



JUL 17 2017

Mr. David Campbell
San Joaquin Refining Company Inc
PO Box 5576
Bakersfield, CA 93388

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-36
Project # 1170829

Dear Mr. Campbell:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project authorizes a tank modification.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authority to Construct with a Certificate of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

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

Thank you for your cooperation in this matter.

Sincerely,



Arnaud Marjollet
Director of Permit Services

Enclosures

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

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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

San Joaquin Valley Air Pollution Control District

Authority to Construct

Modification to Internal Floating Roof Storage Tank

Facility Name: San Joaquin Refining Company Inc Date: July 6, 2017
Mailing Address: PO Box 5576 Engineer: Richard Edgehill
Bakersfield, CA 93388 Lead Engineer: Richard Karrs
Contact Person: David Campbell and Joe Selgrath
Telephone: (661) 852-2504 (DC), (661) 377-0073 #12 (JS, office), 330-1461 (JS, cell)
Application #(s): S-36-81-4
Project #: 1170829
Deemed Complete: March 15, 2017

I. Proposal

San Joaquin Refining Company Inc (SJR) has requested Authority to Construct (ATC) to convert a 2,000 bbl internal floating roof tank to a fixed roof tank with relief valve for VOC control. The maximum allowable True Vapor Pressure (TVP) will be lowered from 2.7 psia to 0.5 psia.

The project triggers BACT. Offsets and public notice are not required.

SJR is a major stationary source with a Title V permit. SJR facility S-36 operates under a Title V Permit. The project is a Federal Major Modification and therefore it is classified as a Title V Significant Modification pursuant to Rule 2520, Section 3.20, 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. SJR must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

Current PTO are included in **Attachment I**.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (2/18/16)
Rule 2410 Prevention of Significant Deterioration (6/16/11)
Rule 4001 New Source Performance Standards (4/14/99).
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4623 Storage of Organic Liquids (5/19/05)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice

III. Project Location

The subject tank is located at the refinery at the corner of Standard and Shell Street, Bakersfield. The tank is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Applicant has stated that the tank will store low TVP liquids. No restriction on liquid type will be included on the ATC.

Applicant has requested a decrease in maximum allowable TVP from 2.7 psia to 0.5 psia.

V. Equipment Listing

Pre-Project Equipment Description:

S-36-81-1-3: 84,000 GALLON FIXED ROOF NAPHTHA STORAGE TANK WITH HMT TANK SERVICE INC. INTERNAL FLOATING ROOF

Proposed Modification:

S-36-81-1-4: MODIFICATION OF 84,000 GALLON FIXED ROOF NAPHTHA STORAGE TANK WITH HMT TANK SERVICE INC. INTERNAL FLOATING ROOF: CONVERT TO FIXED ROOF TANK, LOWER TVP LIMIT TO 0.5 PSIA

Post Project Equipment Description:

S-36-81-4: 84,000 GALLON FIXED ROOF ORGANIC LIQUID STORAGE TANK WITH HMT TANK SERVICE INC. INTERNAL FLOATING ROOF

VI. Emission Control Technology Evaluation

The tank, converted to fixed roof in this project, will be equipped with a pressure-vacuum (PV) relief vent valve set to within 10% of the maximum allowable working pressure of the tank. The PV-valve will reduce VOC wind induced emissions from the tank vent.

VII. General Calculations

A. Assumptions

- Tanks will operate 24 hours per day, 7 days per week, and 52 weeks per year.
- VOC is the only pollutant emitted.
- Throughput (Q): 2,000 bbl/day 136,875 bbl/yr
- Tank diameter (D): 29.75 ft (5/18/17 email)
- Tank height (H): 16.1 ft (5/18/17 email)

- Vapor pressure and throughput limits are provided in the table below

	Vapor Pressure	Throughput
PE1	2.7 psia (TVP)	2000 bbl/day, 136,875 bbl/yr
PE2	0.5 psia (RVP), proposed	2000 bbl/day, 136,875 bbl/yr
BAE		0 bbl/day, 0 bbl/yr

Please note that the applicant was unable to provide sufficient information for calculation of the Projected Actual Emissions (PAE) in the Federal Major Modification calculation. Therefore, PE2 was used as PAE in the Federal Major Modification calculation. Baseline Actual Emissions (BAE) and Unused Baseline Capacity (UBC) were assumed to be zero as the tank did not operate during the baseline period.

- API gravity of stored product (diesel, 30 -42 deg)
- Welded deck no deck seam losses

B. Emission Factors

Pre-Project (Internal Floating Roof)

Floating Roof Parameters (see Attachment II Spreadsheet for Additional Calculations)

- Clingage factor (Cs): 0.006 (light rust crude oil)
- Molecular weight vapors (Mv): 80 lb/lbmol (jet naphtha, AP-42, Table 7.1-2)
- Liquid Density (WL): 6.4 lb/gal (jet naphtha, AP-42, Table 7.1-2)
- Product factor (Fc) = 1.0 (refined products)
- Rim seal factor (KR): 0.6 (rim mounted secondary seal)
- Deck Seam Losses (LD): 0 (welded internal floating roof tank)
- Deck Fitting Loss (LF): calculated using assumed information listed in table below
(from AP-42 Table 7.1-12)

Roof Fitting	Kfi	Number (N)	F = N x Kfi
Access Hatch	36 (unbolted cover, ungasketed)	1 Table 7.1-12	36
Gauge Float Well	2.3 (unbolted cover, gasketed)	1 Table 7.1-12	2.3
Column Wells	10 (round pipe flexible fabric sleeve seal)	1 (Nc) Table 7.1-11	10
Ladder Wells	56 (sliding cover ungasketed)	1 Table 7.1-12	56
Sample Pipes or Wells	43 (gasketed sliding cover or ungasketed)	1 Table 7.1-12 Optional fitting	43
Stub Drains	1.2 (1 in diameter)	7 Table 7.1-15 $D^2/125 = 29.75^2/125 = 7$	8.4
Vacuum Breaker	6.2 (weighted mechanical actuation, ungasketed)	1	6.2
Total (F)			161.9

Post Project

Both the daily and annual PE's for each permit unit will be based on the results from the District's Microsoft Excel spreadsheets for Tank Emissions - Fixed Roof Crude Oil less than 26° API located in **Attachment II**. The spreadsheet for tanks was developed using the equations for fixed-roof tanks from EPA AP-42, Chapter 7.1. See Calculations in **Attachment II**.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

PTO S-36-81-1-3

Sample Calculation

Annual Emissions

$$\begin{aligned} \text{Deck Fitting Loss } L_F &= FP^*MvFc \\ &= 161.9 (0.0507)(80)(1.0) \\ &= \underline{656.7 \text{ lb/yr}} \end{aligned}$$

$$\begin{aligned} * P^* &= P/Pa / [1 + (1 - P/Pa)^{0.5}]^2 \\ &= 2.7/14.7 / [1 + (1 - 2.7/14.7)^{0.5}]^2 \\ &= 0.0507 \end{aligned}$$

$$\begin{aligned} \text{Withdrawal Loss} &= 0.943 Q CsW_L/D \times [1 + NcFc/D] \\ &= 0.943 (136,875)(0.0015)(6.4)/29.75 \times [1 + 1(1.0)/29.75] \\ &= 41.7 \times 1.03 \end{aligned}$$

$$= \underline{42.9 \text{ lb/yr}}$$

$$\begin{aligned} \text{Rim Seal Loss (L}_R) &= DP \cdot MvFc \times K_R \\ &= 29.75(0.0507)(80)(1.0) \times 0.6 \\ &= \underline{72.4 \text{ lb/yr}} \end{aligned}$$

$$\begin{aligned} \text{Total Loss} &= 656.7 + 42.9 + 72.4 \\ &= \underline{772 \text{ lb/yr}} \end{aligned}$$

Spreadsheet result, 772 lb/yr (Spreadsheet, **Attachment II**)

Daily Emissions

2000 bbl/day (1 turnover/day)

Total Loss = 956 lb/yr (2.6 lb/day) (Spreadsheet, **Attachment II**)

Permit Unit	VOC - Daily PE1 (lb/day)	VOC - Annual PE1 (lb/Year)
S-36-81-1-3	2.6	772

2. Post Project Potential to Emit (PE2)

Annual Emissions

VOC = 1,853 lb/yr (Spreadsheet, **Attachment II**)

Daily Emissions

VOC = 4,287 lb/yr/365 = 11.7 lb/day (Spreadsheet, **Attachment II**)

Permit Unit	VOC - Daily PE2 (lb/day)	VOC - Annual PE2 (lb/Year)
S-36-81-4	11.7	1,853

Emissions Profiles are included in **Attachment III**.

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

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (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 that have occurred at the source, and which have not been used on-site.

Pre-Project Stationary Source Potential to Emit [SSPE1] (lb/year)*					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
Pre-Project SSPE (SSPE1)	82,997	96,427	26,179	457,584	42,132

*SSPE Calculator, estimated does not include ERCs or outstanding ATC emissions Including these has no effect on NSR conclusions regarding offsets and public notice

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

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) 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 that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
Pre-Project SSPE (SSPE1)	82,997	96,427	26,179	457,584	42,132
S-36-81-3	0	0	0	0	-772
S-36-81-4	0	0	0	0	1,853
SSPE2	82,997	96,427	26,179	457,584	43,213

5. Major Source Determination

Rule 2201 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. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)						
	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO	VOC
SSPE1	82,997	96,427	26,179	26,179	457,584	42,132
SSPE2	82,997	96,427	26,179	26,179	457,584	43,213
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	No	Yes	Yes

Note: PM2.5 assumed to be equal to PM10

As seen in the table above, the facility is an existing Major Source for NO_x, CO, and VOC.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii).

- a. petroleum refineries,

Therefore, the PSD Major Source threshold is 100 tpy for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀
Estimated Facility PE before Project Increase	41.5	21	48	229	13	13
PSD Major Source Thresholds	100	100	100	100	100	100
PSD Major Source ? (Y/N)	N	N	N	N	N	N

As shown above, the facility is not an existing PSD major source for any regulated NSR pollutant expected to be emitted at this facility.

6. Baseline Emissions (BE)

The BE calculation (in lb/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.

Clean Emissions Unit, Located at a Major Source

Pursuant to Rule 2201, a Clean Emissions Unit is defined as an emissions unit that is "equipped with an emissions control technology with a minimum control efficiency of at least 95% or is equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

This tank is equipped with a vapor control system with a minimum control efficiency of at least 95%. Therefore, BE=PE1.

BE = PE1 = 772 lb VOC/yr

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 facility is a major source for VOCs, 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	1,853	50,000	No

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

8. Federal Major Modification

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

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

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

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

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

Since this facility is not a Major Source for PM10 and SOx, this project does not constitute a Federal Major Modification for these air contaminants.

VOCs

The applicant has provided the required historical and projected operation data (see Assumptions Section above).

Please refer to **Attachment II** for calculations.

PAE = PE2 = 1,853 lb VOCs/yr
BAE = 0
UBC = 0

Emission Increase = 1,853 lb/yr

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*	1,853	0	Yes
PM ₁₀	NA	30,000	No
PM _{2.5}	NA	20,000	No
SO _x	NA	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 there is an increase in NO_x emissions, this project constitutes a Federal Major Modification and no further analysis is required.

Federal Offset Quantities:

The Federal offset quantity is calculated only for the pollutants for which the project is a Federal Major Modification. The Federal offset quantity is the sum of the annual emission changes for all new and modified emission units in a project calculated as the potential to emit after the modification (PE2) minus the actual emissions (AE) during the baseline period for each emission unit times the applicable federal offset ratio. There are no special calculations performed for units covered by an SLC.

Only pollutants for which the project is a Federal Major Modification have Federal offset quantities. The calculated Federal offset quantity, listed in the table below, is entered into the Major Modification tracking spreadsheet under the heading "Federal Offset Quantity."

VOCs			Federal Offset Ratio
Permit No.	Actual Emissions (lb/year)	Potential Emissions (lb/year)	1.5
S-36-81	0	1,853	1,853
Net Emission Change (lb/year):			1,853
Federal Offset Quantity: (NEC * 1.5)			2,780

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and which are emitted in this project are: (See 52.21 (b) (23) definition of significant)

- Hydrogen sulfide (H₂S)
- Total reduced sulfur (including H₂S)
- Reduced sulfur compounds

I. Project Emissions Increase - New Major Source Determination

The post-project potentials to emit from all new and modified units are compared to the PSD major source thresholds to determine if the project constitutes a new major source subject to PSD requirements.

The equipment evaluated under this project is listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). The PSD Major Source threshold is 100 tpy for any regulated NSR pollutant.

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO₂	VOC	SO₂	CO	PM	PM₁₀
Total PE from New and Modified Units	0	0.92	0	0	0	0
PSD Major Source threshold	100	100	100	100	100	100
New PSD Major Source?	N	N	N	N	N	N

As shown in the table above, the potential to emit for the project, by itself, does not exceed any PSD major source threshold. Therefore Rule 2410 is not applicable and no further analysis is required.

10. Quarterly Net Emissions Change (QNEC)

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

QNEC = PE₂ - BE, where:

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

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

S-36-81

Quarterly Net Emissions Change (QNEC) (lbs/year)					
	NO2	SOx	PM10	CO	VOC
Δ PE(lb/yr)	0	0	0	0	-772 + 1,853 = 1,081
QNEC = Δ PE/4	0	0	0	0	270.25

VIII. Compliance Determination

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

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

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

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

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

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

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

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

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

Where,

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

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

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

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

Where,

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

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

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

$$\begin{aligned} \text{AIPE} &= \text{PE2} - (\text{PE1} * (\text{EF2} / \text{EF1})), \text{EF1} = \text{EF2} \\ &= 11.7 - 2.1 \\ &= 9.6 \text{ lb/day} \end{aligned}$$

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

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project constitutes a Federal Major Modification for VOC emissions. Therefore, BACT is triggered.

Per District Policy APR 1305, Section IX, "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 for source categories or classes covered in the BACT Clearinghouse, relevant information under each of the following steps may be simply cited from the Clearinghouse without further analysis."

BACT Guideline 7.3.1, applies to Petroleum and Petrochemical Production – Fixed Roof Organic Liquid Storage or Processing Tank, < 5,000 bbl tank capacity (see Attachment IV)

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 **Attachment V**), BACT has been satisfied with the following:

VOC:pressure and vacuum (PV) relief valve on tank vent set to within 10% of maximum allowable pressure

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	PM₁₀	CO	VOC
SSPE2	82,997	96,427	26,179	457,584	43,213
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets calculations required?	Yes	Yes	No	Yes	Yes

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for VOC, the only pollutant emitted. Therefore offset calculations will be required for this project.

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

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

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,

$$BE = HAE$$

VOC is the only pollutant emitted and therefore,

$$\begin{aligned} \text{Offsets Required (lb/year)} &= (\Sigma[PE2 - BE] + ICCE) \times DOR, \text{ for all new or modified} \\ &= 1,853 - 772 \times 1.5 \text{ (Federal Major Modification)} \\ &= 1,622 \text{ lb/yr} \end{aligned}$$

Calculating the appropriate quarterly emissions to be offset is as follows:

$$\begin{aligned} \text{Quarterly offsets required (lb/qtr)} &= (1,622 \text{ lb VOC/yr}) \div (4 \text{ quarters/year}) \\ &= 405.5 \text{ lb/qtr} \end{aligned}$$

As shown in the calculation above, the quarterly amount of offsets required for this project, when evenly distributed to each quarter, results in fractional pounds of offsets being required each quarter. Since offsets are required to be withdrawn as whole pounds, the quarterly amounts of offsets need to be adjusted to ensure the quarterly values sum to the total annual amount of offsets required.

To adjust the quarterly amount of offsets required, the fractional amount of offsets required in each quarter will be summed and redistributed to each quarter based on the number of days in each quarter. The redistribution is based on the Quarter 1 having the fewest days and the Quarters 3 and 4 having the most days. The redistribution method is summarized in the following table:

Redistribution of Required Quarterly Offsets				
(where X is the annual amount of offsets, and $X \div 4 = Y.z$)				
Value of z	Quarter 1	Quarter 2	Quarter 3	Quarter 4
.0	Y	Y	Y	Y
.25	Y	Y	Y	Y+1
.5	Y	Y	Y+1	Y+1
.75	Y	Y+1	Y+1	Y+1

Therefore the appropriate quarterly emissions to be offset are as follows:

<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>	<u>Total Annual</u>
405	405	406	406	1,622

The applicant has stated that the facility plans to use ERC certificate S-4741-1 to offset the increases in VOC emissions associated with this project. The above certificate has available quarterly VOC credits as follows:

	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
ERC #S-4741-1	33,496	28,211	32,294	37,578

As seen above, the facility has sufficient credits to fully offset the quarterly VOC emissions increases associated with this project.

Proposed Rule 2201 (offset) Conditions:

- {GC# 4447 - edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 405 lb, 2nd quarter – 405 lb, 3rd quarter - 406 lb, and fourth quarter - 406 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
- {GC# 1983} ERC Certificate Number S-4741-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

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.
- e. Any project which results in a Title V significant permit modification

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 Sections VII.C.7 and VII.C.8, this project is a Federal Major Modification. 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

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

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	82,997	82,997	20,000 lb/year	No
SO _x	96,427	96,427	54,750 lb/year	No
PM ₁₀	26,179	26,179	29,200 lb/year	No
CO	457,584	457,584	200,000 lb/year	No
VOC	42,132	43,213	20,000 lb/year	No

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

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. 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	82,997	82,997	0	20,000 lb/year	No
SO _x	96,427	96,427	0	20,000 lb/year	No
PM ₁₀	26,179	26,179	0	20,000 lb/year	No
CO	457,584	457,584	0	20,000 lb/year	No
VOC	43,213	42,132	1,081	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.

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project constitutes a Title V significant modification. Therefore, public noticing for Title V significant modifications is required for this project.

2. Public Notice Action

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

D. Daily Emission Limits (DELs)

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

Proposed Rule 2201 (DEL) Conditions:

- *Combined throughput of organic liquids shall not exceed 2,000 barrels in any one day. [District Rule 2201] N*
- *True Vapor Pressure of organic liquids stored in this tank shall not exceed 0.5 psia under storage conditions. [District Rule 2201] N*

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

No monitoring is required to demonstrate compliance with Rule 2201.

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:

- *The permittee shall keep accurate records of true vapor pressure, storage temperature and daily throughput rate, for a period of five years, and shall make such records*

available for District inspection upon request. [District NSR Rule and 2520, 9.3.2, 9.4.2] Y

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. There are no AAQA standards for VOCs and therefore an AAQA is not required.

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Federal Major Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Section VIII above, this facility is a new major source and this project does constitute a Federal Major Modification, therefore this requirement is applicable. SJR's compliance certification is included in **Attachment VI**.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to modify a tank.

Since the project modification will be used at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII. C. 9. above, this project does not result in a new PSD major source or PSD major modification. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. Section 3.29 defines a significant permit modification as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

The project is Federal Major Modification and therefore is also a Title V Significant Modification. 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 Title V Compliance Certification form is included in **Attachment VI**.

Rule 4001 New Source Performance Standards

The tank were constructed prior to the applicability date for Subpart Kb (July 23, 1984).

A NSPS modification is defined as any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted. The tank is an affected facility and will process liquids with a lower TVP. Therefore the project is not a NSPS Modifications.

Continued compliance with NSPS Subpart Ka is expected.

Rule 4101 Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). The visible emissions limit is not expected to be exceeded based on past inspections. Therefore, compliance with this rule is expected.

Rule 4102 Nuisance

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (**Attachment VII**), the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-36-81-4	5.44E-09	No

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.

Rule 4623 Storage of Organic Liquids

The purpose of this rule is to limit volatile organic compound (VOC) emissions from the storage of organic liquids. This rule applies to any tank with a design capacity of 1,100 gallons or greater used to store organic liquid with a true vapor pressure (TVP) of 0.5 psia or greater.

According to Section 4.4, tanks exclusively receiving and or storing organic liquids with a TVP less than 0.5 psia are exempt from this Rule except for complying with Sections 6.2, 6.3.6, 6.4 and 7.2. Therefore, the following conditions shall be placed on the ATC:

{2480} This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rules 2201 and 4623] Y

{Modified 2910} Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start-up, at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2201 and 4623] Y

The permittee shall conduct API gravity testing upon initial start-up. [District Rules 4623] Y

{Modified 2911} The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Y

{Modified 2483} 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] Y

{Modified 2482} The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rules 2201 and 4623] Y

{Modified 2912} 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 2201 and 4623] Y

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

District is a Lead Agency & Facility is Subject to Cap-and-Trade

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

On December 17, 2009, the District's Governing Board adopted a policy, APR 2005, *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*, for addressing GHG emission impacts when the District is Lead Agency under CEQA and approved the District's guidance document for use by other agencies when addressing GHG impacts as lead agencies under CEQA. Under this policy, the District's determination of significance of project-specific GHG emissions is founded on the principal that projects with GHG emission reductions consistent with AB 32 emission reduction targets are considered to have a less than significant impact on global climate change. Consistent with District Policy 2005, projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, would be determined to have a less than significant individual and cumulative impact for GHG emission.

The California Air Resources Board (ARB) adopted a Cap-and-Trade regulation as part one of the strategies identified for AB 32. This Cap-and-Trade regulation is a statewide plan, supported by a CEQA compliant environmental review document, aimed at reducing or mitigating GHG emissions from targeted industries. Facilities subject to the Cap-and-Trade regulation are subject to an industry-wide cap on overall GHG emissions. Any growth in emissions must be accounted for under that cap such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Further, the cap decreases over time, resulting in an overall decrease in GHG emissions.

Under District policy APR 2025, *CEQA Determinations of Significance for Projects Subject to ARB's GHG Cap-and-Trade Regulation*, the District finds that the Cap-and-Trade is a regulation plan approved by ARB, consistent with AB32 emission reduction targets, and supported by a CEQA compliant environmental review document. As such, consistent with District Policy 2005, projects complying with Cap-and-Trade requirements are determined to have a less than significant individual and cumulative impact for GHG emissions.

Industries covered by Cap-and-Trade are identified in the regulation under section 95811, Covered Entities:

1. Group 1: Large industrial facilities

These types of facilities are subject to Cap and Trade, and the specific companies covered are listed at <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>, Section 95811 (a), under the "Publically Available Market Information" section (list maintained by the California Air Resources Board).

2. Group 2: Electricity generation facilities located in California, or electricity importers

These types of facilities are subject to Cap and Trade (section 95811, b).

3. Group 3: Suppliers of Natural Gas, Suppliers of Reformulated Gasoline Blendstock for Oxygenate Blending and Distillate Fuel Oil, Suppliers of Liquefied Petroleum Gas, and Suppliers of Blended Fuels

These entities are subject to Cap and Trade compliance obligations which must cover all fuels (except jet fuels) identified in section 95811 (c) through (f) of the Cap-and-Trade regulation delivered to end users in California, less the fuel delivered to covered entities (group 1 above).

This facility is subject to the Cap-and-Trade regulation. Therefore, as discussed above, consistent with District Policies APR 2005 and APR 2025, the District concludes that the GHG emissions increases associated with this project (if any) would have a less than significant individual and cumulative impact on global climate change.

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit is based on a case-by-case analysis of a particular project's potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

The criteria pollutant emissions and toxic air contaminant emissions associated with the proposed project are not significant, and there is minimal potential for public concern for this particular type of facility/operation. Therefore, an Indemnification Agreement and/or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue Authority to Construct S-36-81-4 subject to the permit conditions on the attached draft Authority to Construct in **Attachment VIII**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-36-81	3020-05-D	84,000 gallons	\$ 203.00

Attachments

- I: Current PTO
- II: Tank Emissions
- III: Emissions Profiles
- IV: BACT Guidelines
- V: BACT Analysis
- VI: Statewide and Title V Compliance Certification
- VII: HRA
- VIII: Draft ATCs

ATTACHMENT I
Current PTO

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-36-81-3

EXPIRATION DATE: 08/31/2021

SECTION: 24 TOWNSHIP: 29S RANGE: 27E

EQUIPMENT DESCRIPTION:

84,000 GALLON FIXED ROOF NAPHTHA STORAGE TANK WITH HMT TANK SERVICE INC. INTERNAL FLOATING ROOF

PERMIT UNIT REQUIREMENTS

1. There shall be no gap between seal and tank wall. [40 CFR 60.112a(2)] Federally Enforceable Through Title V Permit
2. The internal floating type cover shall be equipped with a continuous closure device between the tank wall and the cover edge. The cover is to be floating at all times, (i.e., off the leg supports) except during initial fill and when the tank is completely emptied and subsequently refilled. The process of emptying and refilling when the cover is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible. Each opening in the cover except for automatic bleeder vents and the rim space vents is to provide a projection below the liquid surface. Each opening in the cover except for automatic bleeder vents, rim space vents, stub drains and leg sleeves is to be equipped with a cover, seal, or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the cover is floating except when the cover is being floated off or is being landed on the leg supports. Rim vents are to be set to open only when the cover is being floated off the leg supports or at the manufacturer's recommended setting. [40 CFR 60.112a(2)] Federally Enforceable Through Title V Permit
3. The owner or operator shall maintain a record of the petroleum liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during the respective storage period. [40 CFR 60.115a(a)] Federally Enforceable Through Title V Permit
4. There shall be no provisions for draining water from this tank to the sewer, refinery drains, or the oil/water separation operation equipment. [District NSR Rule] Federally Enforceable Through Title V Permit
5. True vapor pressure at storage temperature shall not exceed 2.7 psia. [District NSR Rule] Federally Enforceable Through Title V Permit
6. The permittee shall keep accurate records of Reid vapor pressure, storage temperature and daily throughput rate, for a period of five years, and shall make such records available for District inspection upon request. [District NSR Rule and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit
7. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. The internal floating roof closure seals shall be installed and maintained with zero gap. Zero gap is defined as no gap between the tank shell and the seal shall exceed 0.06 inch. The cumulative length of all gaps exceeding 0.02 inch shall not be more than five (5) percent of the circumference of the tank, excluding gaps less than 1.79 inches from vertical seams. [District Rule 4623, 5.4.2 and 3.37] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

9. 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 leak-free, except when the device or appurtenance is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Each opening in a non-contact internal floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, shall provide a projection below the liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid that shall be maintained in a closed position at all times (i.e., no visible gap) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. [District Rule 4623] Federally Enforceable Through Title V Permit
12. 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] Federally Enforceable Through Title V Permit
13. Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or set to open at the manufacturer's recommended setting. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90% of the opening. The fabric cover must be impermeable. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The permittee shall visually inspect, through the manholes, roof hatches, or other openings on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of hydrocarbon vapors. Any defects found are violations of this rule. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The permittee shall conduct actual gap measurements of the primary seal and/or secondary seal at least once every 60 months. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of hydrocarbon vapors. Any defects found are violations of this rule. [District Rule 4623] Federally Enforceable Through Title V Permit
18. 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 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 Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Permittee shall maintain the records of the internal 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] Federally Enforceable Through Title V Permit

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

ATTACHMENT II
Tank Emissions Calculations

****MODIFIABLE DATA****

DO YOU WANT TO ENTER THE SLOPE OF THE ASTM DISTILLATION CURVE AT 10 PERCENT EVAPORATED:	Y	---
IF NO, USE DEFAULT (Y/N)	Y	---
ENTER 'S' VALUE ==>	2.5	---
CONE ROOF	---	---
GIVEN ROOF HEIGHT OR SLOPE (H/S)	0.94	---
TANK CONE ROOF SLOPE, S (DEFAULT=0.0625) (H/H)	0.0625	---
DO YOU WANT TO ENTER A MAX LIQUID HEIGHT? (Y/N)	N	1.00
DEFAULT MAX LIQUID HEIGHT (SHELL HT - 2.0 FT)	Y	14.10
DO YOU WANT TO ENTER AN AVERAGE LIQUID HEIGHT? (Y/N)	Y	---
ENTER AVERAGE LIQUID HEIGHT (H)	8.0	---
IS TANK CONSTANT LEVEL? (Y/N)	N	---
ARE THE CONTENTS OF THE TANK HEATED? (Y/N)	N	---

****GIVEN AND ASSUMED DATA****

****PRESS (TAB) TO SKIP TO NEXT MODIFIABLE CELL****

USING THE CODES ABOVE, WHAT REGION PERMIT NUMBERS DO YOU WANT TO USE? (0, 1, OR 2)	---	1
USING THE CODES ABOVE, WHAT AREA METEOROLOGICAL DATA DO YOU WANT TO USE? (0, 1, 2, ...)	---	1
REID VAPOR PRESSURE (psia)	0.45	---
VAPOR MOLECULAR WEIGHT (MW)	73.28	---
USING THE CODES ABOVE, WHAT TYPE OF ORGANIC LIQUID (0, 1, 2, ...)	---	4
VOC CONTROL EFFICIENCY	0.00	---
TANK SHELL DIAMETER (FEET)	29.75	---
TANK SHELL HEIGHT, H (FEET)	16.10	---
VENT VACUUM (ENTER '-' FOLLOWED BY A VALUE IN PSIG)	-0.03	---
VENT PRESSURE (POSITIVE PSIG)	0.03	---
TANK ID	S-36-81	naphtha
TANK USE	S-36-81	naphtha
SJVAAPCD PERMIT#	S-36-81	---
CONE OR DOME ROOF (C/D)	C	---
MAXIMUM TOTAL DAILY THROUGHPUT (BBL/DAY)	375.00	---
MIN LIQUID HEIGHT (USE 0.0 FT FOR DEFAULT)	2.00	---
TANK ROOF PAINT CONDITION, GOOD OR POOR (G/P)	G	---
TANK ROOF PAINT COLOR, SEE ABOVE (A/G/R/W)	G	---
TANK ROOF PAINT SHADE, SEE ABOVE (S/D/L/M/P/N)	N	---
TANK SHELL PAINT CONDITION, GOOD OR POOR (G/P)	G	---
TANK SHELL PAINT COLOR, SEE ABOVE (A/G/R/W)	G	---
TANK SHELL PAINT SHADE, SEE ABOVE (S/D/L/M/P/N)	N	---

METEOROLOGICAL DATA CODES

AREA	CODE
BAKERSFIELD	0
FRESNO	1
STOCKTON	2

LIQUID TYPE

LIQUID TYPE	CODE
CRUDE OIL	0
MOTOR GASOLINE	1
AVIATION GASOLINE	2
LIGHT NAPHTHA (RVP 8-14 PSIA)	3
NAPHTHA (RVP 2-8 PSIA)	4

PAINT FACTORS

PAINT	SHADE/TYPE	PAINT CONDITION	GOOD	POOR
ALUMINUM	SPECULAR	0.39	0.49	
ALUMINUM	DIFFUSE	0.60	0.68	
GRAY	LIGHT	0.54	0.63	
GRAY	MEDIUM	0.68	0.74	
RED	PRIMER	0.88	0.91	
WHITE	-NONE-	0.17	0.34	

FOR REFERENCE PAINT TABLE

P A E

output

TANK ID	TANK USE	SJVUAPCD PERMIT #	TANK TYPE H OR V	SHELL DIMENSIONS		CAPACITY (BBL)	ROOF TYPE (C/D)	VENT PSIG	
				D (FT)	Hs (FT)			VAC.	PRESS.
3	naphtha	S-36-81	VERTICAL	29.8	16.1	1993.3	CONE	-0.03	0.03

TANK ROOF		PAINT FACTOR	LIQUID DATA			CONSTANT LEVEL?	VAPOR MOL. WT.	VOC CNTRL %EFF (w/w)	
COND.	COLOR		TYPE	Ht=H(lx)	Kp				RVP
GOOD	GRAY	0.00	NAPHTHA	14.1	1.00	0.45	NO	73.28	0.0

****UNCONTROLLED EMISSIONS****

CALENDAR		SURFACE T(la) F	CALC TVP @ T(la)	RATE (BBL/MON)	TURNOVER PER MON.	FAC-(Kn)	VOC (LBM/MONTH)			TOTAL (LBM/QTR)
QUARTER	MONTH						Ls	Lw	TOTAL (Lt)	
FIRST	JANUARY	55.00	0.14	11625	7.76	0.495	6.70	116.73	123.44	374.80
	FEBRUARY	57.36	0.15	10500	7.01	0.495	8.49	109.08	117.58	
	MARCH	61.27	0.17	11625	7.76	0.495	5.84	127.95	133.79	
SECOND	APRIL	61.80	0.17	11250	7.51	0.495	13.76	124.80	138.57	448.81
	MAY	65.21	0.19	11625	7.76	0.495	17.09	135.78	152.87	
	JUNE	68.56	0.21	11250	7.51	0.495	19.06	138.32	157.37	
THIRD	JULY	70.89	0.22	11625	7.76	0.495	21.63	148.21	169.84	491.66
	AUGUST	70.18	0.22	11625	7.76	0.495	20.87	146.59	167.45	
	SEPTEMBER	67.63	0.20	11250	7.51	0.495	18.02	136.36	154.37	
FOURTH	OCTOBER	63.56	0.18	11625	7.76	0.495	15.55	132.42	147.97	399.70
	NOVEMBER	58.46	0.16	11250	7.51	0.495	9.85	118.77	128.62	
	DECEMBER	54.85	0.14	11625	7.76	0.495	6.63	116.47	123.11	

****CONTROLLED EMISSIONS (BASED ON MONTHLY CALCULATIONS)****

CALENDAR		SURFACE T(la) F	CALC TVP @ T(la)	RATE (BBL/QTR)	TURNOVER PER QTR.	FAC-(Kn)	VOC (LBM/QTR)		
QUARTER	MONTH						Ls	Lw	TOTAL (Lt)
FIRST	JAN-MAR	57.88	0.29	33750	23	0.495	21	354	375
SECOND	APR-JUN	65.19	0.32	34125	23	0.495	50	399	449
THIRD	JUL-SEP	69.57	0.34	34500	23	0.495	61	431	492
FOURTH	OCT-DEC	58.96	0.29	34500	23	0.495	32	368	400
QUARTERLY AVERAGE		62.90	0.31	34219			41	388	429
DAILY AVERAGE (LB/DAY, BASED ON MONTHLY CALCULATIONS)							0.4	4.3	4.7
ANNUAL EMISSIONS (LB/YEAR, BASED ON MONTHLY CALCULATIONS)							163	1551	1715

Tank Emission Calculation Spreadsheet, version 01/23/03

PEL
Annual

****FOR REFERENCE** PAINT TABLE**

PAINT COLOR	SHADE/ TYPE	PAINT FACTORS PAINT CONDITION	
		GOOD	POOR
ALUMINUM	SPECULAR	0.39	0.49
ALUMINUM	DIFFUSE	0.60	0.68
GRAY	LIGHT	0.54	0.63
GRAY	MEDIUM	0.68	0.74
RED	PRIMER	0.69	0.91
WHITE	--NONE--	0.17	0.34

LIQUID TYPE	CODE	
CRUDE OIL	0	CRUDE
MOTOR GASOLINE	1	MOTOR GAS
AVIATION GASOLINE	2	AV GAS
LIGHT NAPHTHA (RVP 9-14 PSIA)	3	LT NAPHTHA
NAPHTHA (RVP 2-8 PSIA)	4	NAPHTHA

METEOROLOGICAL DATA CODES	
AREA	CODE
BAKERSFIELD	0
FRESNO	1
STOCKTON	2

****PRESS [TAB] TO SKIP TO NEXT MODIFIABLE CELL****

GIVEN AND ASSUMED DATA	
USING THE CODES ABOVE, WHAT REGION PERMIT NUMBERS DO YOU WANT TO USE? (0, 1, OR 2)	1
USING THE CODES ABOVE, WHAT AREA METEOROLOGICAL DATA DO YOU WANT TO USE? (0, 1, 2, ...)	1
REID VAPOR PRESSURE (psia)	0.50
VAPOR MOLECULAR WEIGHT (Mv)	73.28
USING THE CODES ABOVE, WHAT TYPE OF ORGANIC LIQUID (0, 1, 2, ...)	4
VOC CONTROL EFFICIENCY	0.00
TANK SHELL DIAMETER (FEET)	29.75
TANK SHELL HEIGHT, Hs (FEET)	16.10
VENT VACUUM (ENTER "-" FOLLOWED BY A VALUE IN PSIG)	-0.03
VENT PRESSURE (POSITIVE psig)	0.03
TANK ID	S-36-81
TANK USE	naphtha
SJVUAPCD PERMIT#	S-36-81
CONE OR DOME ROOF (C/D)	C
MAXIMUM TOTAL DAILY THROUGHPUT (BBL/DAY)	375.00
MIN LIQUID HEIGHT (USE 0.0 FT FOR DEFAULT)	2.00
TANK ROOF PAINT CONDITION, GOOD OR POOR (G/P)	G
TANK ROOF PAINT COLOR, SEE ABOVE (A/G/R/W)	G
TANK ROOF PAINT SHADE, SEE ABOVE (S/D/L/M/P/N)	N
TANK SHELL PAINT CONDITION, GOOD OR POOR (G/P)	G
TANK SHELL PAINT COLOR, SEE ABOVE (A/G/R/W)	G
TANK SHELL PAINT SHADE, SEE ABOVE (S/D/L/M/P/N)	N

MODIFIABLE DATA	
DO YOU WANT TO ENTER THE SLOPE OF THE ASTM DISTILLATION CURVE AT 10 PERCENT EVAPORATED, IF NO, USE DEFAULT (Y/N)	Y
ENTER 'S' VALUE ==>	2.5
CONE ROOF GIVEN ROOF HEIGHT OR SLOPE (H/S)	3.0
TANK CONE ROOF SLOPE, Sr (DEFAULT=0.0625) (ft/ft)	0.0625
DO YOU WANT TO ENTER A MAX LIQUID HEIGHT? (Y/N)	1.00
DEFAULT MAX LIQUID HEIGHT (SHELL HT - 2.0 FT)	14.10
DO YOU WANT TO ENTER AN AVERAGE LIQUID HEIGHT? (Y/N)	Y
ENTER AVERAGE LIQUID HEIGHT (ft)	8.0
IS TANK CONSTANT LEVEL? (Y/N)	N
ARE THE CONTENTS OF THE TANK HEATED? (Y/N)	N

output

TANK ID	TANK USE	SJVUAPCD PERMIT #	TANK TYPE H OR V	SHELL DIMENSIONS		CAPACITY (BBL)	ROOF TYPE (C/D)	VENT PSIG	
				D (FT)	Hs (FT)			VAC.	PRESS.
3	naphtha	S-36-81	VERTICAL	29.8	16.1	1993.3	CONE	-0.03	0.03

TANK ROOF		PAINT FACTOR	LIQUID DATA				CONSTANT LEVEL?	VAPOR MOL. WT.	VOC CNTRL %EFF (w/w)
COND.	COLOR		TYPE	Ht=H(lx)	Kp	RVP			
GOOD	GRAY	0.00	NAPHTHA	14.1	1.00	0.50	NO	73.28	0.0

****UNCONTROLLED EMISSIONS****

CALENDAR		SURFACE T(la) F	CALC TVP @ T(la)	RATE (BBL/MON)	TURNOVER PER MON.	FAC-(Kn)	VOC (LBM/MONTH)			TOTAL (LBM/QTR)
QUARTER	MONTH						Ls	Lw	TOTAL (Lt)	
FIRST	JANUARY	55.00	0.16	11625	7.76	0.495	7.56	125.02	132.58	403.19
	FEBRUARY	57.36	0.17	10500	7.01	0.495	9.57	116.97	126.54	
	MARCH	61.27	0.19	11625	7.76	0.495	6.58	137.48	144.06	
SECOND	APRIL	61.80	0.19	11250	7.51	0.495	15.49	134.14	149.63	485.57
	MAY	65.21	0.21	11625	7.76	0.495	19.22	146.18	165.39	
	JUNE	68.56	0.23	11250	7.51	0.495	21.40	149.15	170.55	
THIRD	JULY	70.89	0.25	11625	7.76	0.495	24.28	159.99	184.27	533.09
	AUGUST	70.18	0.24	11625	7.76	0.495	23.42	158.19	181.61	
	SEPTEMBER	67.63	0.23	11250	7.51	0.495	20.24	146.97	167.21	
FOURTH	OCTOBER	63.56	0.20	11625	7.76	0.495	17.49	142.45	159.93	430.68
	NOVEMBER	58.46	0.18	11250	7.51	0.495	11.10	127.43	138.53	
	DECEMBER	54.85	0.16	11625	7.76	0.495	7.48	124.73	132.21	

****CONTROLLED EMISSIONS (BASED ON MONTHLY CALCULATIONS)****

CALENDAR		SURFACE T(la) F	CALC TVP @ T(la)	RATE (BBL/QTR)	TURNOVER PER QTR.	FAC-(Kn)	VOC (LBM/QTR)		
QUARTER	MONTH						Ls	Lw	TOTAL (Lt)
FIRST	JAN-MAR	57.88	0.31	33750	23	0.495	24	379	403
SECOND	APR-JUN	65.19	0.35	34125	23	0.495	56	429	486
THIRD	JUL-SEP	69.57	0.37	34500	23	0.495	68	465	533
FOURTH	OCT-DEC	58.96	0.32	34500	23	0.495	36	395	431
QUARTERLY AVERAGE		62.90	0.34	34219			46	417	463
DAILY AVERAGE (LB/DAY, BASED ON MONTHLY CALCULATIONS)							0.5	4.6	5.1
ANNUAL EMISSIONS (LB/YEAR, BASED ON MONTHLY CALCULATIONS)							184	1669	1853

Tank Emission Calculation Spreadsheet, version 01/23/03

DO YOU WANT TO ENTER THE SLOPE OF THE ASTM DISTILLATION CURVE AT 10 PERCENT EVAPORATED: IF NO, USE DEFAULT (Y/N) -----

ENTER 'S' VALUE ==> -----

CONE ROOF -----

GIVEN ROOF HEIGHT OR SLOPE (H/S) -----

TANK CONE ROOF SLOPE, SF (DEFAULT=0.0625) (H/H) -----

1.00 -----

DO YOU WANT TO ENTER A MAX LIQUID HEIGHT? (Y/N) -----

DEFAULT MAX LIQUID HEIGHT (SHELL HT - 2.0 FT) -----

DO YOU WANT TO ENTER AN AVERAGE LIQUID HEIGHT? (Y/N) -----

ENTER AVERAGE LIQUID HEIGHT (H) -----

8.0 -----

IS TANK CONSTANT LEVEL? (Y/N) -----

N -----

ARE THE CONTENTS OF THE TANK HEATED? (Y/N) -----

N -----

USING THE CODES ABOVE, WHAT REGION PERMIT NUMBERS DO YOU WANT TO USE? (0, 1, OR 2) -----

USING THE CODES ABOVE, WHAT AREA METEOROLOGICAL DATA DO YOU WANT TO USE? (0, 1, 2, ...) -----

REID VAPOR PRESSURE (psia) -----

0.50 -----

VAPOR MOLECULAR WEIGHT (MW) -----

73.28 -----

USING THE CODES ABOVE, WHAT TYPE OF ORGANIC LIQUID (0, 1, 2, ...) -----

4 -----

VOC CONTROL EFFICIENCY -----

0.00 -----

TANK SHELL DIAMETER (FEET) -----

29.75 -----

TANK SHELL HEIGHT, Hs (FEET) -----

16.10 -----

VENT VACUUM (ENTER "-" FOLLOWED BY A VALUE IN PSIG) -----

-0.03 -----

VENT PRESSURE (POSITIVE PSIG) -----

0.03 -----

TANK ID -----

TANK USE -----

SJVAPCD PERMIT# -----

CONE OR DOME ROOF (C/D) -----

2000.00 -----

MIN LIQUID HEIGHT (USE 0.0 FT FOR DEFAULT) -----

2.00 -----

TANK ROOF PAINT CONDITION, GOOD OR POOR (G/P) -----

G -----

TANK ROOF PAINT COLOR, SEE ABOVE (A/G/R/W) -----

G -----

TANK ROOF PAINT SHADE, SEE ABOVE (S/D/L/M/P/N) -----

N -----

TANK SHELL PAINT CONDITION, GOOD OR POOR (G/P) -----

G -----

TANK SHELL PAINT COLOR, SEE ABOVE (A/G/R/W) -----

G -----

TANK SHELL PAINT SHADE, SEE ABOVE (S/D/L/M/P/N) -----

N -----

GIVEN AND ASSUMED DATA

PRESS [TAB] TO SKIP TO NEXT MODIFIABLE CELL

STOCKTON	2
FRESNO	1
BAKERSFIELD	0
AREA	CODE
METEOROLOGICAL DATA CODES	

LIQUID TYPE	CODE	
CRUDE OIL	0	CRUDE
MOTOR GASOLINE	1	MOTOR GAS
AVIATION GASOLINE	2	AV GAS
LIGHT NAPHTHA (RVP 9-14 PSIA)	3	LT NAPHTHA
NAPHTHA (RVP 2-8 PSIA)	4	NAPHTHA

PAINT	COLOR	ALUMINUM	SPECULAR	0.39	0.49
		ALUMINUM	DIFFUSE	0.60	0.68
PAINT	SHADE/TYPE	GRAY	LIGHT	0.64	0.63
		GRAY	MEDIUM	0.68	0.74
PAINT	SHADE/TYPE	RED	PRIMER	0.89	0.91
		WHITE	--NONE--	0.17	0.34
PAINT FACTORS		PAINT CONDITION		GOOD	POOR

FOR REFERENCE PAINT TABLE

input

PE2 Daily

TANK	ID	3	naphtha	SJVAPCD	TANK TYPE	H OR V	SHELL DIMENSIONS		CAPACITY	ROOF	VENT PSIG
	USE	PERMIT #					D (FT)	Hs (FT)	(BBL)	TYPE (C/D)	VAC. PRESS.
		S-36-81		VERTICAL			29.8	16.1	1993.3	CONE	-0.03

TANK ROOF			LIQUID DATA			VOC CNTRL			
COND.	COLOR	FACTOR	TYPE	HT=H(I)(X)	Kp	RVP	LEVEL?	MOL. WT.	%EFF (w/w)
GOOD	GRAY	0.00	NAPHTHA	14.1	1.00	0.50	NO	73.28	0.0

UNCONTROLLED EMISSIONS

CALENDAR	MONTH	SURFACE T(la) F	CALC TYP @ T(la)	RATE (BBL/MON)	TURNOVER PER MON.	FAC-(kn)	VOC (LBM/MONTH)		TOTAL (LB)	TOTAL (LBM/QTR)
							Ls	Lw		
FIRST	JANUARY	55.00	0.16	62000	41.39	0.228	7.56	307.42	314.98	956.84
	FEBRUARY	57.36	0.17	56000	37.38	0.228	9.57	287.64	297.21	
	MARCH	61.27	0.19	62000	41.39	0.228	6.58	338.07	344.65	
SECOND	APRIL	61.80	0.19	60000	40.05	0.228	15.49	329.84	345.33	1112.16
	MAY	65.21	0.21	62000	41.39	0.228	19.22	359.45	378.66	
	JUNE	68.56	0.23	60000	40.05	0.228	21.40	366.76	388.16	
THIRD	JULY	70.89	0.25	62000	41.39	0.228	24.28	393.41	417.69	1211.75
	AUGUST	70.18	0.24	62000	41.39	0.228	23.42	388.99	412.41	
	SEPTEMBER	67.63	0.23	60000	40.05	0.228	20.24	361.41	381.65	
FOURTH	OCTOBER	63.56	0.20	62000	41.39	0.228	17.49	350.28	367.77	1006.42
	NOVEMBER	58.46	0.18	60000	40.05	0.228	11.10	313.36	324.46	
	DECEMBER	54.85	0.16	62000	41.39	0.228	7.48	306.71	314.19	

CONTROLLED EMISSIONS (BASED ON MONTHLY CALCULATIONS)

CALENDAR	MONTH	SURFACE T(la) F	CALC TYP @ T(la)	RATE (BBL/QTR)	TURNOVER PER QTR.	FAC-(kn)	VOC (LBM/QTR)		TOTAL (L)
							Ls	Lw	
FIRST	JAN-MAR	57.88	0.31	180000	120	0.228	24	933	957
	APR-JUN	65.19	0.35	182000	121	0.228	56	1056	1112
	JUL-SEP	69.57	0.37	184000	123	0.228	68	1144	1212
FOURTH	OCT-DEC	58.96	0.32	184000	123	0.228	36	970	1006
	QUARTERLY AVERAGE		62.90	0.34	182500	46	1026	1072	
	DAILY AVERAGE (LB/DAY, BASED ON MONTHLY CALCULATIONS)		0.5	11.2	4287				
ANNUAL EMISSIONS (LB/YEAR, BASED ON MONTHLY CALCULATIONS)		184	4103	4287					

Tank Emission Calculation Spreadsheet, version 01/23/03

PE 1
Annual

INTERNAL OR EXTERNAL FLOATING ROOF CALCUALTIONS

COMPANY NAME
COMPANY ID
TANK NUMBER OR DESIGNATION
INTERNAL OR EXTERNAL (I OR E)

San Joaquin
Refinery
S-36-81
S-36-81

K_{Ra} , ZERO WIND SPEED LOSS (TABLE 7.1-8)	0.6
K_{Rb} , WIND SPEED DEPENDENT LOSS (TABLE 7.1-8)	0.3
V, AVERAGE WIND SPEED (Bakersfield enter 6.4 TABLE 7.1-9) (zero if IFR)	0
n, SEAL RELATED WIND SPEED EXPONENT (TABLE 7.1-8)	2.1
P, TRUE VAPOR PRESSURE, PSIA	2.7
P_a , AVERAGE ATMOSPHERIC PRESSURE, PSIA	14.7
P^* , $(P/P_a) / (1 + (1 - P/P_a)^{0.5})^2$	0.050691724
M_v , VAPOR MOLECULAR WEIGHT (TABLE 7.1-2) (Oil Default = 50 if not provided)	80
K_c , PRODUCT FACTOR (.4 FOR CRUDE OIL, 1 FOR ELSE)	1
Q, THROUGHPUT, bbl/YR	136,875.00
C, SHELL CLINGAGE FACTOR bbl/1000 FT ² (table 7.1-10) (0.006 if Crude)	0.0015
W_l , AVERAGE LIQUID DENSITY (TABLE 7.1-2) Crude RVP 5 = 7.1	6.4
D, TANK DIAMETER, FT	29.75
N_c , NUMBER OF COLUMNES (TABLE 7.1-11)	1
F_c , EFFECTIVE COLUMN E DIAMETER (SEE NOTE 3, PG. 7.1-24)	0.7
NUMBER OF EXCESS HATCHES (TABLE 7.1-12)	1
ACCESS HATCH FITTING LOSS FACTOR (TABLE 7.1-12)	36
NUMBER OF AUTOMATIC GAUGE FLOAT WELLS (Table 7.1-12)	1
GAUGE FLOAT WELL FITTING LOSS FACTOR (TABLE 7.1-12)	2.3
NUMBER OF COLUMN WELLS (Table 7.1-12)	1
COLUMN WELL LOSS FITTING LOSS FACTOR (Table 7.1-12)	10
NUMBER OF LADDER WELLS (same as # of columns)	1
LADDER WELL FITTING LOSS FACTOR (Table 7.1-12)	56
NUMBER OF ROOF LEG OR HANGER WELLS (TABLE 7.1-15)	7
ROOF LEG OR HANGER WELL LOSS FACTOR (Table 7.1-12)	0
NUMBER OF SAMPLE PIPES OR WELLS (Table 7.1-12)	1
SAMPLE PIPE OR WELL LOSS FACTOR (Table 7.1-12)	43
NUMBER OF STUB DRAINS (Table 7.1-12)	7
STUB DRAIN LOSS FACTOR (Table 7.1-12)	1.2
NUMBER OF VACUUM BREAKERS (table 7.1-13)	1
VACUUM BREAKER LOSS FACTOR (Table 7.1-12)	6.2
F_t , TOTAL DECK FITTING LOSS FACTOR	161.9
K_d , 0 FOR WELDED DECK OR EXTERNAL TANKS, 0.14 FOR BOLTED DECK	0
S_d , DECK SEAM LENGTH FACTOR (Table 7.1-16)	0.2

San Joaquin Refin:
S-36-81
S-36-81

RIM SEAL LOSS (LB/YR) (equation 2-2)	72.39
<hr/>	
WITHDRAWAL LOSS (LB/YR) (equation 2-4)	42.63
DECK FITTING LOSS (LB/YR) (equation 2-5)	656.56
DECK SEAM LOSS (LB/YR) (equation (2-9)	0.00
TOTAL LOSS (LB/YR)	771.58
TOTAL LOSS (TONS/YR)	0.39

Inputs

Geographic Data

Liquid Data

TANK Data

Loss Factor

P* = Vapor Pressure Function

PE 1
Daily

INTERNAL OR EXTERNAL FLOATING ROOF CALCUALTIONS

COMPANY NAME
COMPANY ID
TANK NUMBER OR DESIGNATION
INTERNAL OR EXTERNAL (I OR E)

San Joaquin
Refinery
S-36-81
S-36-81

K _{ra} , ZERO WIND SPEED LOSS (TABLE 7.1-8)	0.6
K _{rb} , WIND SPEED DEPENDENT LOSS (TABLE 7.1-8)	0.3
V, AVERAGE WIND SPEED (Bakersfield enter 6.4 TABLE 7.1-9) (zero if IFR)	0
n, SEAL RELATED WIND SPEED EXPONENT (TABLE 7.1-8)	2.1
P, TRUE VAPOR PRESSURE, PSIA	2.7
P _a , AVERAGE ATMOSPHERIC PRESSURE, PSIA	14.7
P*, (P/P _a) / (1 + (1 - P/P _a) ^{0.5}) ²	0.050691724
M _v , VAPOR MOLECULAR WEIGHT (TABLE 7.1-2) (Oil Default = 50 if not provided)	80
K _c , PRODUCT FACTOR (.4 FOR CRUDE OIL, 1 FOR ELSE)	1
Q, THROUGHPUT, bbl/YR	730,000.00
C, SHELL CLINGAGE FACTOR bbl/1000 FT ² (table 7.1-10) (0.006 if Crude)	0.0015
W _l , AVERAGE LIQUID DENSITY (TABLE 7.1-2) Crude RVP 5 = 7.1	6.4
D, TANK DIAMETER, FT	29.75
N _c , NUMBER OF COLUMNES (TABLE 7.1-11)	1
F _c , EFFECTIVE COLUMNE DIAMETER (SEE NOTE 3, PG. 7.1-24)	0.7
NUMBER OF EXCESS HATCHES (TABLE 7.1-12)	1
ACCESS HATCH FITTING LOSS FACTOR (TABLE 7.1-12)	36
NUMBER OF AUTOMATIC GAUGE FLOAT WELLS (Table 7.1-12)	1
GAUGE FLOAT WELL FITTING LOSS FACTOR (TABLE 7.1-12)	2.3
NUMBER OF COLUMN WELLS (Table 7.1-12)	1
COLUMN WELL LOSS FITTING LOSS FACTOR (Table 7.1-12)	10
NUMBER OF LADDER WELLS (same as # of columns)	1
LADDER WELL FITTING LOSS FACTOR (Table 7.1-12)	56
NUMBER OF ROOF LEG OR HANGER WELLS (TABLE 7.1-15)	7
ROOF LEG OR HANGER WELL LOSS FACTOR (Table 7.1-12)	0
NUMBER OF SAMPLE PIPES OR WELLS (Table 7.1-12)	1
SAMPLE PIPE OR WELL LOSS FACTOR (Table 7.1-12)	43
NUMBER OF STUB DRAINS (Table 7.1-12)	7
STUB DRAIN LOSS FACTOR (Table 7.1-12)	1.2
NUMBER OF VACUUM BREAKERS (table 7.1-13)	1
VACUUM BREAKER LOSS FACTOR (Table 7.1-12)	6.2
F _t , TOTAL DECK FITTING LOSS FACTOR	161.9
K _d , 0 FOR WELDED DECK OR EXTERNAL TANKS, 0.14 FOR BOLTED DECK	0
S _d , DECK SEAM LENGTH FACTOR (Table 7.1-16)	0.2

San Joaquin Refi:
S-36-81
S-36-81

RIM SEAL LOSS (LB/YR) (equation 2-2)	72.39
<hr/>	
WITHDRAWAL LOSS (LB/YR) (equation 2-4)	227.36
DECK FITTING LOSS (LB/YR) (equation 2-5)	656.56
DECK SEAM LOSS (LB/YR) (equation 2-9)	0.00
TOTAL LOSS (LB/YR)	956.31
TOTAL LOSS (TONS/YR)	0.48

Inputs

Geographic Data

Liquid Data

TANK Data

Loss Factor

P* = Vapor Pressure Function

INTERNAL OR EXTERNAL FLOATING ROOF CALCUALTIONS

San Joaquin
 Retinery
 S-36-81
 S-36-81

COMPANY NAME
 COMPANY ID
 TANK NUMBER OR DESIGNATION
 INTERNAL OR EXTERNAL (I OR E)

K_{Ra} , ZERO WIND SPEED LOSS (TABLE 7.1-8)	0.6
K_{Rb} , WIND SPEED DEPENDENT LOSS (TABLE 7.1-8)	0.3
V, AVERAGE WIND SPEED (Bakersfield enter 6.4 TABLE 7.1-9) (zero if IFR)	0
n, SEAL RELATED WIND SPEED EXPONENT (TABLE 7.1-8)	2.1
P, TRUE VAPOR PRESSURE, PSIA	2.7
P_a , AVERAGE ATMOSPHERIC PRESSURE, PSIA	14.7
P^* , $(P/P_a) / (1 + (1 - P/P_a)^{0.5})^2$	0.050691724
M_v , VAPOR MOLECULAR WEIGHT (TABLE 7.1-2) (Oil Default = 50 if not provided)	80
K_c , PRODUCT FACTOR (.4 FOR CRUDE OIL, 1 FOR ELSE)	1
Q, THROUGHPUT, bbl/YR	1,277,500.00
C, SHELL CLINGAGE FACTOR bbl/1000 FT ² (table 7.1-10) (0.006 if Crude)	0.0015
W_l , AVERAGE LIQUID DENSITY (TABLE 7.1-2)Crude RVP 5 = 7.1	6.4
D, TANK DIAMETER, FT	29.75
N_c , NUMBER OF COLUMNES (TABLE 7.1-11)	1
F_c , EFFECTIVE COLUMNE DIAMETER (SEE NOTE 3, PG. 7.1-24)	0.7
NUMBER OF EXCESS HATCHES (TABLE 7.1-12)	1
ACCESS HATCH FITTING LOSS FACTOR (TABLE 7.1-12)	36
NUMBER OF AUTOMATIC GAUGE FLOAT WELLS (Table 7.1-12)	1
GAUGE FLOAT WELL FITTING LOSS FACTOR (TABLE 7.1-12)	2.3
NUMBER OF COLUMN WELLS (Table 7.1-12)	1
COLUMN WELL LOSS FITTING LOSS FACTOR (Table 7.1-12)	10
NUMBER OF LADDER WELLS (same as # of columns)	1
LADDER WELL FITTIN LOSS FACTOR (Table 7.1-12)	56
NUMBER OF ROOF LEG OR HANGER WELLS (TABLE 7.1-15)	7
ROOF LEG OR HANGER WELL LOSS FACTOR (Table 7.1-12)	0
NUMBER OF SAMPLE PIPES OR WELLS (Table 7.1-12)	1
SAMPLE PIPE OR WELL LOSS FACTOR (Table 7.1-12)	43
NUMBER OF STUB DRAINS (Table 7.1-12)	7
STUB DRAIN LOSS FACTOR (Table 7.1-12)	1.2
NUMBER OF VACUUM BREAKERS (table 7.1-13)	1
VACUUM BREAKER LOSS FACTOR (Table 7.1-12)	6.2
F_t , TOTAL DECK FITTING LOSS FACTOR	161.9
K_d , 0 FOR WELDED DECK OR EXTERNAL TANKS, 0.14 FOR BOLTED DECK	0
S_d , DECK SEAM LENGTH FACTOR (Table 7.1-16)	0.2

San Joaquin Reti
S-36-81
S-36-81

RIM SEAL LOSS (LB/YR) (equation 2-2)	72.39
---	-------

WITHDRAWAL LOSS (LB/YR) (equation 2-4)	397.88
---	--------

DECK FITTING LOSS (LB/YR) (equation 2-5)	656.56
---	--------

DECK SEAM LOSS (LB/YR) (equation (2-9)	0.00
---	------

TOTAL LOSS (LB/YR)	1126.83
--------------------	---------

TOTAL LOSS (TONS/YR)	0.56
----------------------	------

Inputs

Geographic Data

Liquid Data

TANK Data

Loss Factor

P* = Vapor Pressure Function

ATTACHMENT III
Emissions Profiles

Permit #: S-36-81-4	Last Updated
Facility: SAN JOAQUIN REFINING CO	06/22/2017 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	1853.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	11.7
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	270.0
Q2:	0.0	0.0	0.0	0.0	270.0
Q3:	0.0	0.0	0.0	0.0	270.0
Q4:	0.0	0.0	0.0	0.0	271.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					405.0
Q2:					405.0
Q3:					406.0
Q4:					406.0

**ATTACHMENT IV
BACT Guideline**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 7.3.1*

Last Update 10/1/2002

**Petroleum and Petrochemical Production - Fixed Roof Organic
Liquid Storage or Processing Tank, < 5,000 bbl Tank capacity ****

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	PV-vent set to within 10% of maximum allowable pressure	99% control (Waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of noncondensable vapors to gas pipeline; reinjection to formation (if appropriate wells are available); or equal).	

** Converted from Determinations 7.1.11 (10/01/02).

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 a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required 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**

ATTACHMENT V BACT Analysis

Top Down BACT Analysis

VOC emissions may occur when the produced fluids from the crude oil production wells enter the oil storage tanks.

Step 1 - Identify All Possible Control Technologies

BACT Guideline 7.3.1 lists the controls that are considered potentially applicable to fixed-roof organic liquid storage or processing tank <5,000 bbl tank capacity. The VOC control measures are summarized below.

Technologically feasible:

99% control (waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of uncondensed vapors to gas pipeline or reinjection to formation (if appropriate wells are available).

Achieved in Practice:

PV relief valve set to within 10% of maximum allowable pressure.

Step 2 - Eliminate Technologically Infeasible Options

All of the above identified control options are technologically feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. 99% control (waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of uncondensed vapors to gas pipeline or reinjection to formation (if appropriate wells are available).
2. PV relief valve set to within 10% of maximum allowable pressure.

Step 4 - Cost Effectiveness Analysis

Applicant has provided the following costs for the project:

Total capital cost: \$340,000

The annualized capital cost is

AP = (P) $\{[(i) (1 + i)^n]/[(1 + i)^n - 1]\}$, where

AP = Equivalent Annual Capital Cost of Control Equip.

P = Present value of the control equipment, including installation cost. \$51,000

i = interest rate (use 10% per policy)
n = equipment life (assume 10 years per policy)

$$AP = (P) \left\{ \frac{(0.1)(1 + 0.1)^{10}}{(1 + 0.1)^{10} - 1} \right\}$$
$$AP = (P) \times (0.16274) = (\$340,000) (0.1627) = \$ 55,318/\text{year}$$

For calculation of the amount of VOCs removed from each tank (emissions unit) with the vapor control system, 100% control is assumed. The VOCs removed annually are

$$\text{Tons/yr} = 1,853 \text{ lb/yr} / 2000 \text{ lb/ton} = 0.93 \text{ ton/yr}$$

$$\text{Annualized cost} = \$ 55,318/\text{yr} / 0.93 \text{ tons/yr}$$
$$= \$ 59,482/\text{ton}$$

This exceeds the cost effectiveness threshold for VOCs of \$17,500/ton. Therefore, the vapor control system is not cost effective.

Step 5 - Select BACT

PV relief valve set to within 10% of maximum allowable pressure of the tank

ATTACHMENT VI
Statewide and Title V Compliance Certification



San Joaquin Valley Air Pollution Control District



TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

ADMINISTRATIVE AMENDMENT MINOR MODIFICATION SIGNIFICANT MODIFICATION

COMPANY NAME: <u>SAN JOAQUIN REFINING CO. INC.</u>	FACILITY ID: <u>S-36</u>
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: <u>MAJID MOJIBI</u>	
3. Agent to the Owner: <u>PAT OVESON</u>	

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

- PO 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).
- PO 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.
- PO Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- PO 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.
- PO For minor modifications, this application meets the criteria for use of minor permit modification procedures pursuant to District Rule 2520.

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

Pat Oveson
Signature of Responsible Official

3/15/17
Date

PAT OVESON
Name of Responsible Official (please print)

REFINERY MANAGER
Title of Responsible Official (please print)

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

Certification of Truth and Accuracy

Company Name: <i>SAN JOAQUIN REFINING</i>	Facility ID: <i>S - 36</i>
---	----------------------------

I declare, under penalty of perjury under the laws of the state of California that based on information and belief formed after reasonable inquiry, the statements and information provided in the document are true, accurate, and complete:

Pat Oveson

Signature of Responsible Official

3/1/17

Date

DAT OVESON

Name of Responsible Official (please print)

REFINERY MANAGER

Title of Responsible Official (please print)

ATTACHMENT VII
HRA

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Richard Edgehill – Permit Services
 From: Georgia Stewart – Technical Services
 Date: June 28, 2017
 Facility Name: San Joaquin Refining
 Location: Intersection Standard St and Shell St, Bakersfield, CA
 Application #(s): S-36-81-4
 Project #: S-1170829

A. RMR SUMMARY

RMR Summary						
Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required ?	Special Permit Requirements?
2,000 bbl Fixed-roof Tank (Unit 81-4)	0.21	0.00	0.00	5.44E-09	No	No
Project Totals	<1	2.16E-03	1.99E-04	5.44E-09		
Facility Totals	>1	5.05E-02	2.27E-02	8.86E-06		

Proposed Permit Requirements

To ensure that human health risks will not exceed District allowable levels; the following shall be included as requirements for:

Unit # 81-4

No special requirements are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on June 22, 2017, to perform an Ambient Air Quality Analysis and a Risk Management Review for the proposed modification to an oil refining operation. The modification consisted of the conversion of an internal floating roof tank to a fixed-roof, 2,000 bbl tank.

II. Analysis

Toxic emissions from Oilfield Fugitives were calculated using emission factors derived from 1991 source tests of central valley sites, and input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, May 28, 2015), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines. The prioritization score for the proposed unit was less than 1.0. The prioritization score for this proposed facility was greater than 1.0 (see RMR Summary Table). Therefore, a refined health risk assessment was required. The AERMOD model was used, with the parameters outlined below and meteorological data for 2010-2014 from Bakersfield to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the SHARP Program, which then used the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the reviews:

Analysis Parameters Unit 81-4			
Source Type	Circular Area	Location Type	Urban
X-Length (m)	4.23	Closest Receptor (m)	115
Y-Length (m)	N/A	Type of Receptor	Business
Release Height (m)	4.91	Pollutant Type	VOC
Fugitive VOC Emissions (lbs/hr)	0.379	Fugitive VOC Emissions (lbs/yr)	1,081

AAQA

An AAQA is modeled for the criteria pollutants CO, NO_x, SO_x and PM₁₀. However, there are no State or Federal standards for VOC. Therefore, an AAQA was not performed.

III. Conclusion

The acute and chronic indices are below 1.0 and the cancer risk factor associated with the project is less than 1.0 in a million. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

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. Prioritization score w/ toxic emissions summary
- D. Facility Summary

ATTACHMENT VIII
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-36-81-4

LEGAL OWNER OR OPERATOR: SAN JOAQUIN REFINING CO
MAILING ADDRESS: PO BOX 5576
BAKERSFIELD, CA 93388

LOCATION: STANDARD AND SHELL ST
BAKERSFIELD, CA 93308

SECTION: 24 TOWNSHIP: 29S RANGE: 27E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 84,000 GALLON FIXED ROOF NAPHTHA STORAGE TANK WITH HMT TANK SERVICE INC.
INTERNAL FLOATING ROOF: COVERT TO FIXED ROOF TANK, LOWER TVP LIMIT TO 0.5 PSIA

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 405 lb, 2nd quarter - 405 lb, 3rd quarter - 406 lb, and fourth quarter - 406 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number S-4741-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director, APCO

DRAFT

Arnaud Marjolle, Director of Permit Services

S-36-81-4 Jul 12 2017 2:45PM - EDGEHLR : Joint Inspection NOT Required

5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. Throughput of organic liquids shall not exceed 2,000 barrels in any one day nor 136,875 hbl in any one year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, and properly maintained in good operating order in accordance with the manufacturer's instructions. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
10. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
12. Permittee shall maintain monthly records of average daily throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The permittee shall keep accurate records of true vapor pressure, storage temperature and daily throughput rate, for a period of five years, and shall make such records available for District inspection upon request. [District Rule 2201 and 2520, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit
14. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
15. {2400} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rule 4403 (as amended February 16, 1995) because units that qualify to use this template are not components serving light crude oil or gases at light crude oil and gas production facilities and are not components at natural gas processing facilities. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

DRAFT