) & (ii)] Federally Enforceable Through Title V Permit

37. {2752} Operator shall also perform gap measurements on primary seals during hydrostatic testing of the vessel. [40CFR 60.113b(b)(1)(i)] Federally Enforceable Through Title V Permit

38. {2753} If unit is out of service for a period of one year or more, subsequent refilling with volatile organic liquid shall be considered initial fill in accordance with the conditions of this permit. [40CFR60.113b(b)(1)(iii)] Federally Enforceable Through Title V Permit

39. The permittee shall inspect the primary and secondary seals for compliance with the requirements of Rule 4623 every time this tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 24 hours after the tank roof is re-floated. [District Rule 4623, 6.1.3.1.2 and 40CFR 60.113b(b)(6)] Federally Enforceable Through Title V Permit

40. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623, 6.3.5] Federally Enforceable Through Title V Permit

41. {2755} Permittee shall maintain the records of the external floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the maximum true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623, 6.3.7 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

42. {2728} All covers, seals and lids covering openings in the roof used for sampling and gauging, except pressure-vacuum valves set to within 10 percent of the maximum allowable working pressure of the roof, shall be inspected annually by the facility operator to ensure compliance with the provisions of this permit. However, if one or more of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If none of the components of that type are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

43. {2619} Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [40 CFR 60.112b(a)(3)(i)] Federally Enforceable Through Title V Permit

44. {2605} 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. Leaks over 10,000 ppmv shall be reported as a deviation. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

45. {2756} Operator shall notify the APCO 30 days in advance of any gap measurements required by this permit to afford the APCO opportunity to have an observer present. [40CFR 60.113b(b)(5)] Federally Enforceable Through Title V Permit

46. {2757} If the external floating roof has defects, or the primary seal or secondary seal has holes, tears, or other openings in the seal or seal fabric, the operator shall repair the items as necessary so that none of these conditions exist before filling or refilling the storage vessel with VOL. [40CFR 60.113b(b)(6)(i)] Federally Enforceable Through Title V Permit

47. {2758} For all visual inspections required by this permit, the operator shall notify the APCO in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the APCO the opportunity to inspect the storage vessel prior to refilling, except when notification is specifically allowed otherwise by this permit. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

48. {2759} If a visual inspection required by this permit is not planned and the operator could not have known about the inspection 30 days in advance of refilling the tank, the operator shall notify the APCO at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so it is received by the APCO at least 7 days prior to the refilling. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

49. {2760} Operator shall record the vessel on which the measurement was performed, date of the seal gap measurement, raw data obtained in the measurement process in accordance with the conditions of this permit. [40CFR 60.115b(b)(3)] Federally Enforceable Through Title V Permit

50. {2761} Within 60 days of performing the seal gap measurements required by this permit, the operator shall furnish the APCO with a report containing the date of measurement, raw data obtained in the measurement process, and all such gap calculations as required by this permit. [40CFR 60.115b(b)(2)] Federally Enforceable Through Title V Permit

51. {2762} After each seal gap measurement that detects gaps exceeding any limit of this permit, the operator shall submit a report to the APCO within 30 days of the inspection. The report will identify the vessel and contain the date of measurement, raw data obtained in the measurement process, all such gap calculations as required by this permit, and the date the vessel was emptied or the repairs made and the date of repair. [40CFR 60.115b(b)(4)] Federally Enforceable Through Title V Permit

52. {2763} If the seals do not meet the required specifications of this permit, operator shall repair or empty the storage vessel within 45 days of identification. [40CFR 60.113b(b)(4)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

53. {2630} Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit

54. {2624} Operator shall determine the true vapor pressure of each type of crude oil with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method from available data and record if the true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)(ii)] Federally Enforceable Through Title V Permit

55. {2626} Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)(iii)] Federally Enforceable Through Title V Permit

56. {2627} For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] Federally Enforceable Through Title V Permit

57. {2623} Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit

58. {2764} Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit

59. Operator shall determine the true vapor pressure of each type of crude oil, with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method, using available data and record if the estimated maximum true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)] Federally Enforceable Through Title V Permit

60. {2706} Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

61. {2592} As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

62. The API gravity of crude oil or petroleum distillate shall be determine by using ASTM Method D 287 el "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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

63. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

64. For any organic liquid, except crude oil with an API gravity of 26 degrees or less, the true vapor pressure (TVP) shall be determined by measuring Reid Vapor Pressure (RVP) with ASTM Method D 323 and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

65. Permittee shall maintain accurate records of true vapor pressure (TVP), storage temperature, type of liquids stored, and daily tank throughput. [District Rules 2201 and 4623 and 40 CFR 60.115a(a)] Federally Enforceable Through Title V Permit

66. 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 Rules 1070 and 2201] Federally Enforceable Through Title V Permit

67. Permittee shall keep annual records of the throughput of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

68. All records required for monitoring data and support information for inspection shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

69. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m3 (19,813 gallons) but less than 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-1518-31-5 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: PHILLIPS 66 PIPELINE LLC
MAILING ADDRESS: JUNCTION PUMP STATION
14990 HWY 46
LOST HILLS, CA 93249

LOCATION: JUNCTION PUMP STATION
14990 HWY 46
LOST HILLS, CA 93249

SECTION: SE19 **TOWNSHIP:** 26S **RANGE:** 19E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 110,000 BBL CRUDE OIL STORAGE TANK (#110026) INCLUDING EXTERNAL FLOATING ROOF WITH METALLIC SHOE TYPE PRIMARY SEAL AND WIPER TYPE SECONDARY SEAL: INCREASE TVP LIMIT TO 11.0 PSIA

CONDITIONS

1. Authority to Construct S-1518-7-5 shall be implemented prior to or concurrently with this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
2. {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
3. The true vapor pressure (TVP) of the organic liquid placed or stored shall not exceed 11 psia. [District Rules 2201 and 4623, 5.1.1] Federally Enforceable Through Title V Permit
4. The maximum amount of material introduced into this tank shall not exceed 27,371,300 bbl/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {2736} The tank shall be equipped with a floating roof consisting of a pan type that was installed before December 20, 2001, pontoon-type or double-deck-type cover which rests upon the surface of the liquid being stored and is equipped with a closure device between the tank shell and roof edge consisting of a primary and a secondary seal. [District Rule 4623, 5.3.1 and 40 CFR 60.112b(a)(2) & (i)] 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

DRAFT

DAVID WARNER, Director of Permit Services
S-1518-31-5 : Nov 8 2012 3:30PM -- JONESW : Joint Inspection NOT Required

6. {2737} The external floating roof shall float on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on it's legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land on its legs. [District Rule 4623, 5.3.1.3 and 40CFR 60.112b(a)(2)(iii)] Federally Enforceable Through Title V Permit
7. This tank shall be equipped with a closure device between the tank shell and roof edge consisting of two seals mounted one above the other; the one below shall be referred to as the primary seal, and the one above shall be referred as the secondary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
8. {2738} Primary seal (lower seal) shall be either a mechanical shoe seal or a liquid-mounted seal. [40CFR 60.112b(a)(2)(i) and 60.112b(a)(2)(i)(A)] Federally Enforceable Through Title V Permit
9. Operators of floating roof tanks shall submit a tank inspection plan to the APCO for approval. The plan shall include an inventory of the tanks subject to this rule and a tank inspection schedule. A copy of the operator's tank safety procedures shall be made available to the APCO upon request. The tank inventory shall include tank's identification number, PTO number, maximum tank capacity, dimensions of tank (height and diameter), organic liquid stored, type of primary and secondary seal, type of floating roof (internal or external floating roof), construction date of tank, and location of tank. Any revision to a previously approved tank inspection schedule shall be submitted to the APCO for approval prior to conducting an inspection. [District Rule 4623, 6.1] Federally Enforceable Through Title V Permit
10. Accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm2 per meter (10.01 in2 per foot) of tank diameter, and the width of any gap shall not exceed 3.81 cm (1.5 inches). [40CFR 60.113b(b)(4)(i)] Federally Enforceable Through Title V Permit
11. {2656} Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
12. {2657} The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
13. {2658} The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
14. {2659} No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
15. Accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm2 per meter (1.00 in2 per foot) of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm (1/2 inch). [District Rule 4623, 5.3.2.1.2 and 40CFR 60.113b(b)(4)(ii)(B)] Federally Enforceable Through Title V Permit
16. {2661} The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623, 5.3.2.1.2] Federally Enforceable Through Title V Permit
17. {2662} The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 24 inches above the stored liquid surface. [District Rule 4623, 5.3.2.1.3] Federally Enforceable Through Title V Permit
18. {2663} The geometry of the metallic-shoe type seal shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623, 5.3.2.1.4] Federally Enforceable Through Title V Permit
19. {2741} There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623, 5.3.2.1.5 and 40 CFR 60.112b(b)(4)(ii)(C)] Federally Enforceable Through Title V Permit
20. {2665} The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623, 5.3.2.1.6] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. {2666} The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623, 5.3.2.1.7] Federally Enforceable Through Title V Permit

22. {2742} Secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion. [40CFR 60.112b(a)(2)(i)(B)] Federally Enforceable Through Title V Permit

23. All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be leak-free, except when the device or appurtenance is in use [District Rule 4623, 5.5.1] Federally Enforceable Through Title V Permit

24. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623, 3.11, 3.17 and 6.4.8] Federally Enforceable Through Title V Permit

25. Except for automatic bleeder vents, rim vents, and pressure relief vents, each opening in a non-contact external floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.2.1] Federally Enforceable Through Title V Permit

26. Except for automatic bleeder vents and rim vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid that shall be maintained in a closed position at all times (i.e., no visible gap) except when in actual use. [District Rule 4623, 5.5.2.2.2] Federally Enforceable Through Title V Permit

27. {2749} Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [District Rule 4623, 5.5.2.2.3, 5.5.2.1.3 and 40CFR 60.112b(a)(2)(ii)]] Federally Enforceable Through Title V Permit

28. {2750} Rim vents shall be equipped with a gasket and shall be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. [District Rule 4623, 5.5.2.2.4 and 40CFR 60.112b(a)(2)(ii)] Federally Enforceable Through Title V Permit

29. Each roof drain that drains rainwater into the contents of the tank shall be provided with an impermeable slotted membrane fabric cover that covers at least 90 percent of the area of the opening. [District Rule 4623, 5.5.2.2.5] Federally Enforceable Through Title V Permit

30. External floating roof legs shall be equipped with vapor socks or vapor barriers in order to maintain a gas-tight condition so as to prevent VOC emissions from escaping through the roof leg opening. [District Rule 4623, 5.5.2.2.6] Federally Enforceable Through Title V Permit

31. All wells and similar fixed projections through the floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.3.1] Federally Enforceable Through Title V Permit

32. The solid guidepole well shall be equipped with a pole wiper and a gasketed cover, seal or lid which shall be in a closed position at all times (i.e., no visible gap) except when the well is in use. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

33. The gap between the pole wiper and the solid guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/2 inch. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

34. The slotted guidepole well on the external floating roof shall be equipped with the following: a sliding cover, a well gasket, a pole sleeve, a pole wiper, and an internal float and float wiper designed to minimize the gap between the float and the well, and provided the gap shall not exceed 1/8 inch; or shall be equipped with a well gasket, a zero gap pole wiper seal and a pole sleeve that projects below the liquid surface. [District Rule 4623, 5.5.2.4.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

35. The gap between the pole wiper and the slotted guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/8 inch. [District Rule 4623, 5.5.2.4.3] Federally Enforceable Through Title V Permit

36. {2699} The permittee shall make the primary seal envelope available for unobstructed inspection by the APCO on an annual basis at locations selected along its circumference at random by the APCO. In the case of riveted tanks with toroid-type seals, a minimum of eight locations shall be made available; in all other cases, a minimum of four locations shall be made available. If the APCO suspects a violation may exist the APCO may require such further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. [District Rule 4623, 6.1.1] Federally Enforceable Through Title V Permit

37. {2751} Operator shall perform gap measurements on primary and secondary seals within 60 days of the initial fill and at least once every year thereafter to determine compliance with the requirements of Rule 4623. The actual gap measurements of the floating roof primary and secondary seals shall be recorded. The inspection results shall be submitted to the APCO as specified in Section 6.3.5. [District Rule 4623, 6.1.3.1.1 and 40 CFR 60.113b(b)(1)(i) & (ii)] Federally Enforceable Through Title V Permit

38. {2752} Operator shall also perform gap measurements on primary seals during hydrostatic testing of the vessel. [40CFR 60.113b(b)(1)(i)] Federally Enforceable Through Title V Permit

39. {2753} If unit is out of service for a period of one year or more, subsequent refilling with volatile organic liquid shall be considered initial fill in accordance with the conditions of this permit. [40CFR60.113b(b)(1)(iii)] Federally Enforceable Through Title V Permit

40. The permittee shall inspect the primary and secondary seals for compliance with the requirements of Rule 4623 every time this tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 24 hours after the tank roof is re-floated. [District Rule 4623, 6.1.3.1.2 and 40CFR 60.113b(b)(6)] Federally Enforceable Through Title V Permit

41. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Leak-free status of the tank and floating roof deck fittings. Records of the leak-free status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623, 6.3.5, 40 CFR 60.115b(b)(4)] Federally Enforceable Through Title V Permit

42. {2755} Permittee shall maintain the records of the external floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the maximum true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623, 6.3.7 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

43. {2728} All covers, seals and lids covering openings in the roof used for sampling and gauging, except pressure-vacuum valves set to within 10 percent of the maximum allowable working pressure of the roof, shall be inspected annually by the facility operator to ensure compliance with the provisions of this permit. However, if one or more of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If none of the components of that type are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

44. {2619} Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [40 CFR 60.112b(a)(3)(i)] Federally Enforceable Through Title V Permit

45. {2605} 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. Leaks over 10,000 ppmv shall be reported as a deviation. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

46. {2756} Operator shall notify the APCO 30 days in advance of any gap measurements required by this permit to afford the APCO opportunity to have an observer present. [40CFR 60.113b(b)(5)] Federally Enforceable Through Title V Permit

47. {2757} If the external floating roof has defects, or the primary seal or secondary seal has holes, tears, or other openings in the seal or seal fabric, the operator shall repair the items as necessary so that none of these conditions exist before filling or refilling the storage vessel with VOL. [40CFR 60.113b(b)(6)(i)] Federally Enforceable Through Title V Permit

48. {2758} For all visual inspections required by this permit, the operator shall notify the APCO in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the APCO the opportunity to inspect the storage vessel prior to refilling, except when notification is specifically allowed otherwise by this permit. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

49. {2759} If a visual inspection required by this permit is not planned and the operator could not have known about the inspection 30 days in advance of refilling the tank, the operator shall notify the APCO at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so it is received by the APCO at least 7 days prior to the refilling. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

50. {2760} Operator shall record the vessel on which the measurement was performed, date of the seal gap measurement, raw data obtained in the measurement process in accordance with the conditions of this permit. [40CFR 60.115b(b)(3)] Federally Enforceable Through Title V Permit

51. {2761} Within 60 days of performing the seal gap measurements required by this permit, the operator shall furnish the APCO with a report containing the date of measurement, raw data obtained in the measurement process, and all such gap calculations as required by this permit. [40CFR 60.115b(b)(2)] Federally Enforceable Through Title V Permit

52. {2762} After each seal gap measurement that detects gaps exceeding any limit of this permit, the operator shall submit a report to the APCO within 30 days of the inspection. The report will identify the vessel and contain the date of measurement, raw data obtained in the measurement process, all such gap calculations as required by this permit, and the date the vessel was emptied or the repairs made and the date of repair. [40CFR 60.115b(b)(4)] Federally Enforceable Through Title V Permit

53. {2763} If the seals do not meet the required specifications of this permit, operator shall repair or empty the storage vessel within 45 days of identification. [40CFR 60.113b(b)(4)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

54. {2630} Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit

55. {2626} Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)(iii)] Federally Enforceable Through Title V Permit

56. {2627} For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] Federally Enforceable Through Title V Permit

57. {2623} Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit

58. {2764} Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit

59. Operator shall determine the true vapor pressure of each type of crude oil, with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method, using available data and record if the estimated maximum true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)] Federally Enforceable Through Title V Permit

60. {2706} Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

61. {2592} As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

62. The API gravity of crude oil or petroleum distillate shall be determine by using ASTM Method D 287 el "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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

63. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

64. For any organic liquid, except crude oil with an API gravity of 26 degrees or less, the true vapor pressure (TVP) shall be determined by measuring Reid Vapor Pressure (RVP) with ASTM Method D 323 and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

65. Permittee shall maintain accurate records of true vapor pressure (TVP), storage temperature, type of liquids stored, and daily tank throughput. [District Rules 2201 and 4623 and 40 CFR 60.115a(a)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

66. 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 Rules 1070 and 2201] Federally Enforceable Through Title V Permit

67. Permittee shall keep annual records of the throughput of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

68. All records required for monitoring data and support information for inspection shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

69. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m3 (19,813 gallons) but less than 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit

APPENDIX B:
Current PTO(s)

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1518-2-3 **EXPIRATION DATE:** 05/31/2014

SECTION: SE19 **TOWNSHIP:** 26S **RANGE:** 19E

EQUIPMENT DESCRIPTION:
4,620,000 GALLON WELDED EXTERNAL FLOATING ROOF TANK (#110022) WITH METALLIC SHOE PRIMARY AND SECONDARY WIPER SEAL

PERMIT UNIT REQUIREMENTS

1. Throughput of material for this tank shall not exceed 14,000,000 bbl/year (588,000,000 gallons/year). [District Rule 4623] Federally Enforceable Through Title V Permit
2. True vapor pressure of the organic liquid stored shall be less than 10.00 psia. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a floating roof consisting of a pan type that was installed before December 20, 2001, pontoon-type or double-deck-type cover which rests upon the surface of the liquid being stored and is equipped with a closure device between the tank shell and roof edge consisting of a primary and a secondary seal. [District Rule 4623, 5.3.1 and 40 CFR 60.112b(a)(2) & (i)] Federally Enforceable Through Title V Permit
4. The external floating roof shall float on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on it's legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land on its legs. [District Rule 4623, 5.3.1.3 and 40CFR 60.112b(a)(2)(iii)] Federally Enforceable Through Title V Permit
5. This tank shall be equipped with a closure device between the tank shell and roof edge consisting of two seals mounted one above the other; the one below shall be referred to as the primary seal, and the one above shall be referred as the secondary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Primary seal (lower seal) shall be either a mechanical shoe seal or a liquid-mounted seal. [40CFR 60.112b(a)(2)(i) and 60.112b(a)(2)(i)(A)] Federally Enforceable Through Title V Permit
7. Operators of floating roof tanks shall submit a tank inspection plan to the APCO for approval. The plan shall include an inventory of the tanks subject to this rule and a tank inspection schedule. A copy of the operator's tank safety procedures shall be made available to the APCO upon request. The tank inventory shall include tank's identification number, PTO number, maximum tank capacity, dimensions of tank (height and diameter), organic liquid stored, type of primary and secondary seal, type of floating roof (internal or external floating roof), construction date of tank, and location of tank. Any revision to a previously approved tank inspection schedule shall be submitted to the APCO for approval prior to conducting an inspection. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm2 per meter (10.01 in2 per foot) of tank diameter, and the width of any gap shall not exceed 3.81 cm (1.5 inches). [40CFR 60.113b(b)(4)(i)] Federally Enforceable Through Title V Permit
9. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit

11. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit

12. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit

13. Accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm2 per meter (1.00 in2 per foot) of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm (1/2 inch). [District Rule 4623, 5.3.2.1.2 and 40CFR 60.113b(b)(4)(ii)(B)] Federally Enforceable Through Title V Permit

14. The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623, 5.3.2.1.2] Federally Enforceable Through Title V Permit

15. The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 24 inches above the stored liquid surface. [District Rule 4623, 5.3.2.1.3] Federally Enforceable Through Title V Permit

16. The geometry of the metallic-shoe type seal shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623, 5.3.2.1.4] Federally Enforceable Through Title V Permit

17. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623, 5.3.2.1.5 and 40 CFR 60.112b(b)(4)(ii)(C)] Federally Enforceable Through Title V Permit

18. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623, 5.3.2.1.6] Federally Enforceable Through Title V Permit

19. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623, 5.3.2.1.7] Federally Enforceable Through Title V Permit

20. Secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion. [40CFR 60.112b(a)(2)(i)(B)] Federally Enforceable Through Title V Permit

21. All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use [District Rule 4623, 5.5.1] Federally Enforceable Through Title V Permit

22. A leak free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit

23. Except for automatic bleeder vents, rim vents, and pressure relief vents, each opening in a non-contact external floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.2.1] Federally Enforceable Through Title V Permit

24. Except for automatic bleeder vents and rim vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid that shall be maintained in a closed position at all times (i.e., no visible gap) except when in actual use. [District Rule 4623, 5.5.2.2.2] Federally Enforceable Through Title V Permit

25. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [District Rule 4623, 5.5.2.2.3, 5.5.2.1.3 and 40CFR 60.112b(a)(2)(ii)]] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. Rim vents shall be equipped with a gasket and shall be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. [District Rule 4623, 5.5.2.2.4 and 40CFR 60.112b(a)(2)(ii)] Federally Enforceable Through Title V Permit

27. Each roof drain that drains rainwater into the contents of the tank shall be provided with an impermeable slotted membrane fabric cover that covers at least 90 percent of the area of the opening. [District Rule 4623, 5.5.2.2.5] Federally Enforceable Through Title V Permit

28. External floating roof legs shall be equipped with vapor socks or vapor barriers in order to maintain a gas-tight condition so as to prevent VOC emissions from escaping through the roof leg opening. [District Rule 4623, 5.5.2.2.6] Federally Enforceable Through Title V Permit

29. All wells and similar fixed projections through the floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.3.1] Federally Enforceable Through Title V Permit

30. The solid guidepole well shall be equipped with a pole wiper and a gasketed cover, seal or lid which shall be in a closed position at all times (i.e., no visible gap) except when the well is in use. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

31. The gap between the pole wiper and the solid guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/2 inch. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

32. The slotted guidepole well on the external floating roof shall be equipped with the following: a sliding cover, a well gasket, a pole sleeve, a pole wiper, and an internal float and float wiper designed to minimize the gap between the float and the well, and provided the gap shall not exceed 1/8 inch; or shall be equipped with a well gasket, a zero gap pole wiper seal and a pole sleeve that projects below the liquid surface. [District Rule 4623, 5.5.2.4.2] Federally Enforceable Through Title V Permit

33. The gap between the pole wiper and the slotted guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/8 inch. [District Rule 4623, 5.5.2.4.3] Federally Enforceable Through Title V Permit

34. The permittee shall make the primary seal envelope available for unobstructed inspection by the APCO on an annual basis at locations selected along its circumference at random by the APCO. In the case of riveted tanks with toroid-type seals, a minimum of eight locations shall be made available; in all other cases, a minimum of four locations shall be made available. If the APCO suspects a violation may exist the APCO may require such further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. [District Rule 4623, 6.1.1] Federally Enforceable Through Title V Permit

35. Operator shall perform gap measurements on primary and secondary seals within 60 days of the initial fill and at least once every year thereafter to determine compliance with the requirements of Rule 4623. The actual gap measurements of the floating roof primary and secondary seals shall be recorded. The inspection results shall be submitted to the APCO as specified in Section 6.3.5. [District Rule 4623, 6.1.3.1.1 and 40 CFR 60.113b(b)(1)(i) & (ii)] Federally Enforceable Through Title V Permit

36. Operator shall also perform gap measurements on primary seals during hydrostatic testing of the vessel. [40CFR 60.113b(b)(1)(i)] Federally Enforceable Through Title V Permit

37. If unit is out of service for a period of one year or more, subsequent refilling with volatile organic liquid shall be considered initial fill in accordance with the conditions of this permit. [40CFR60.113b(b)(1)(iii)] Federally Enforceable Through Title V Permit

38. The permittee shall inspect the primary and secondary seals for compliance with the requirements of Rule 4623 every time this tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 24 hours after the tank roof is re-floated. [District Rule 4623, 6.1.3.1.2 and 40CFR 60.113b(b)(6)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

39. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623, 6.3.5] Federally Enforceable Through Title V Permit

40. Permittee shall maintain the records of the external floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the maximum true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623, 6.3.7 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit

41. All covers, seals and lids covering openings in the roof used for sampling and gauging, except pressure-vacuum valves set to within 10 percent of the maximum allowable working pressure of the roof, shall be inspected annually by the facility operator to ensure compliance with the provisions of this permit. However, if one or more of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If none of the components of that type are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

42. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [40 CFR 60.112b(a)(3)(i)] Federally Enforceable Through Title V Permit

43. 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. Leaks over 10,000 ppmv shall be reported as a deviation. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

44. Operator shall notify the APCO 30 days in advance of any gap measurements required by this permit to afford the APCO opportunity to have an observer present. [40CFR 60.113b(b)(5)] Federally Enforceable Through Title V Permit

45. If the external floating roof has defects, or the primary seal or secondary seal has holes, tears, or other openings in the seal or seal fabric, the operator shall repair the items as necessary so that none of these conditions exist before filling or refilling the storage vessel with VOL. [40CFR 60.113b(b)(6)(i)] Federally Enforceable Through Title V Permit

46. For all visual inspections required by this permit, the operator shall notify the APCO in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the APCO the opportunity to inspect the storage vessel prior to refilling, except when notification is specifically allowed otherwise by this permit. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

47. If a visual inspection required by this permit is not planned and the operator could not have known about the inspection 30 days in advance of refilling the tank, the operator shall notify the APCO at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so it is received by the APCO at least 7 days prior to the refilling. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

48. Operator shall record the vessel on which the measurement was performed, date of the seal gap measurement, raw data obtained in the measurement process in accordance with the conditions of this permit. [40CFR 60.115b(b)(3)] Federally Enforceable Through Title V Permit

49. Within 60 days of performing the seal gap measurements required by this permit, the operator shall furnish the APCO with a report containing the date of measurement, raw data obtained in the measurement process, and all such gap calculations as required by this permit. [40CFR 60.115b(b)(2)] Federally Enforceable Through Title V Permit

50. After each seal gap measurement that detects gaps exceeding any limit of this permit, the operator shall submit a report to the APCO within 30 days of the inspection. The report will identify the vessel and contain the date of measurement, raw data obtained in the measurement process, all such gap calculations as required by this permit, and the date the vessel was emptied or the repairs made and the date of repair. [40CFR 60.115b(b)(4)] Federally Enforceable Through Title V Permit

51. If the seals do not meet the required specifications of this permit, operator shall repair or empty the storage vessel within 45 days of identification. [40CFR 60.113b(b)(4)] Federally Enforceable Through Title V Permit

52. Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit

53. Operator shall determine the true vapor pressure of each type of crude oil with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method from available data and record if the true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)(ii)] Federally Enforceable Through Title V Permit

54. Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)(iii)] Federally Enforceable Through Title V Permit

55. For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] Federally Enforceable Through Title V Permit

56. Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit

57. Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit

58. Operator shall determine the true vapor pressure of each type of crude oil, with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method, using available data and record if the estimated maximum true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

59. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

60. As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

61. The API gravity of crude oil or petroleum distillate shall be determine by using ASTM Method D 287 el "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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

62. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

63. For any organic liquid, except crude oil with an API gravity of 26 degrees or less, the true vapor pressure (TVP) shall be determined by measuring Reid Vapor Pressure (RVP) with ASTM Method D 323 and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

64. Permittee shall maintain accurate records of true vapor pressure (TVP), storage temperature, type of liquids stored, and daily tank throughput. [District Rules 2201 and 4623 and 40 CFR 60.115a(a)] Federally Enforceable Through Title V Permit

65. 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 Rules 1070 and 2201] Federally Enforceable Through Title V Permit

66. Permittee shall keep annual records of the throughput of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

67. All records required for monitoring data and support information for inspection shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

68. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m3 (19,813 gallons) but less than 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1518-5-5 **EXPIRATION DATE:** 05/31/2014

SECTION: SE19 **TOWNSHIP:** 26S **RANGE:** 19E

EQUIPMENT DESCRIPTION:
110,000 BBL CRUDE OIL STORAGE TANK (#110024) INCLUDING EXTERNAL FLOATING ROOF WITH METALLIC SHOE TYPE PRIMARY SEAL AND WIPER TYPE SECONDARY SEAL

PERMIT UNIT REQUIREMENTS

1. The true vapor pressure (TVP) of the organic liquid placed or stored shall not exceed 9.5 psia. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The maximum amount of material introduced into this tank shall not exceed 30,250,000 bbl/yr (275 turnovers/yr). [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a floating roof consisting of a pan type that was installed before December 20, 2001, pontoon-type or double-deck-type cover which rests upon the surface of the liquid being stored and is equipped with a closure device between the tank shell and roof edge consisting of a primary and a secondary seal. [District Rule 4623, 5.3.1 and 40 CFR 60.112b(a)(2) & (i)] Federally Enforceable Through Title V Permit
4. The external floating roof shall float on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on it's legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land on its legs. [District Rule 4623, 5.3.1.3 and 40CFR 60.112b(a)(2)(iii)] Federally Enforceable Through Title V Permit
5. This tank shall be equipped with a closure device between the tank shell and roof edge consisting of two seals mounted one above the other; the one below shall be referred to as the primary seal, and the one above shall be referred as the secondary seal. [District Rule 4623, 5.3] Federally Enforceable Through Title V Permit
6. Primary seal (lower seal) shall be either a mechanical shoe seal or a liquid-mounted seal. [40CFR 60.112b(a)(2)(i) and 60.112b(a)(2)(i)(A)] Federally Enforceable Through Title V Permit
7. Operators of floating roof tanks shall submit a tank inspection plan to the APCO for approval. The plan shall include an inventory of the tanks subject to this rule and a tank inspection schedule. A copy of the operator's tank safety procedures shall be made available to the APCO upon request. The tank inventory shall include tank's identification number, PTO number, maximum tank capacity, dimensions of tank (height and diameter), organic liquid stored, type of primary and secondary seal, type of floating roof (internal or external floating roof), construction date of tank, and location of tank. Any revision to a previously approved tank inspection schedule shall be submitted to the APCO for approval prior to conducting an inspection. [District Rule 4623, 6.1] Federally Enforceable Through Title V Permit
8. Accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm2 per meter (10.01 in2 per foot) of tank diameter, and the width of any gap shall not exceed 3.81 cm (1.5 inches). [40CFR 60.113b(b)(4)(i)] Federally Enforceable Through Title V Permit
9. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
11. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
12. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
13. Accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm2 per meter (1.00 in2 per foot) of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm (1/2 inch). [District Rule 4623, 5.3.2.1.2 and 40CFR 60.113b(b)(4)(ii)(B)] Federally Enforceable Through Title V Permit
14. The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623, 5.3.2.1.2] Federally Enforceable Through Title V Permit
15. The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 24 inches above the stored liquid surface. [District Rule 4623, 5.3.2.1.3] Federally Enforceable Through Title V Permit
16. The geometry of the metallic-shoe type seal shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623, 5.3.2.1.4] Federally Enforceable Through Title V Permit
17. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623, 5.3.2.1.5 and 40 CFR 60.112b(b)(4)(ii)(C)] Federally Enforceable Through Title V Permit
18. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623, 5.3.2.1.6] Federally Enforceable Through Title V Permit
19. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623, 5.3.2.1.7] Federally Enforceable Through Title V Permit
20. Secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion. [40CFR 60.112b(a)(2)(i)(B)] Federally Enforceable Through Title V Permit
21. All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be leak-free, except when the device or appurtenance is in use [District Rule 4623, 5.5.1] Federally Enforceable Through Title V Permit
22. A leak- free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623, 3.11, 3.17 and 6.4.8] Federally Enforceable Through Title V Permit
23. Except for automatic bleeder vents, rim vents, and pressure relief vents, each opening in a non-contact external floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.2.1] Federally Enforceable Through Title V Permit
24. Except for automatic bleeder vents and rim vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid that shall be maintained in a closed position at all times (i.e., no visible gap) except when in actual use. [District Rule 4623, 5.5.2.2.2] Federally Enforceable Through Title V Permit
25. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [District Rule 4623, 5.5.2.2.3, 5.5.2.1.3 and 40CFR 60.112b(a)(2)(ii)]] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. Rim vents shall be equipped with a gasket and shall be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. [District Rule 4623, 5.5.2.2.4 and 40CFR 60.112b(a)(2)(ii)] Federally Enforceable Through Title V Permit

27. Each roof drain that drains rainwater into the contents of the tank shall be provided with an impermeable slotted membrane fabric cover that covers at least 90 percent of the area of the opening. [District Rule 4623, 5.5.2.2.5] Federally Enforceable Through Title V Permit

28. External floating roof legs shall be equipped with vapor socks or vapor barriers in order to maintain a gas-tight condition so as to prevent VOC emissions from escaping through the roof leg opening. [District Rule 4623, 5.5.2.2.6] Federally Enforceable Through Title V Permit

29. All wells and similar fixed projections through the floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.3.1] Federally Enforceable Through Title V Permit

30. The solid guidepole well shall be equipped with a pole wiper and a gasketed cover, seal or lid which shall be in a closed position at all times (i.e., no visible gap) except when the well is in use. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

31. The gap between the pole wiper and the solid guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/2 inch. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

32. The slotted guidepole well on the external floating roof shall be equipped with the following: a sliding cover, a well gasket, a pole sleeve, a pole wiper, and an internal float and float wiper designed to minimize the gap between the float and the well, and provided the gap shall not exceed 1/8 inch; or shall be equipped with a well gasket, a zero gap pole wiper seal and a pole sleeve that projects below the liquid surface. [District Rule 4623, 5.5.2.4.2] Federally Enforceable Through Title V Permit

33. The gap between the pole wiper and the slotted guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/8 inch. [District Rule 4623, 5.5.2.4.3] Federally Enforceable Through Title V Permit

34. The permittee shall make the primary seal envelope available for unobstructed inspection by the APCO on an annual basis at locations selected along its circumference at random by the APCO. In the case of riveted tanks with toroid-type seals, a minimum of eight locations shall be made available; in all other cases, a minimum of four locations shall be made available. If the APCO suspects a violation may exist the APCO may require such further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. [District Rule 4623, 6.1.1] Federally Enforceable Through Title V Permit

35. Operator shall perform gap measurements on primary and secondary seals within 60 days of the initial fill and at least once every year thereafter to determine compliance with the requirements of Rule 4623. The actual gap measurements of the floating roof primary and secondary seals shall be recorded. The inspection results shall be submitted to the APCO as specified in Section 6.3.5. [District Rule 4623, 6.1.3.1.1 and 40 CFR 60.113b(b)(1)(i) & (ii)] Federally Enforceable Through Title V Permit

36. Operator shall also perform gap measurements on primary seals during hydrostatic testing of the vessel. [40CFR 60.113b(b)(1)(i)] Federally Enforceable Through Title V Permit

37. If unit is out of service for a period of one year or more, subsequent refilling with volatile organic liquid shall be considered initial fill in accordance with the conditions of this permit. [40CFR60.113b(b)(1)(iii)] Federally Enforceable Through Title V Permit

38. The permittee shall inspect the primary and secondary seals for compliance with the requirements of Rule 4623 every time this tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 24 hours after the tank roof is re-floated. [District Rule 4623, 6.1.3.1.2 and 40CFR 60.113b(b)(6)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

39. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623, 6.3.5] Federally Enforceable Through Title V Permit

40. Permittee shall maintain the records of the external floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the maximum true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623, 6.3.7 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit

41. All covers, seals and lids covering openings in the roof used for sampling and gauging, except pressure-vacuum valves set to within 10 percent of the maximum allowable working pressure of the roof, shall be inspected annually by the facility operator to ensure compliance with the provisions of this permit. However, if one or more of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If none of the components of that type are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

42. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [40 CFR 60.112b(a)(3)(i)] Federally Enforceable Through Title V Permit

43. 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. Leaks over 10,000 ppmv shall be reported as a deviation. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

44. Operator shall notify the APCO 30 days in advance of any gap measurements required by this permit to afford the APCO opportunity to have an observer present. [40CFR 60.113b(b)(5)] Federally Enforceable Through Title V Permit

45. If the external floating roof has defects, or the primary seal or secondary seal has holes, tears, or other openings in the seal or seal fabric, the operator shall repair the items as necessary so that none of these conditions exist before filling or refilling the storage vessel with VOL. [40CFR 60.113b(b)(6)(i)] Federally Enforceable Through Title V Permit

46. For all visual inspections required by this permit, the operator shall notify the APCO in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the APCO the opportunity to inspect the storage vessel prior to refilling, except when notification is specifically allowed otherwise by this permit. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

47. If a visual inspection required by this permit is not planned and the operator could not have known about the inspection 30 days in advance of refilling the tank, the operator shall notify the APCO at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so it is received by the APCO at least 7 days prior to the refilling. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

48. Operator shall record the vessel on which the measurement was performed, date of the seal gap measurement, raw data obtained in the measurement process in accordance with the conditions of this permit. [40CFR 60.115b(b)(3)] Federally Enforceable Through Title V Permit

49. Within 60 days of performing the seal gap measurements required by this permit, the operator shall furnish the APCO with a report containing the date of measurement, raw data obtained in the measurement process, and all such gap calculations as required by this permit. [40CFR 60.115b(b)(2)] Federally Enforceable Through Title V Permit

50. After each seal gap measurement that detects gaps exceeding any limit of this permit, the operator shall submit a report to the APCO within 30 days of the inspection. The report will identify the vessel and contain the date of measurement, raw data obtained in the measurement process, all such gap calculations as required by this permit, and the date the vessel was emptied or the repairs made and the date of repair. [40CFR 60.115b(b)(4)] Federally Enforceable Through Title V Permit

51. If the seals do not meet the required specifications of this permit, operator shall repair or empty the storage vessel within 45 days of identification. [40CFR 60.113b(b)(4)] Federally Enforceable Through Title V Permit

52. Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit

53. Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)(iii)] Federally Enforceable Through Title V Permit

54. For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] Federally Enforceable Through Title V Permit

55. Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit

56. Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit

57. Operator shall determine the true vapor pressure of each type of crude oil, with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method, using available data and record if the estimated maximum true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)] Federally Enforceable Through Title V Permit

58. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

59. As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

60. The API gravity of crude oil or petroleum distillate shall be determine by using ASTM Method D 287 el "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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

61. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

62. For any organic liquid, except crude oil with an API gravity of 26 degrees or less, the true vapor pressure (TVP) shall be determined by measuring Reid Vapor Pressure (RVP) with ASTM Method D 323 and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

63. Permittee shall maintain accurate records of true vapor pressure (TVP), storage temperature, type of liquids stored, and daily tank throughput. [District Rules 2201 and 4623 and 40 CFR 60.115a(a)] Federally Enforceable Through Title V Permit

64. 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 Rules 1070 and 2201] Federally Enforceable Through Title V Permit

65. Permittee shall keep annual records of the throughput of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

66. All records required for monitoring data and support information for inspection shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

67. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m3 (19,813 gallons) but less than 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1518-7-4 **EXPIRATION DATE:** 05/31/2014

SECTION: SE19 **TOWNSHIP:** 26S **RANGE:** 19E

EQUIPMENT DESCRIPTION:
110,000 BBL WELDED EXTERNAL FLOATING ROOF TANK (#110020) WITH METALLIC SHOE PRIMARY AND WIPER TYPE SECONDARY SEALS

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of the organic liquid stored shall be less than 11 psia. [District Rule 4623, 5.1.1] Federally Enforceable Through Title V Permit
2. Annual throughput of this tank shall not exceed 500 turnovers per year, or 55 million barrels per year. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a floating roof consisting of a pan type that was installed before December 20, 2001, pontoon-type or double-deck-type cover which rests upon the surface of the liquid being stored and is equipped with a closure device between the tank shell and roof edge consisting of a primary and a secondary seal. [District Rule 4623, 5.3.1 and 40 CFR 60.112b(a)(2) & (i)] Federally Enforceable Through Title V Permit
4. The external floating roof shall float on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on it's legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land on its legs. [District Rule 4623, 5.3.1.3 and 40CFR 60.112b(a)(2)(iii)] Federally Enforceable Through Title V Permit
5. This tank shall be equipped with a closure device between the tank shell and roof edge consisting of two seals mounted one above the other; the one below shall be referred to as the primary seal, and the one above shall be referred as the secondary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Primary seal (lower seal) shall be either a mechanical shoe seal or a liquid-mounted seal. [40CFR 60.112b(a)(2)(i) and 60.112b(a)(2)(i)(A)] Federally Enforceable Through Title V Permit
7. Operators of floating roof tanks shall submit a tank inspection plan to the APCO for approval. The plan shall include an inventory of the tanks subject to this rule and a tank inspection schedule. A copy of the operator's tank safety procedures shall be made available to the APCO upon request. The tank inventory shall include tank's identification number, PTO number, maximum tank capacity, dimensions of tank (height and diameter), organic liquid stored, type of primary and secondary seal, type of floating roof (internal or external floating roof), construction date of tank, and location of tank. Any revision to a previously approved tank inspection schedule shall be submitted to the APCO for approval prior to conducting an inspection. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm2 per meter (10.01 in2 per foot) of tank diameter, and the width of any gap shall not exceed 3.81 cm (1.5 inches). [40CFR 60.113b(b)(4)(i)] Federally Enforceable Through Title V Permit
9. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
11. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
12. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
13. Accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm2 per meter (1.00 in2 per foot) of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm (1/2 inch). [District Rule 4623, 5.3.2.1.2 and 40CFR 60.113b(b)(4)(ii)(B)] Federally Enforceable Through Title V Permit
14. The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623, 5.3.2.1.2] Federally Enforceable Through Title V Permit
15. The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 24 inches above the stored liquid surface. [District Rule 4623, 5.3.2.1.3] Federally Enforceable Through Title V Permit
16. The geometry of the metallic-shoe type seal shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623, 5.3.2.1.4] Federally Enforceable Through Title V Permit
17. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623, 5.3.2.1.5 and 40 CFR 60.112b(b)(4)(ii)(C)] Federally Enforceable Through Title V Permit
18. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623, 5.3.2.1.6] Federally Enforceable Through Title V Permit
19. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623, 5.3.2.1.7] Federally Enforceable Through Title V Permit
20. Secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion. [40CFR 60.112b(a)(2)(i)(B)] Federally Enforceable Through Title V Permit
21. All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use [District Rule 4623, 5.5.1] Federally Enforceable Through Title V Permit
22. A leak free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit
23. Except for automatic bleeder vents, rim vents, and pressure relief vents, each opening in a non-contact external floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.2.1] Federally Enforceable Through Title V Permit
24. Except for automatic bleeder vents and rim vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid that shall be maintained in a closed position at all times (i.e., no visible gap) except when in actual use. [District Rule 4623, 5.5.2.2.2] Federally Enforceable Through Title V Permit
25. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [District Rule 4623, 5.5.2.2.3, 5.5.2.1.3 and 40CFR 60.112b(a)(2)(ii)]] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. Rim vents shall be equipped with a gasket and shall be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. [District Rule 4623, 5.5.2.2.4 and 40CFR 60.112b(a)(2)(ii)] Federally Enforceable Through Title V Permit

27. Each roof drain that drains rainwater into the contents of the tank shall be provided with an impermeable slotted membrane fabric cover that covers at least 90 percent of the area of the opening. [District Rule 4623, 5.5.2.2.5] Federally Enforceable Through Title V Permit

28. External floating roof legs shall be equipped with vapor socks or vapor barriers in order to maintain a gas-tight condition so as to prevent VOC emissions from escaping through the roof leg opening. [District Rule 4623, 5.5.2.2.6] Federally Enforceable Through Title V Permit

29. All wells and similar fixed projections through the floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.3.1] Federally Enforceable Through Title V Permit

30. The solid guidepole well shall be equipped with a pole wiper and a gasketed cover, seal or lid which shall be in a closed position at all times (i.e., no visible gap) except when the well is in use. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

31. The gap between the pole wiper and the solid guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/2 inch. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

32. The slotted guidepole well on the external floating roof shall be equipped with the following: a sliding cover, a well gasket, a pole sleeve, a pole wiper, and an internal float and float wiper designed to minimize the gap between the float and the well, and provided the gap shall not exceed 1/8 inch; or shall be equipped with a well gasket, a zero gap pole wiper seal and a pole sleeve that projects below the liquid surface. [District Rule 4623, 5.5.2.4.2] Federally Enforceable Through Title V Permit

33. The gap between the pole wiper and the slotted guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/8 inch. [District Rule 4623, 5.5.2.4.3] Federally Enforceable Through Title V Permit

34. The permittee shall make the primary seal envelope available for unobstructed inspection by the APCO on an annual basis at locations selected along its circumference at random by the APCO. In the case of riveted tanks with toroid-type seals, a minimum of eight locations shall be made available; in all other cases, a minimum of four locations shall be made available. If the APCO suspects a violation may exist the APCO may require such further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. [District Rule 4623, 6.1.1] Federally Enforceable Through Title V Permit

35. Operator shall perform gap measurements on primary and secondary seals within 60 days of the initial fill and at least once every year thereafter to determine compliance with the requirements of Rule 4623. The actual gap measurements of the floating roof primary and secondary seals shall be recorded. The inspection results shall be submitted to the APCO as specified in Section 6.3.5. [District Rule 4623, 6.1.3.1.1 and 40 CFR 60.113b(b)(1)(i) & (ii)] Federally Enforceable Through Title V Permit

36. Operator shall also perform gap measurements on primary seals during hydrostatic testing of the vessel. [40CFR 60.113b(b)(1)(i)] Federally Enforceable Through Title V Permit

37. If unit is out of service for a period of one year or more, subsequent refilling with volatile organic liquid shall be considered initial fill in accordance with the conditions of this permit. [40CFR60.113b(b)(1)(iii)] Federally Enforceable Through Title V Permit

38. The permittee shall inspect the primary and secondary seals for compliance with the requirements of Rule 4623 every time this tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 24 hours after the tank roof is re-floated. [District Rule 4623, 6.1.3.1.2 and 40CFR 60.113b(b)(6)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

39. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623, 6.3.5] Federally Enforceable Through Title V Permit

40. Permittee shall maintain the records of the external floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the maximum true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623, 6.3.7 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit

41. All covers, seals and lids covering openings in the roof used for sampling and gauging, except pressure-vacuum valves set to within 10 percent of the maximum allowable working pressure of the roof, shall be inspected annually by the facility operator to ensure compliance with the provisions of this permit. However, if one or more of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If none of the components of that type are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

42. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [40 CFR 60.112b(a)(3)(i)] Federally Enforceable Through Title V Permit

43. 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. Leaks over 10,000 ppmv shall be reported as a deviation. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

44. Operator shall notify the APCO 30 days in advance of any gap measurements required by this permit to afford the APCO opportunity to have an observer present. [40CFR 60.113b(b)(5)] Federally Enforceable Through Title V Permit

45. If the external floating roof has defects, or the primary seal or secondary seal has holes, tears, or other openings in the seal or seal fabric, the operator shall repair the items as necessary so that none of these conditions exist before filling or refilling the storage vessel with VOL. [40CFR 60.113b(b)(6)(i)] Federally Enforceable Through Title V Permit

46. For all visual inspections required by this permit, the operator shall notify the APCO in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the APCO the opportunity to inspect the storage vessel prior to refilling, except when notification is specifically allowed otherwise by this permit. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

47. If a visual inspection required by this permit is not planned and the operator could not have known about the inspection 30 days in advance of refilling the tank, the operator shall notify the APCO at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so it is received by the APCO at least 7 days prior to the refilling. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

48. Operator shall record the vessel on which the measurement was performed, date of the seal gap measurement, raw data obtained in the measurement process in accordance with the conditions of this permit. [40CFR 60.115b(b)(3)] Federally Enforceable Through Title V Permit

49. Within 60 days of performing the seal gap measurements required by this permit, the operator shall furnish the APCO with a report containing the date of measurement, raw data obtained in the measurement process, and all such gap calculations as required by this permit. [40CFR 60.115b(b)(2)] Federally Enforceable Through Title V Permit

50. After each seal gap measurement that detects gaps exceeding any limit of this permit, the operator shall submit a report to the APCO within 30 days of the inspection. The report will identify the vessel and contain the date of measurement, raw data obtained in the measurement process, all such gap calculations as required by this permit, and the date the vessel was emptied or the repairs made and the date of repair. [40CFR 60.115b(b)(4)] Federally Enforceable Through Title V Permit

51. If the seals do not meet the required specifications of this permit, operator shall repair or empty the storage vessel within 45 days of identification. [40CFR 60.113b(b)(4)] Federally Enforceable Through Title V Permit

52. Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit

53. Operator shall determine the true vapor pressure of each type of crude oil with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method from available data and record if the true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)(ii)] Federally Enforceable Through Title V Permit

54. Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)(iii)] Federally Enforceable Through Title V Permit

55. For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] Federally Enforceable Through Title V Permit

56. Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit

57. Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit

58. Operator shall determine the true vapor pressure of each type of crude oil, with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method, using available data and record if the estimated maximum true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

59. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

60. As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

61. The API gravity of crude oil or petroleum distillate shall be determine by using ASTM Method D 287 el "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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

62. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

63. For any organic liquid, except crude oil with an API gravity of 26 degrees or less, the true vapor pressure (TVP) shall be determined by measuring Reid Vapor Pressure (RVP) with ASTM Method D 323 and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

64. Permittee shall maintain accurate records of true vapor pressure (TVP), storage temperature, type of liquids stored, and daily tank throughput. [District Rules 2201 and 4623 and 40 CFR 60.115a(a)] Federally Enforceable Through Title V Permit

65. 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 Rules 1070 and 2201] Federally Enforceable Through Title V Permit

66. Permittee shall keep annual records of the throughput of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

67. All records required for monitoring data and support information for inspection shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

68. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m3 (19,813 gallons) but less than 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1518-31-4 **EXPIRATION DATE:** 05/31/2014

SECTION: SE19 **TOWNSHIP:** 26S **RANGE:** 19E

EQUIPMENT DESCRIPTION:
110,000 BBL CRUDE OIL STORAGE TANK (#110026) INCLUDING EXTERNAL FLOATING ROOF WITH METALLIC SHOE TYPE PRIMARY SEAL AND WIPER TYPE SECONDARY SEAL

PERMIT UNIT REQUIREMENTS

1. The true vapor pressure (TVP) of the organic liquid placed or stored shall not exceed 5.35 psia. [District Rules 2201 and 4623, 5.1.1] Federally Enforceable Through Title V Permit
2. The maximum amount of material introduced into this tank shall not exceed 27,371,300 bbl/yr (248.83 turnovers/yr). [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a floating roof consisting of a pan type that was installed before December 20, 2001, pontoon-type or double-deck-type cover which rests upon the surface of the liquid being stored and is equipped with a closure device between the tank shell and roof edge consisting of a primary and a secondary seal. [District Rule 4623, 5.3.1 and 40 CFR 60.112b(a)(2) & (i)] Federally Enforceable Through Title V Permit
4. The external floating roof shall float on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on it's legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work. The tank must be in compliance with this rule before it may land on its legs. [District Rule 4623, 5.3.1.3 and 40CFR 60.112b(a)(2)(iii)] Federally Enforceable Through Title V Permit
5. This tank shall be equipped with a closure device between the tank shell and roof edge consisting of two seals mounted one above the other; the one below shall be referred to as the primary seal, and the one above shall be referred as the secondary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Primary seal (lower seal) shall be either a mechanical shoe seal or a liquid-mounted seal. [40CFR 60.112b(a)(2)(i) and 60.112b(a)(2)(i)(A)] Federally Enforceable Through Title V Permit
7. Operators of floating roof tanks shall submit a tank inspection plan to the APCO for approval. The plan shall include an inventory of the tanks subject to this rule and a tank inspection schedule. A copy of the operator's tank safety procedures shall be made available to the APCO upon request. The tank inventory shall include tank's identification number, PTO number, maximum tank capacity, dimensions of tank (height and diameter), organic liquid stored, type of primary and secondary seal, type of floating roof (internal or external floating roof), construction date of tank, and location of tank. Any revision to a previously approved tank inspection schedule shall be submitted to the APCO for approval prior to conducting an inspection. [District Rule 4623, 6.1] Federally Enforceable Through Title V Permit
8. Accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm2 per meter (10.01 in2 per foot) of tank diameter, and the width of any gap shall not exceed 3.81 cm (1.5 inches). [40CFR 60.113b(b)(4)(i)] Federally Enforceable Through Title V Permit
9. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
11. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
12. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623, 5.3.2.1.1] Federally Enforceable Through Title V Permit
13. Accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm2 per meter (1.00 in2 per foot) of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm (1/2 inch). [District Rule 4623, 5.3.2.1.2 and 40CFR 60.113b(b)(4)(ii)(B)] Federally Enforceable Through Title V Permit
14. The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623, 5.3.2.1.2] Federally Enforceable Through Title V Permit
15. The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 24 inches above the stored liquid surface. [District Rule 4623, 5.3.2.1.3] Federally Enforceable Through Title V Permit
16. The geometry of the metallic-shoe type seal shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623, 5.3.2.1.4] Federally Enforceable Through Title V Permit
17. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623, 5.3.2.1.5 and 40 CFR 60.112b(b)(4)(ii)(C)] Federally Enforceable Through Title V Permit
18. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623, 5.3.2.1.6] Federally Enforceable Through Title V Permit
19. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623, 5.3.2.1.7] Federally Enforceable Through Title V Permit
20. Secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion. [40CFR 60.112b(a)(2)(i)(B)] Federally Enforceable Through Title V Permit
21. All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be leak-free, except when the device or appurtenance is in use [District Rule 4623, 5.5.1] Federally Enforceable Through Title V Permit
22. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623, 3.11, 3.17 and 6.4.8] Federally Enforceable Through Title V Permit
23. Except for automatic bleeder vents, rim vents, and pressure relief vents, each opening in a non-contact external floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.2.1] Federally Enforceable Through Title V Permit
24. Except for automatic bleeder vents and rim vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid that shall be maintained in a closed position at all times (i.e., no visible gap) except when in actual use. [District Rule 4623, 5.5.2.2.2] Federally Enforceable Through Title V Permit
25. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [District Rule 4623, 5.5.2.2.3, 5.5.2.1.3 and 40CFR 60.112b(a)(2)(ii)]] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. Rim vents shall be equipped with a gasket and shall be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. [District Rule 4623, 5.5.2.2.4 and 40CFR 60.112b(a)(2)(ii)] Federally Enforceable Through Title V Permit

27. Each roof drain that drains rainwater into the contents of the tank shall be provided with an impermeable slotted membrane fabric cover that covers at least 90 percent of the area of the opening. [District Rule 4623, 5.5.2.2.5] Federally Enforceable Through Title V Permit

28. External floating roof legs shall be equipped with vapor socks or vapor barriers in order to maintain a gas-tight condition so as to prevent VOC emissions from escaping through the roof leg opening. [District Rule 4623, 5.5.2.2.6] Federally Enforceable Through Title V Permit

29. All wells and similar fixed projections through the floating roof shall provide a projection below the liquid surface. [District Rule 4623, 5.5.2.3.1] Federally Enforceable Through Title V Permit

30. The solid guidepole well shall be equipped with a pole wiper and a gasketed cover, seal or lid which shall be in a closed position at all times (i.e., no visible gap) except when the well is in use. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

31. The gap between the pole wiper and the solid guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/2 inch. [District Rule 4623, 5.5.2.3.2] Federally Enforceable Through Title V Permit

32. The slotted guidepole well on the external floating roof shall be equipped with the following: a sliding cover, a well gasket, a pole sleeve, a pole wiper, and an internal float and float wiper designed to minimize the gap between the float and the well, and provided the gap shall not exceed 1/8 inch; or shall be equipped with a well gasket, a zero gap pole wiper seal and a pole sleeve that projects below the liquid surface. [District Rule 4623, 5.5.2.4.2] Federally Enforceable Through Title V Permit

33. The gap between the pole wiper and the slotted guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed 1/8 inch. [District Rule 4623, 5.5.2.4.3] Federally Enforceable Through Title V Permit

34. The permittee shall make the primary seal envelope available for unobstructed inspection by the APCO on an annual basis at locations selected along its circumference at random by the APCO. In the case of riveted tanks with toroid-type seals, a minimum of eight locations shall be made available; in all other cases, a minimum of four locations shall be made available. If the APCO suspects a violation may exist the APCO may require such further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. [District Rule 4623, 6.1.1] Federally Enforceable Through Title V Permit

35. Operator shall perform gap measurements on primary and secondary seals within 60 days of the initial fill and at least once every year thereafter to determine compliance with the requirements of Rule 4623. The actual gap measurements of the floating roof primary and secondary seals shall be recorded. The inspection results shall be submitted to the APCO as specified in Section 6.3.5. [District Rule 4623, 6.1.3.1.1 and 40 CFR 60.113b(b)(1)(i) & (ii)] Federally Enforceable Through Title V Permit

36. Operator shall also perform gap measurements on primary seals during hydrostatic testing of the vessel. [40CFR 60.113b(b)(1)(i)] Federally Enforceable Through Title V Permit

37. If unit is out of service for a period of one year or more, subsequent refilling with volatile organic liquid shall be considered initial fill in accordance with the conditions of this permit. [40CFR60.113b(b)(1)(iii)] Federally Enforceable Through Title V Permit

38. The permittee shall inspect the primary and secondary seals for compliance with the requirements of Rule 4623 every time this tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 24 hours after the tank roof is re-floated. [District Rule 4623, 6.1.3.1.2 and 40CFR 60.113b(b)(6)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

39. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Leak-free status of the tank and floating roof deck fittings. Records of the leak-free status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623, 6.3.5, 40 CFR 60.115b(b)(4)] Federally Enforceable Through Title V Permit

40. Permittee shall maintain the records of the external floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the maximum true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623, 6.3.7 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit

41. All covers, seals and lids covering openings in the roof used for sampling and gauging, except pressure-vacuum valves set to within 10 percent of the maximum allowable working pressure of the roof, shall be inspected annually by the facility operator to ensure compliance with the provisions of this permit. However, if one or more of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If none of the components of that type are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

42. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [40 CFR 60.112b(a)(3)(i)] Federally Enforceable Through Title V Permit

43. 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. Leaks over 10,000 ppmv shall be reported as a deviation. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

44. Operator shall notify the APCO 30 days in advance of any gap measurements required by this permit to afford the APCO opportunity to have an observer present. [40CFR 60.113b(b)(5)] Federally Enforceable Through Title V Permit

45. If the external floating roof has defects, or the primary seal or secondary seal has holes, tears, or other openings in the seal or seal fabric, the operator shall repair the items as necessary so that none of these conditions exist before filling or refilling the storage vessel with VOL. [40CFR 60.113b(b)(6)(i)] Federally Enforceable Through Title V Permit

46. For all visual inspections required by this permit, the operator shall notify the APCO in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the APCO the opportunity to inspect the storage vessel prior to refilling, except when notification is specifically allowed otherwise by this permit. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

47. If a visual inspection required by this permit is not planned and the operator could not have known about the inspection 30 days in advance of refilling the tank, the operator shall notify the APCO at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so it is received by the APCO at least 7 days prior to the refilling. [40CFR 60.113b(b)(6)(ii)] Federally Enforceable Through Title V Permit

48. Operator shall record the vessel on which the measurement was performed, date of the seal gap measurement, raw data obtained in the measurement process in accordance with the conditions of this permit. [40CFR 60.115b(b)(3)] Federally Enforceable Through Title V Permit

49. Within 60 days of performing the seal gap measurements required by this permit, the operator shall furnish the APCO with a report containing the date of measurement, raw data obtained in the measurement process, and all such gap calculations as required by this permit. [40CFR 60.115b(b)(2)] Federally Enforceable Through Title V Permit

50. After each seal gap measurement that detects gaps exceeding any limit of this permit, the operator shall submit a report to the APCO within 30 days of the inspection. The report will identify the vessel and contain the date of measurement, raw data obtained in the measurement process, all such gap calculations as required by this permit, and the date the vessel was emptied or the repairs made and the date of repair. [40CFR 60.115b(b)(4)] Federally Enforceable Through Title V Permit

51. If the seals do not meet the required specifications of this permit, operator shall repair or empty the storage vessel within 45 days of identification. [40CFR 60.113b(b)(4)] Federally Enforceable Through Title V Permit

52. Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit

53. Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)(iii)] Federally Enforceable Through Title V Permit

54. For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] Federally Enforceable Through Title V Permit

55. Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit

56. Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit

57. Operator shall determine the true vapor pressure of each type of crude oil, with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method, using available data and record if the estimated maximum true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)] Federally Enforceable Through Title V Permit

58. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

59. As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

60. The API gravity of crude oil or petroleum distillate shall be determine by using ASTM Method D 287 el "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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

61. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

62. For any organic liquid, except crude oil with an API gravity of 26 degrees or less, the true vapor pressure (TVP) shall be determined by measuring Reid Vapor Pressure (RVP) with ASTM Method D 323 and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

63. Permittee shall maintain accurate records of true vapor pressure (TVP), storage temperature, type of liquids stored, and daily tank throughput. [District Rules 2201 and 4623 and 40 CFR 60.115a(a)] Federally Enforceable Through Title V Permit

64. 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 Rules 1070 and 2201] Federally Enforceable Through Title V Permit

65. Permittee shall keep annual records of the throughput of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

66. All records required for monitoring data and support information for inspection shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

67. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m3 (19,813 gallons) but less than 151 m3 (39,890 gallons) storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit

APPENDIX C:
BACT Guideline

Best Available Control Technology (BACT) Guideline 7.3.3
Last Update: 10/1/2002

Petroleum and Petrochemical Production - Floating Roof Organic Liquid Storage or Processing Tank, = or > 471 bbl Tank capacity, = or > 0.5 psia TVP

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	95% control (Primary metal shoe seal with secondary wiper seal, or equal)	95% Control (Dual wiper seal with drip curtain or primary metal shoe seal with secondary wiper seal, or equal.)	

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is requried for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

This is a Summary Page for this Class of Source. For background information, see Permit Specific BACT Determinations on Details Page.

APPENDIX D:
BACT Analysis

Top Down BACT Analysis for VOC Emissions:

Step 1 – Identify All Control Technologies

BACT Guideline 7.3.3 lists 95% control (dual wiper seal with drip curtain or primary metal shoe seal with secondary wiper seal, or equal) as Technologically Feasible BACT. Achieved-in-Practice option is 95% control (primary metal shoe seal with secondary wiper seal, or equal).

Step 2 – Eliminate Technologically Infeasible Options

There are no technologically infeasible options listed.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

It is noted that Technologically Feasible option is equivalent in control effectiveness to the Achieved-in-Practice option.

a) 95% control (dual wiper seal with drip curtain or primary metal shoe seal with secondary wiper seal, or equal)
a) 95% control (primary metal shoe seal with secondary wiper seal, or equal)

Step 4 – Cost Effectiveness Analysis

The applicant is proposing the most stringent control technology presented in Step 3, (95% control (primary metal shoe seal with secondary wiper seal); therefore, no cost effectiveness analysis is required.

Step 5 – Select BACT

BACT for this unit is 95% control (primary metal shoe seal with secondary wiper seal, or equal).

APPENDIX E:
HRA Summary

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	William Jones – Permit Services
From:	Yu Vu – Technical Services
Date:	July 19, 2012
Facility Name:	Phillips 66 Pipeline LLC
Location:	SE ¼ Station 19, Township 26S, Range 19E
Application #(s):	S-1518-2-4, -5-6, -7-5, and -31-5
Project #:	S-1122222

A. RMR SUMMARY

RMR Summary						
Categories	**Tank (Unit 2-4)**	**Tank (Unit 5-6)**	**Tank (Unit 7-5)**	**Tank (Unit 31-5)**	**Project Totals**	**Facility Totals**
Prioritization Score	0.01	0.02	0.02	0.02	0.07	0.23
Acute Hazard Index	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A	N/A
Chronic Hazard Index	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A	N/A
Maximum Individual Cancer Risk (10^{-6})	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A	N/A
T-BACT Required?	**No**	**No**	**No**	**No**		
Special Permit Conditions?	**No**	**No**	**No**	**No**		

[1]This project passes on prioritization with a score less than 1.0; therefore, no further analysis was necessary.

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit #s 2-4, 5-6, 7-5, and 31-5

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on July 19, 2012, to perform a Risk Management Review for a proposed modification to four oilfield tanks. The applicant is proposing to increase the true vapor pressure (TVP) limit on the tanks permitted under S-1518-2-4, -5-5, and -31-4 to 11 psia and reduce the annual throughput on tank S-1518-7-4.

II. Analysis

Toxic emissions for this proposed unit were calculated using the District's "Oilfield Equipment Fugitives Heavy Crude Oil" spreadsheet. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905, March 2, 2001), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEARTs database. The prioritization score for this proposed unit was less than 1.0 (see RMR Summary Table). Therefore, no further analysis was necessary.

The following parameters were used for the review:

Analysis Parameters Unit 2-4			
VOC Emissions (lb/hr)	1.5	**Max Hours per Year**	8760
VOC Emissions (lb/yr)	8,723	**Closest Receptor (m)**	1609
Analysis Parameters Unit 5-6			
VOC Emissions (lb/hr)	1.5	**Max Hours per Year**	8760
VOC Emissions (lb/yr)	11,683	**Closest Receptor (m)**	1609
Analysis Parameters Unit 7-5			
VOC Emissions (lb/hr)	1.5	**Max Hours per Year**	8760
VOC Emissions (lb/yr)	14,933	**Closest Receptor (m)**	1609
Analysis Parameters Unit 31-5			
VOC Emissions (lb/hr)	1.5	**Max Hours per Year**	8760
VOC Emissions (lb/yr)	14,835	**Closest Receptor (m)**	1609

III. Conclusion

The prioritization score is less than 1.0. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

To ensure that human health risks will not exceed District allowable levels; the permit conditions listed on page 1 of this report must be included for this proposed unit.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

IV. Attachments

A. RMR request from the project engineer
B. Additional information from the applicant/project engineer
C. Toxic emissions summary
D. Prioritization score
E. Facility Summary

APPENDIX F:
Quarterly Net Emissions Change

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 - PE1, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

S-1518-2-4

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year
= 13,712 lb./year ÷ 4 qtr./year
= 3,428 lb. VOC/qtr.

$PE1_{quarterly}$ = $PE1_{annual}$ ÷ 4 quarters/year
= 10,512 lb./year ÷ 4 qtr./year
= 2,628 lb. VOC/qtr.

Quarterly NEC [QNEC]			
	PE2 (lb./qtr)	PE1 (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	2,628	3,428	800

S-1518-5-6

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year
= 19,696 lb./year ÷ 4 qtr./year
= 4,924lb. VOC/qtr.

$PE1_{quarterly}$ = $PE1_{annual}$ ÷ 4 quarters/year
= 17,758 lb./year ÷ 4 qtr./year
= 4,440 lb. VOC/qtr.

Quarterly NEC [QNEC]			
	PE2 (lb./qtr)	PE1 (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	4,924	4,440	484.5

S-1518-7-5

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year
= 19,078 lb./year ÷ 4 qtr./year
= 4,770lb. VOC/qtr.

$PE1_{quarterly}$= $PE1_{annual}$ ÷ 4 quarters/year
= 33,197 lb./year ÷ 4 qtr./year
= 8,299 lb. VOC/qtr.

Quarterly NEC [QNEC]			
	PE2 (lb./qtr)	PE1 (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	4,770	8,299	-3,529.75

S-1518-31-5

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year
= 18.597 lb./year ÷ 4 qtr./year
= 4.647 lb. VOC/qtr.

$PE1_{quarterly}$= $PE1_{annual}$ ÷ 4 quarters/year
= 13,186 lb./year ÷ 4 qtr./year
= 3,297 lb. VOC/qtr.

Quarterly NEC [QNEC]			
	PE2 (lb./qtr)	PE1 (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	4,649	3,297	1,352.75

APPENDIX G:
Emission Profile(s)

Application Emissions

Permit #: S-1518-2-4	**Last Updated**
Facility: PHILLIPS 66 PIPELINE LLC	09/16/2012 JONESW

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	13712.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	37.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	800.0
Q2:	0.0	0.0	0.0	0.0	800.0
Q3:	0.0	0.0	0.0	0.0	800.0
Q4:	0.0	0.0	0.0	0.0	800.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-1518-5-6	**Last Updated**
Facility: PHILLIPS 66 PIPELINE LLC	09/16/2012 JONESW

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	19696.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	54.0
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	485.0
Q2:	0.0	0.0	0.0	0.0	485.0
Q3:	0.0	0.0	0.0	0.0	485.0
Q4:	0.0	0.0	0.0	0.0	485.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1518-7-5	**Last Updated**
Facility: PHILLIPS 66 PIPELINE LLC	09/16/2012 JONESW

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	19078.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	52.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	-3527.0
Q2:	0.0	0.0	0.0	0.0	-3527.0
Q3:	0.0	0.0	0.0	0.0	-3527.0
Q4:	0.0	0.0	0.0	0.0	-3527.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1518-31-5	**Last Updated**
Facility: PHILLIPS 66 PIPELINE LLC	09/16/2012 JONESW

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	18597.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	51.0
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	1353.0
Q2:	0.0	0.0	0.0	0.0	1353.0
Q3:	0.0	0.0	0.0	0.0	1353.0
Q4:	0.0	0.0	0.0	0.0	1353.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

APPENDIX H:
PE1/PE2 Emissions Calculation

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	S-1518-2-4 (Junction - 110022)
City:	Bakersfield
State:	California
Company:	ConocoPhillips
Type of Tank:	External Floating Roof Tank
Description:	110,000 BBL. TVP 11.0. 127.272727273 TO/yr

Tank Dimensions

Diameter (ft):	118.50
Volume (gallons):	4,620,000.00
Turnovers:	127.27

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good

Roof Characteristics

Type:	Pontoon
Fitting Category	Detail

Tank Construction and Rim-Seal System

Construction:	Welded
Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Slotted Guide-Pole/Sample Well/Gask. Sliding Cover, w. Float, Wiper	1
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Gasketed	22
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Gasketed	28
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	2

Meterological Data used in Emissions Calculations: Bakersfield, California (Avg Atmospheric Pressure = 14.47 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

S-1518-2-4 (Junction - 110022) - External Floating Roof Tank
Bakersfield, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude TVP 11.0	All	67.63	61.25	74.00	65.42	11.0000	N/A	N/A	100.0000			200.00	Option 1: VP60 = 11 VP70 = 11

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

S-1518-2-4 (Junction - 110022) - External Floating Roof Tank
Bakersfield, California

Annual Emission Calculations	
Rim Seal Losses (lb):	5,097.6848
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Average Wind Speed (mph):	6.3500
Seal-related Wind Speed Exponent:	1.0000
Value of Vapor Pressure Function:	0.3425
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	11.0000
Tank Diameter (ft):	118.5000
Vapor Molecular Weight (lb/lb-mole):	100.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	5,347.6456
Annual Net Throughput (gal/yr.):	588,000,000.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	8.0000
Tank Diameter (ft):	118.5000
Roof Fitting Losses (lb):	3,266.8236
Value of Vapor Pressure Function:	0.3425
Vapor Molecular Weight (lb/lb-mole):	100.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	238.4518
Average Wind Speed (mph):	6.3500
Total Losses (lb):	13,712.1540

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	21.9202
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1	4.30	17.00	0.38	469.4598
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	151.7607
Slotted Guide-Pole/Sample Well/Gask. Sliding Cover, w. Float, Wiper	1	21.00	7.90	1.80	1,874.4995
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1	0.47	0.02	0.97	7.6037
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Gasketed	22	1.30	0.08	0.65	455.4089
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Gasketed	28	0.53	0.11	0.13	254.5371
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	2	0.71	0.10	1.00	31.6336

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

S-1518-2-4 (Junction - 110022) - External Floating Roof Tank
Bakersfield, California

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude TVP 11.0	5,097.68	5,347.65	3,266.82	0.00	13,712.15

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	S-1518-5-6 (Junction - 110024)
City:	Bakersfield
State:	California
Company:	Phillips66
Type of Tank:	External Floating Roof Tank
Description:	80,000 BBL. TVP 11.0. 275 TO/yr

Tank Dimensions

Diameter (ft):	118.50
Volume (gallons):	4,620,000.00
Turnovers:	275.00

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good

Roof Characteristics

Type:	Pontoon
Fitting Category	Detail

Tank Construction and Rim-Seal System

Construction:	Welded
Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Slotted Guide-Pole/Sample Well/Gask. Sliding Cover, w. Float, Wiper	1
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Sock	12
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Sock	26
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	1

Meterological Data used in Emissions Calculations: Bakersfield, California (Avg Atmospheric Pressure = 14.47 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

S-1518-5-6 (Junction - 110024) - External Floating Roof Tank
Bakersfield, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude TVP 11.0	All	67.63	61.25	74.00	65.42	11.0000	N/A	N/A	100.0000			200.00	Option 1: VP60 = 11 VP70 = 11

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

S-1518-5-6 (Junction - 110024) - External Floating Roof Tank
Bakersfield, California

Annual Emission Calculations	
Rim Seal Losses (lb):	5,097.6848
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Average Wind Speed (mph):	6.3500
Seal-related Wind Speed Exponent:	1.0000
Value of Vapor Pressure Function:	0.3425
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	11.0000
Tank Diameter (ft):	118.5000
Vapor Molecular Weight (lb/lb-mole):	100.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	11,554.7342
Annual Net Throughput (gal/yr.):	1,270,500,000.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	8.0000
Tank Diameter (ft):	118.5000
Roof Fitting Losses (lb):	3,043.8089
Value of Vapor Pressure Function:	0.3425
Vapor Molecular Weight (lb/lb-mole):	100.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	222.1734
Average Wind Speed (mph):	6.3500
Total Losses (lb):	19,696.2259

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	21.9202
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1	4.30	17.00	0.38	469.4598
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	151.7607
Slotted Guide-Pole/Sample Well/Gask. Sliding Cover, w. Float, Wiper	1	21.00	7.90	1.80	1,874.4995
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1	0.47	0.02	0.97	7.6037
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Sock	12	1.20	0.14	0.65	257.9767
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Sock	26	0.49	0.16	0.14	244.7694
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	1	0.71	0.10	1.00	15.8168

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

S-1518-5-6 (Junction - 110024) - External Floating Roof Tank
Bakersfield, California

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude TVP 11.0	5,097.68	11,554.73	3,043.81	0.00	19,696.23

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	S-1518-7-5 (Junction - 110020)
City:	Bakersfield
State:	California
Company:	Phillips66
Type of Tank:	External Floating Roof Tank
Description:	110,000 BBL. TVP 11.0. 291 TO/yr

Tank Dimensions

Diameter (ft):	118.50
Volume (gallons):	4,620,000.00
Turnovers:	291.00

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good

Roof Characteristics

Type:	Pontoon
Fitting Category	Detail

Tank Construction and Rim-Seal System

Construction:	Welded
Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Unslotted Guide-Pole Well/Gasketed sliding Cover, w. Wiper	1
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Gasketed	22
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Gasketed	27
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	3

Meterological Data used in Emissions Calculations: Bakersfield, California (Avg Atmospheric Pressure = 14.47 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

S-1518-7-5 (Junction - 110020) - External Floating Roof Tank
Bakersfield, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude TVP 11.0	All	67.63	61.25	74.00	65.42	11.0000	N/A	N/A	100.0000			200.00	Option 1: VP60 = 11 VP70 = 11

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

S-1518-7-5 (Junction - 110020) - External Floating Roof Tank
Bakersfield, California

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude TVP 11.0	5,097.68	12,227.01	1,753.13	0.00	19,077.83

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	S-1518-31-5 (Junction - 110026)
City:	Bakersfield
State:	California
Company:	Phillips66
Type of Tank:	External Floating Roof Tank
Description:	110,000 BBL. TVP 11.0. 248.83 TO/yr

Tank Dimensions

Diameter (ft):	118.50
Volume (gallons):	4,620,000.00
Turnovers:	248.83

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good

Roof Characteristics

Type:	Pontoon
Fitting Category	Detail

Tank Construction and Rim-Seal System

Construction:	Welded
Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Slotted Guide-Pole/Sample Well/Gask. Sliding Cover, w. Float, Wiper	1
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Sock	12
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Sock	26
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	1

Meterological Data used in Emissions Calculations: Bakersfield, California (Avg Atmospheric Pressure = 14.47 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

S-1518-31-5 (Junction - 110026) - External Floating Roof Tank
Bakersfield, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude TVP 11.0	All	67.63	61.25	74.00	65.42	11.0000	N/A	N/A	100.0000			200.00	Option 1: VP60 = 11 VP70 = 11

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

S-1518-31-5 (Junction - 110026) - External Floating Roof Tank
Bakersfield, California

Annual Emission Calcaulations

Rim Seal Losses (lb):	5,097.6848
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Average Wind Speed (mph):	6.3500
Seal-related Wind Speed Exponent:	1.0000
Value of Vapor Pressure Function:	0.3425
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	11.0000
Tank Diameter (ft):	118.5000
Vapor Molecular Weight (lb/lb-mole):	100.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	10,455.1437
Annual Net Throughput (gal/yr.):	1,149,594,600.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	8.0000
Tank Diameter (ft):	118.5000
Roof Fitting Losses (lb):	3,043.8069
Value of Vapor Pressure Function:	0.3425
Vapor Molecular Weight (lb/lb-mole):	100.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	222.1734
Average Wind Speed (mph):	6.3500
Total Losses (lb):	18,596.6354

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	21.9202
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1	4.30	17.00	0.38	469.4598
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	151.7607
Slotted Guide-Pole/Sample Well/Gask. Sliding Cover, w. Float, Wiper	1	21.00	7.90	1.80	1,874.4995
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1	0.47	0.02	0.97	7.6037
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Sock	12	1.20	0.14	0.65	257.9767
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Sock	26	0.49	0.16	0.14	244.7694
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	1	0.71	0.10	1.00	15.8168

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

S-1518-31-5 (Junction - 110026) - External Floating Roof Tank
Bakersfield, California

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude TVP 11.0	5,097.68	10,455.14	3,043.81	0.00	18,596.64

APPENDIX I:
Historical and Projected Operation Data

SB 288 Major Modification Calculation and Determination			
Permit number	PE2 (lb./yr.)	BAE (lb./yr.)	NEI (lb./yr.)
S-1518-2-4	13,712	1,813	11,899
S-1518-5-6	19,696	3,462	16,234
S-1518-7-5	19,078	2,188	16,890
S-1518-31-5	18,597	2,045	16,552
Total	71,083	9,508	61,575

NEI = PE2 – BAE

Where: PE2 = The post project potential to emit
BAE = BAE is the actual historic emissions.

Federal Major Modification Thresholds for Emission Increases						
Permit Number	PE1	BAE	PE2	PAE	UBC	NEI
S-1518-2-4	10,512	1,813	13,712	7,961	8,699	-2,551
S-1518-5-6	17,758	3,462	19,696	6,734	14,296	-11,024
S-1518-7-5	33,197	2,188	19,078	7,177	31,009	-26,020
S-1518-31-5	13,186	2,045	18,597	8,095	11,141	-5,091
Total	74,653	9,508	71,083	29,967	65,145	-44,686

Where

PE1 = Pre-Project Maximum Potential Emissions
BAE = Base Line Actual Emissions
PE2 = Post-Project Maximum Potential Emissions
PAE = Projected Actual Emissions
UBC = Unused Baseline Emissions
NEI = Net Emissions Increase

Date / Time Printed 2/3/2012 9:13:56 AM

UTM Zone : 11
UTM East: 232.375
UTM North: 3948.8

Emission Statement - Calendar Year 2011 Emissions

Please Sign and Return to:
San Joaquin Valley Unified APCD
1990 East Gettysburg Avenue
Fresno, CA 93726

Facility ID # S - 1518
TAD # 15 - 1518
SIC 4612 NAICS 486110
Facility Name CONOCOPHILLIPS PIPELINE CO
TOXID # 50276
Planning Inventory: / Electronic
Update Summary ☑

CHECK BOX IF PROCESS RATES ARE CONFIDENTIAL : Y

Please Note: Emissions for NH3 are reported in Lbs / Year.

Device ID #	Process #	Equipment Type	Yearly Process Rate	Units / Source Classification Code	NOX Lb / Unit	VOC Lb / Unit	SOX Lb / Unit	CO Lb / Unit	PM10 Lb / Unit	NH3 Lb / Unit	
1	1	3.36mil gal float roof tank-breath loss	3360	1000 GALLONS STORAGE CAPA	.0	.08	.0	.0	.0	.0	
				40400304	0	0	0	0	0	0	(Tons/Yr)
1	2	3.36mil gal float roof tank-working loss	~~0~~ 12,767.7	1000 GALLONS THROUGHPUT	.0	.0	.0	.0	.0	.0	
				40400306	0	0	0	0	0	0	(Tons/Yr)
2	1	4.62mil gal float roof tank-breath loss	4620	1000 GALLONS STORAGE CAPA	.0	.08	.0	.0	.0	.0	
				40400304	0	18	0	0	0	0	(Tons/Yr)
2	2	4.62mil gal float roof tank-working loss	~~0~~ 146,106.8	1000 GALLONS THROUGHPUT	.0	.0	.0	.0	.0	.0	
				40400306	0	0	0	0	0	0	(Tons/Yr)
5	1	4.62mil gal float roof tank-breath loss	4620	1000 GALLONS STORAGE CAPA	.0	.08	.0	.0	.0	.0	
				40400304	0	18	0	0	0	0	(Tons/Yr)
5	2	4.26mil gal float roof tank-working loss	~~0~~ 104,721.5	1000 GALLONS THROUGHPUT	.0	.0	.0	.0	.0	.0	
				40400306	0	0	0	0	0	0	(Tons/Yr)
7	1	4.62mil gal float roof tank-breath loss	4620	1000 GALLONS STORAGE CAPA	.0	.08	.0	.0	.0	.0	
				40400304	0	18	0	0	0	0	(Tons/Yr)
7	2	4.62mil gal float roof tank-working loss 240,615.4	0 ~~5,428.4~~	1000 GALLONS THROUGHPUT	.0	.0	.0	.0	.0	.0	
				40400306	0	0	0	0	0	0	(Tons/Yr)
8	1	1.68mil gal float roof tank-breath loss	1680	1000 GALLONS STORAGE CAPA	.0	.08	.0	.0	.0	.0	
				40400304	0	07	0	0	0	0	(Tons/Yr)
8	2	1.68mil gal float roof tank-working loss	~~0~~ 5,803.6	1000 GALLONS THROUGHPUT	.0	.0	.0	.0	.0	.0	
				40400306	0	0	0	0	0	0	(Tons/Yr)
18	1	244 HP DIESEL IC ENGINE(FIRE PROTECTION)	0.01	THOUSANDS OF GALLONS	469.0	32.1	31.2	102.0	33.5	.0	
				20300101	0	0	0	0	0	0	(Tons/Yr)
24	1	1,024 HP WAUKESHA MODEL L-7042-G NG ICE	~~27.7~~ 20.58	MILLION CUBIC FEET BURNED	22.62	39.19	3.51	153.91	11.66	.0	
				20300201	31	54	05	2.15	16	0	(Tons/Yr)
25	1	1,024 HP NATURAL GAS IC ENGINE	~~36.3~~ 35.40	MILLION CUBIC FEET BURNED	22.62	39.19	3.51	153.91	11.66	.0	
				20300201	41	71	06	2.79	21	0	(Tons/Yr)
27	1	TWO LANE UNLOADING RACK	78387.6	1000 GALLONS TRANSFERRED	.0	.06	.0	.0	.0	.0	
				40400250	0	2.19	0	0	0	0	(Tons/Yr)
30	1	1,024 HP WAUKESHA MODEL L-7042-GU NG ICE	~~34.7~~ 31.55	MILLION CUBIC FEET BURNED	22.62	39.19	3.51	153.91	11.66	.0	
				20300201	35	61	06	2.67	2.2	0	(Tons/Yr)
31	1	110,000bbl ext float roof tank-breath lo	4620	1000 GALLONS STORAGE CAPA	.0	.08	.0	.0	.0	.0	
				40400304	0	18	0	0	0	0	(Tons/Yr)

This data was taken from last year's emissions inventory data. Please make any correction to this document in red ink.

Last Updated By VILLALVL

See Tanks 4.09d Report attached.

Date / Time Printed: 2/3/2012 9:13:56 AM

UTM Zone: 11
UTM East: 232.375
UTM North: 3948.8

Emission Statement - Calendar Year 2011 Emissions

Please Sign and Return to:
San Joaquin Valley Unified APCD
1990 East Gettysburg Avenue
Fresno, CA 93726

Facility ID # S - 1518
TAD # 15 - 1518
SIC 4612 NAICS 486110
Facility Name CONOCOPHILLIPS PIPELINE CO
TOXID # 50276
Planning Inventory: / Electronic
Update Summary ☑

CHECK BOX IF PROCESS RATES ARE CONFIDENTIAL : Y

Device ID #	Process #	Equipment Type	Yearly Process Rate	Units / Source Classification Code	NOX Lb / Unit	VOC Lb / Unit	SOX Lb / Unit	CO Lb / Unit	PM10 Lb / Unit	NH3 Lb / Unit
31	2	110,000bbl ext float roof tank-work loss	0	1000 GALLONS THROUGHPUT	.0	.0	.0	.0	.0	.0
			~~110,108.8~~ 109,127.8	40400306	.0	.0	.0	.0	.0	.0
				Totals For the Facility (TONS / YEAR)	1.12	5.06	.17	7.6	.58	.0

Please Note: Emissions for NH3 are reported in Lbs / Year.

If your facility has unpaved traffic areas please complete the following section. An unpaved traffic area is any nonresidential area that is not covered by asphalt, recycled asphalt, asphaltic concrete, concrete, or concrete pavement that is used for fueling and servicing; shipping, receiving and transfer; or parking or storing equipment, haul trucks, vehicles, and any conveyances.

UNPAVED TRAFFIC AREAS

Size of Unpaved Traffic Areas (sum of all areas): 2 Units (circle one): Square feet, Acres

Average Number of Vehicles Entering the Unpaved Areas Per Day: 5

Contact	Jim Adams
Company	CONOCOPHILLIPS PIPELINE CO
Address	256 E POLK ST
City,State,Zip	Coalinga CA 93210
Telephone	(562) 290 - 1516
Email:	Jadams36@conocophillips.com
Location of facility if different from above	CONOCOPHILLIPS PIPELINE CO JUNCTION PUMP STATION, 14

Name and Title of Responsible Official
Jeff Randel
WC Pipeline Division Manager

I certify that the information contained in the Emission Statement is accurate to the best of my knowledge.

3-19-12
Signature of Responsible Official and Date

This data was taken from last year's emissions inventory data. Please make any correction to this document in red ink.

Last Updated By VILLALVL

Emission Statement - Calendar Year 2010 Emissions

Date 5/10/2011
Time 8:20:22 AM

UTM
Zone : 11
East : 230.56578
North : 3945.8284

Please return to:
San Joaquin Valley Unified APCD
1990 East Gettysburg Avenue
Fresno, CA 93726
or FAX: (559) 230 - 6061

Facility ID # : S-1518
TAD # : 15-1518
SIC : 4612
Facility Name : CONOCOI
Toxic ID # :

Check Box If Process Rates are Confidential : X

Device ID #	Process Number	Equipment Type	Yearly Process Rate	Units / Source Classification Code	NOX lb / Unit	VOC Lb / Unit	SOX lb / Unit	CO lb / Unit	PM10 Lb / Unit	NH3* Lb / Unit	* Please Note: Emissions for NH3 are reported in Lbs / Year.
1	1	3.36mil gal float roof tank-breath loss	3360.00	000 GALLONS STORAGE CAP	0.00	0.08	0.00	0.00	0.00	0.00	
				40400304	0.00	0.13	0.00	0.00	0.00	0.00	Tons /Yr
1	2	3.36mil gal float roof tank-working loss	122832.00	1000 GALLONS THROUGHPUT	0.00	0.00	0.00	0.00	0.00	0.00	
				40400306	0.00	0.00	0.00	0.00	0.00	0.00	Tons /Yr
2	1	4.62mil gal float roof tank-breath loss	4620.00	000 GALLONS STORAGE CAP	0.00	0.08	0.00	0.00	0.00	0.00	
				40400304	0.00	0.18	0.00	0.00	0.00	0.00	Tons /Yr
2	2	4.62mil gal float roof tank-working loss	211688.00	1000 GALLONS THROUGHPUT	0.00	0.00	0.00	0.00	0.00	0.00	
				40400306	0.00	0.00	0.00	0.00	0.00	0.00	Tons /Yr
5	1	4.62mil gal float roof tank-breath loss	4620.00	000 GALLONS STORAGE CAP	0.00	0.08	0.00	0.00	0.00	0.00	
				40400304	0.00	0.18	0.00	0.00	0.00	0.00	Tons /Yr
5	2	4.26mil gal float roof tank-working loss	88262.00	1000 GALLONS THROUGHPUT	0.00	0.00	0.00	0.00	0.00	0.00	
				40400306	0.00	0.00	0.00	0.00	0.00	0.00	Tons /Yr
7	1	4.62mil gal float roof tank-breath loss	4620.00	000 GALLONS STORAGE CAP	0.00	0.08	0.00	0.00	0.00	0.00	
				40400304	0.00	0.18	0.00	0.00	0.00	0.00	Tons /Yr
7	2	4.62mil gal float roof tank-working loss	238567.00	1000 GALLONS THROUGHPUT	0.00	0.00	0.00	0.00	0.00	0.00	
				40400306	0.00	0.00	0.00	0.00	0.00	0.00	Tons /Yr
8	1	1.68mil gal float roof tank-breath loss	1680.00	000 GALLONS STORAGE CAP	0.00	0.08	0.00	0.00	0.00	0.00	
				40400304	0.00	0.07	0.00	0.00	0.00	0.00	Tons /Yr
8	2	1.68mil gal float roof tank-working loss	6824.00	1000 GALLONS THROUGHPUT	0.00	0.00	0.00	0.00	0.00	0.00	
				40400306	0.00	0.00	0.00	0.00	0.00	0.00	Tons /Yr
18	1	244 HP DIESEL IC ENGINE(FIRE PROTECTION)	0.01	THOUSANDS OF GALLONS	469.00	32.10	31.20	102.00	33.50	0.00	
				20300101	0.00	0.00	0.00	0.00	0.00	0.00	Tons /Yr
24	1	1,024 HP WAUKESHA MODEL L-7042-G NG ICE	44.68	MILLION CUBIC FEET BURNED	22.62	39.19	3.51	153.91	11.66	0.00	
				20300201	0.31	0.54	0.05	2.13	0.16	0.00	Tons /Yr
25	1	1,024 HP NATURAL GAS IC ENGINE	38.13	MILLION CUBIC FEET BURNED	22.62	39.19	3.51	153.91	11.66	0.00	
				20300201	0.41	0.71	0.06	2.79	0.21	0.00	Tons /Yr
		TWO LANE UNLOADING		1000 GALLONS TRANSFERRED	0.00	0.06	0.00	0.00	0.00	0.00	

27	1	RACK	78387.60	40400250	0.00	2.19	0.00	0.00	0.00	0.00	Tons/Yr
		1,024 HP WAUKESHA		MILLION CUBIC FEET BURNED	22.62	39.19	3.51	153.91	11.66	0.00	
30	1	MODEL L-7042-GU NG ICE	10.30	20300201	0.39	0.68	0.06	2.67	0.20	0.00	Tons/Yr
		110,000bbl ext float roof tank-		000 GALLONS STORAGE CAP	0.00	0.08	0.00	0.00	0.00	0.00	
31	1	breath lo	4620.00	40400304	0.00	0.18	0.00	0.00	0.00	0.00	Tons/Yr
		110,000bbl ext float roof tank-		1000 GALLONS THROUGHPUT	0.00	0.00	0.00	0.00	0.00	0.00	
31	2	work loss	28742.00	40400306	0.00	0.00	0.00	0.00	0.00	0.00	Tons/Yr
		Totals For the Facility (Tons/Year)			1.11864	5.06498	0.17337	7.60	0.58	0.00	

Contact	Jim Adams
Company	CONOCOPHILLIPS PIPELINE CO
Address	256 E POLK ST
City,State,Zip	Coalinga , CA 93210
Telephone	(562) 2901516
Email Address	jadams3@conocophillips.com
Location of facility if different from above	JUNCTION PUMP STATION, 14 Coalinga

FACILITY WIDE RELATIVE MONTHLY ACTIVITY

If the facility has the same operating schedule year round, then check the Default Monthly Activity box.
Otherwise, provide the percentage and months the facility operates. Note: The total percentage for the year must add up to 100%.

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
X	DEFAULT MONTHLY ACTIVITY	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33
	RELATIVE MONTHLY ACTIVITY	0	0	0	0	0	0	0	0	0	0

Daily Activity

Please indicate normal operating schedule:

Number of hours worked each day:	
24	Sunday
24	Monday
24	Tuesday
24	Wednesday
24	Thursday

24	Friday
24	Saturday

NOV	DEC
8.33	8.33
0	0

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	S-1518-1 (Junction Tank 80018)
City:	Bakersfield
State:	California
Company:	ConocoPhillips
Type of Tank:	External Floating Roof Tank
Description:	80,000 barrel Pressure Distillate external floating roof storage tank

Tank Dimensions

Diameter (ft):	101.00
Volume (gallons):	3,360,000.00
Turnovers:	36.24

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good

Roof Characteristics

Type:	Pontoon
Fitting Category	Detail

Tank Construction and Rim-Seal System

Construction:	Welded
Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	2
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Unslotted Guide-Pole Well/Gasketed sliding Cover, w. Wiper	1
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Gasketed	18
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Gasketed	24
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	2

Meterological Data used in Emissions Calculations: Bakersfield, California (Avg Atmospheric Pressure = 14.47 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

S-1518-1 (Junction Tank 80018) - External Floating Roof Tank
Bakersfield, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude oil (RVP 9)	All	67.63	61.25	74.00	65.42	7.3274	N/A	N/A	50.0000			200.00	Option 4: RVP=9

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

S-1518-1 (Junction Tank 80018) - External Floating Roof Tank
Bakersfield, California

Annual Emission Calcaulations

Rim Seal Losses (lb):	1,107.9063
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Average Wind Speed (mph):	6.3500
Seal-related Wind Speed Exponent:	1.0000
Value of Vapor Pressure Function:	0.1747
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.3274
Tank Diameter (ft):	101.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	1,299.3143
Annual Net Throughput (gal/yr.):	121,767,660.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	8.0000
Tank Diameter (ft):	101.0000
Roof Fitting Losses (lb):	420.5238
Value of Vapor Pressure Function:	0.1747
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	120.3756
Average Wind Speed (mph):	6.3500
Total Losses (lb):	2,827.7443

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	2	1.60	0.00	0.00	11.1790
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1	4.30	17.00	0.38	119.7086
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	38.6978
Unslotted Guide-Pole Well/Gasketed sliding Cover, w. Wiper	1	14.00	3.70	0.78	90.2883
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1	0.47	0.02	0.97	1.9389
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Gasketed	18	1.30	0.08	0.65	95.0120
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Gasketed	24	0.53	0.11	0.13	55.6328
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	2	0.71	0.10	1.00	8.0663

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

S-1518-1 (Junction Tank 80018) - External Floating Roof Tank
Bakersfield, California

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude oil (RVP 9)	1,107.91	1,299.31	420.52	0.00	2,827.74

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	S-1518-2-2 (Junction - 110022)
City:	Bakersfield
State:	California
Company:	ConocoPhillips
Type of Tank:	External Floating Roof Tank
Description:	80,000 barrel capacity external floating roof storage tank

Tank Dimensions

Diameter (ft):	118.50
Volume (gallons):	4,620,000.00
Turnovers:	31.63

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good

Roof Characteristics

Type:	Pontoon
Fitting Category	Detail

Tank Construction and Rim-Seal System

Construction:	Welded
Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Slotted Guide-Pole/Sample Well/Gask. Sliding Cover, w. Float, Wiper	1
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Sock	22
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Sock	28
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	2

Meterological Data used in Emissions Calculations: Bakersfield, California (Avg Atmospheric Pressure = 14.47 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

S-1518-2-2 (Junction - 110022) - External Floating Roof Tank
Bakersfield, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude Oil TVP 1.1	All	67.63	61.25	74.00	65.42	1.1000	N/A	N/A	100.0000			200.00	Option 1: VP60 = 1.1 VP70 = 1.1

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

S-1518-2-2 (Junction - 110022) - External Floating Roof Tank
Bakersfield, California

Annual Emission Calcaulations	
Rim Seal Losses (lb):	294.1303
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Average Wind Speed (mph):	6.3500
Seal-related Wind Speed Exponent:	1.0000
Value of Vapor Pressure Function:	0.0198
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	1.1000
Tank Diameter (ft):	118.5000
Vapor Molecular Weight (lb/lb-mole):	100.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	1,328.8067
Annual Net Throughput (gal/yr.):	146,108,844.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	8.0000
Tank Diameter (ft):	118.5000
Roof Fitting Losses (lb):	190.0271
Value of Vapor Pressure Function:	0.0198
Vapor Molecular Weight (lb/lb-mole):	100.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	240.3941
Average Wind Speed (mph):	6.3500
Total Losses (lb):	1,812.9641

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	1.2648
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1	4.30	17.00	0.38	27.0873
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	8.7564
Slotted Guide-Pole/Sample Well/Gask. Sliding Cover, w. Float, Wiper	1	21.00	7.90	1.80	108.1564
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1	0.47	0.02	0.97	0.4387
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Sock	22	1.20	0.14	0.65	27.2891
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Sock	28	0.49	0.16	0.14	15.2093
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	2	0.71	0.10	1.00	1.8252

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

S-1518-2-2 (Junction - 110022) - External Floating Roof Tank
Bakersfield, California

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude Oil TVP 1.1	294.13	1,328.81	190.03	0.00	1,812.96

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	S-1518-31-2 (Junction - 110026)
City:	Bakersfield
State:	California
Company:	ConocoPhillips
Type of Tank:	External Floating Roof Tank
Description:	110,000 barrel Crude Oil external floating roof storage tank

Tank Dimensions

Diameter (ft):	118.50
Volume (gallons):	4,620,000.00
Turnovers:	31.63

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good

Roof Characteristics

Type:	Pontoon
Fitting Category	Detail

Tank Construction and Rim-Seal System

Construction:	Welded
Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Slotted Guide-Pole/Sample Well/Gask. Sliding Cover, w. Float, Wiper	1
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Sock	12
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Sock	22
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	1

Meterological Data used in Emissions Calculations: Bakersfield, California (Avg Atmospheric Pressure = 14.47 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

S-1518-31-2 (Junction - 110026) - External Floating Roof Tank
Bakersfield, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude oil TVP 1.65	All	67.63	61.25	74.00	65.42	1.6500	N/A	N/A	100.0000			200.00	Option 1: VP60 = 1.65 VP70 = 1.65

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

S-1518-31-2 (Junction - 110026) - External Floating Roof Tank
Bakersfield, California

Annual Emission Calcaulations	
Rim Seal Losses (lb):	450.3228
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Average Wind Speed (mph):	6.3500
Seal-related Wind Speed Exponent:	1.0000
Value of Vapor Pressure Function:	0.0303
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	1.6500
Tank Diameter (ft):	118.5000
Vapor Molecular Weight (lb/lb-mole):	100.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	1,328.8067
Annual Net Throughput (gal/yr.):	146,108,844.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	8.0000
Tank Diameter (ft):	118.5000
Roof Fitting Losses (lb):	265.5594
Value of Vapor Pressure Function:	0.0303
Vapor Molecular Weight (lb/lb-mole):	100.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	219.4248
Average Wind Speed (mph):	6.3500
Total Losses (lb):	2,044.6889

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	1.9364
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1	4.30	17.00	0.38	41.4715
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	13.4063
Slotted Guide-Pole/Sample Well/Gask. Sliding Cover, w. Float, Wiper	1	21.00	7.90	1.80	165.5908
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1	0.47	0.02	0.97	0.6717
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Sock	12	1.20	0.14	0.65	22.7893
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Sock	22	0.49	0.16	0.14	18.2961
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	1	0.71	0.10	1.00	1.3972

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

S-1518-31-2 (Junction - 110026) - External Floating Roof Tank
Bakersfield, California

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude oil TVP 1.65	450.32	1,328.81	265.56	0.00	2,044.69

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	S-1518-5-3 (Junction - 111024)
City:	Bakersfield
State:	California
Company:	ConocoPhillips
Type of Tank:	External Floating Roof Tank
Description:	80,000 barrel capacity Crude external floating roof storage tank

Tank Dimensions

Diameter (ft):	118.50
Volume (gallons):	4,620,000.00
Turnovers:	22.67

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good

Roof Characteristics

Type:	Pontoon
Fitting Category	Detail

Tank Construction and Rim-Seal System

Construction:	Welded
Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Slotted Guide-Pole/Sample Well/Gask. Sliding Cover, w. Float, Wiper	1
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Sock	12
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Sock	26
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	1

Meterological Data used in Emissions Calculations: Bakersfield, California (Avg Atmospheric Pressure = 14.47 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

S-1518-5-3 (Junction - 111024) - External Floating Roof Tank
Bakersfield, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude Oil TVP 5.0	All	67.63	61.25	74.00	65.42	5.0000	N/A	N/A	100.0000			200.00	Option 1: VP60 = 5 VP70 = 5

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

S-1518-5-3 (Junction - 111024) - External Floating Roof Tank
Bakersfield, California

Annual Emission Calcaulations	
Rim Seal Losses (lb):	1,571.4559
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Average Wind Speed (mph):	6.3500
Seal-related Wind Speed Exponent:	1.0000
Value of Vapor Pressure Function:	0.1056
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.0000
Tank Diameter (ft):	118.5000
Vapor Molecular Weight (lb/lb-mole):	100.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	952.4042
Annual Net Throughput (gal/yr.):	104,721,540.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	8.0000
Tank Diameter (ft):	118.5000
Roof Fitting Losses (lb):	938.3099
Value of Vapor Pressure Function:	0.1056
Vapor Molecular Weight (lb/lb-mole):	100.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	222.1734
Average Wind Speed (mph):	6.3500
Total Losses (lb):	3,462.1701

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	6.7573
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1	4.30	17.00	0.38	144.7197
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	46.7831
Slotted Guide-Pole/Sample Well/Gask. Sliding Cover, w. Float, Wiper	1	21.00	7.90	1.80	577.8492
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1	0.47	0.02	0.97	2.3440
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Sock	12	1.20	0.14	0.65	79.5261
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Sock	26	0.49	0.16	0.14	75.4547
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	1	0.71	0.10	1.00	4.8758

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

S-1518-5-3 (Junction - 111024) - External Floating Roof Tank
Bakersfield, California

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude Oil TVP 5.0	1,571.46	952.40	938.31	0.00	3,462.17

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	S-1518-7 (Junction - 110020)
City:	Bakersfield
State:	California
Company:	ConocoPhillips
Type of Tank:	External Floating Roof Tank
Description:	110,000 barrel capacity external floating roof storage tank

Tank Dimensions

Diameter (ft):	118.50
Volume (gallons):	4,620,000.00
Turnovers:	52.08

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good

Roof Characteristics

Type:	Pontoon
Fitting Category	Detail

Tank Construction and Rim-Seal System

Construction:	Welded
Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	2
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Unslotted Guide-Pole Well/Gasketed sliding Cover, w. Wiper	1
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Sock	22
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Gasketed	27
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	3

Meterological Data used in Emissions Calculations: Bakersfield, California (Avg Atmospheric Pressure = 14.47 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

S-1518-7 (Junction - 110020) - External Floating Roof Tank
Bakersfield, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude TVP 0.15	All	67.63	61.25	74.00	65.42		N/A	N/A	100.0000			200.00	

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

S-1518-7 (Junction - 110020) - External Floating Roof Tank
Bakersfield, California

Annual Emission Calcaulations	
Rim Seal Losses (lb):	0.0000
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Average Wind Speed (mph):	6.3500
Seal-related Wind Speed Exponent:	1.0000
Value of Vapor Pressure Function:	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0000
Tank Diameter (ft):	118.5000
Vapor Molecular Weight (lb/lb-mole):	100.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	2,188.3070
Annual Net Throughput (gal/yr.):	240,615,144.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	8.0000
Tank Diameter (ft):	118.5000
Roof Fitting Losses (lb):	0.0000
Value of Vapor Pressure Function:	0.0000
Vapor Molecular Weight (lb/lb-mole):	100.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	130.8455
Average Wind Speed (mph):	6.3500
Total Losses (lb):	2,188.3070

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	2	1.60	0.00	0.00	0.0000
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1	4.30	17.00	0.38	0.0000
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	0.0000
Unslotted Guide-Pole Well/Gasketed sliding Cover, w. Wiper	1	14.00	3.70	0.78	0.0000
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1	0.47	0.02	0.97	0.0000
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Sock	22	1.20	0.14	0.65	0.0000
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Gasketed	27	0.53	0.11	0.13	0.0000
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	3	0.71	0.10	1.00	0.0000

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

S-1518-7 (Junction - 110020) - External Floating Roof Tank
Bakersfield, California

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude TVP 0.15	0.00	2,188.31	0.00	0.00	2,188.31

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	S-1518-8-3 (Junction 40010)
City:	Bakersfield
State:	California
Company:	ConocoPhillips
Type of Tank:	External Floating Roof Tank
Description:	40,000 barrel capacity external floating roof storage tank

Tank Dimensions

Diameter (ft):	80.00
Volume (gallons):	1,680,000.00
Turnovers:	3.45

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good

Roof Characteristics

Type:	Pontoon
Fitting Category	Detail

Tank Construction and Rim-Seal System

Construction:	Welded
Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Unslotted Guide-Pole Well/Gasketed sliding Cover, w. Wiper	1
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Gasketed	15
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Gasketed	10
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	4

Meterological Data used in Emissions Calculations: Bakersfield, California (Avg Atmospheric Pressure = 14.47 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

S-1518-8-3 (Junction 40010) - External Floating Roof Tank
Bakersfield, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude oil (RVP 9)	All	67.63	61.25	74.00	65.42	7.3274	N/A	N/A	50.0000			200.00	Option 4: RVP=9

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

S-1518-8-3 (Junction 40010) - External Floating Roof Tank
Bakersfield, California

Annual Emission Calcaulations	
Rim Seal Losses (lb):	877.5495
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Average Wind Speed (mph):	6.3500
Seal-related Wind Speed Exponent:	1.0000
Value of Vapor Pressure Function:	0.1747
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.3274
Tank Diameter (ft):	80.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	78.1834
Annual Net Throughput (gal/yr.):	5,803,644.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	8.0000
Tank Diameter (ft):	80.0000
Roof Fitting Losses (lb):	374.7128
Value of Vapor Pressure Function:	0.1747
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	107.2622
Average Wind Speed (mph):	6.3500
Total Losses (lb):	1,330.4457

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	5.5895
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1	4.30	17.00	0.38	119.7086
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	38.6978
Unslotted Guide-Pole Well/Gasketed sliding Cover, w. Wiper	1	14.00	3.70	0.78	90.2883
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1	0.47	0.02	0.97	1.9369
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Gasketed	15	1.30	0.08	0.65	79.1767
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Gasketed	10	0.53	0.11	0.13	23.1804
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	4	0.71	0.10	1.00	16.1327

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

S-1518-8-3 (Junction 40010) - External Floating Roof Tank
Bakersfield, California

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude oil (RVP 9)	877.55	78.18	374.71	0.00	1,330.45

TANKS 4.0.9d
Emissions Report - Detail Format
Total Emissions Summaries - All Tanks in Report

Emissions Report for: Annual

Tank Identification				Losses (lbs)
S-1518-1 (Junction Tank 80018)	ConocoPhillips	External Floating Roof Tank	Bakersfield, California	2,827.74
S-1518-2-2 (Junction - 110022)	ConocoPhillips	External Floating Roof Tank	Bakersfield, California	1,812.96
S-1518-31-2 (Junction - 110026)	ConocoPhillips	External Floating Roof Tank	Bakersfield, California	2,044.69
S-1518-5-3 (Junction - 111024)	ConocoPhillips	External Floating Roof Tank	Bakersfield, California	3,462.17
S-1518-7 (Junction - 110020)	ConocoPhillips	External Floating Roof Tank	Bakersfield, California	2,188.31
S-1518-8-3 (Junction 40010)	ConocoPhillips	External Floating Roof Tank	Bakersfield, California	1,330.45
Total Emissions for all Tanks:				13,666.32

APPENDIX J:
Compliance Certification

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

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

COMPANY NAME: Phillips 66 Pipeline Company	FACILITY ID: S- 1518
1. Type of Organization:[X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name: Phillips66 Company, Inc.	
3. Agent to the Owner: NA	

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

(✓) Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).

(✓) Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.

(✓) Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

(✓) Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

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

Signature of Responsible Official — Date: 6-18-12

Jeff Randel

Name of Responsible Official (please print)

WC Pipeline Division Manager

Title of Responsible Official (please print)

RECEIVED
JUN 18 2012
SJVAPCD
Southern Region

CERTIFICATION

Phillips 66 Pipeline Company hereby certifies as follows:

1. Phillips 66 owns or operates certain major stationary sources in the State of California. Such sources are comprised of a vast number of emission points. As used in this certification, the term "major stationary source" shall, with respect to Phillips 66 stationary sources in the SJVUAPCD, have the meaning ascribed thereto in SJVUAPCD Rule 2201, Section 3.23, and shall, with respect to all of Phillips 66 other stationary sources in the State of California, have the meaning ascribed thereto in section 302(J) of the Clean Air Act (42 U.S.C. Section 7602 (J)).

2. Subject to paragraphs 3 and 4 below, all major stationary sources owned or operated by Phillips 66 in the State of California are either in compliance, or on an approved schedule of compliance, with all applicable emission limitations and standards under the Clean Air Act and all of the State Implementation Plan approved by the Environmental Protection Agency.

3. This certification is made on information and belief and is based upon a review of Phillips 66 major stationary sources in the State of California by those employees of Phillips 66 who have operational responsibility for compliance. In conducting such reviews, Phillips 66 and its employees have acted in good faith and have exercised best efforts to identify any exceedance of the emission limitations and standards referred to in paragraph 2 thereof.

4. This certification shall speak as of the time and date of its execution.

CERTIFICATION

By: Jeff Randel Date: 6-14-12

Title: WC Pipeline Division Manager Time: 10:30 AM