San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

OCT 2 2 2018

Ms. Melinda Hicks
Kern Oil & Refining Co.
7724 E Panama Ln
Bakersfield, CA 93307

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
Facility Number: S-37
Project Number: S-1182896

Dear Ms. Hicks:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project authorizes the conversion of one floating roof tank to a fixed roof tank and the installation of two new fixed roof tanks with all three tanks connected to a new vapor recovery system.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authorities to Construct with Certificates 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 Authorities to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Errol Villegas, Permit Services Manager, at (559) 230-5900.

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

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San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Modification of One Existing Organic Liquid Storage Tank from Floating Roof Tank to Fixed Roof Tank and Two New Fixed Roof Tanks Connected to Vapor Recovery System

Facility Name:	Kern Oil & Refining Co.	Date:	September 26, 2018
Mailing Address:	7724 E Panama Lane Bakersfield, CA 93307	Engineer:	Jesse A. Garcia
		Lead Engineer:	Joven Refuerzo
Contact Person:	Melinda Hicks		
Telephone:	(661) 845-0761		
E-Mail:	mhicks@kernoil.com		
Application #(s):	S-37-111-8, -166-0, -167-0		
Project #:	S-1182896		
Deemed Complete:	August 14, 2018		

I. Proposal

Kern Oil & Refining Co. has submitted an Authority to Construct (ATC) application to convert one existing floating roof tank (S-37-111) to a fixed roof tank and install two new tanks, S-37-166 and -167, to replace the tanks listed under permits -95 and -96 and control the emissions from all the tanks with a new vapor recovery system (VRS).

The following conditions will be included on ATCs S-37-166 and -167, since they will be replacing existing tanks:

- Within 90 days of startup of the equipment authorized by this Authority to Construct, Permit to Operate S-37-xx shall be surrendered to the District and the associated equipment shall be removed or rendered inoperable. [District Rule 2201]

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

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (02/18/16)
Rule 2410	Prevention of Significant Deterioration (06/16/11)
Rule 2520	Federally Mandated Operating Permits (06/21/01)
Rule 4001	New Source Performance Standards,

Subpart K, Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels).
Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries.
Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems.
Subpart OOOO - Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution.

Rule 4002	National Emission Standards For Hazardous Air Pollutants (05/20/04)
Rule 4101	Visible Emissions (04/20/05)
Rule 4102	Nuisance (12/17/92)
Rule 4455	Components at Petroleum Refineries, Gas Liquids Processing, Facilities, and Chemical Plants (04/20/05)
Rule 4623	Storage of Organic Liquids (05/19/05)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice

Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The facility is located within the Kern Oil & Refining Co. facility at 7724 E Panama Lane, Bakersfield, CA. The facility is located in Section 25, Township 30S, Range 28E. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Kern Oil & Refining Co. operates a petroleum refining operation engaged in the production of gasoline and various petroleum distillates, including diesel fuel. Kern Oil & Refining Co. is proposing to retrofit one existing floating roof organic liquid storage tank at its facility from a floating roof tank to a fixed roof tank and install two new fixed roof organic liquid storage tanks with all three tanks to be connected to a new vapor recovery system listed under permit S-37-166.

Additionally, the tank listed under permit S-37-111 will also store oily wastewater that is diverted from the refinery.

V. Equipment Listing

Pre-Project Equipment Description:

S-37-111-7: 55,000 BBL ORGANIC LIQUID INTERNAL FLOATING ROOF TANK (#55000), WELDED CONSTRUCTION WITH MECHANICAL SHOE PRIMARY SEAL AND RIM-MOUNTED SECONDARY SEAL

S-37-95-8: 10,000 BBL FIXED-ROOF ORGANIC LIQUID STORAGE TANK (#10003) VENTING TO A 2,000 LB CARBON CANISTER (SHARED WITH PERMIT UNIT S-37-96)

S-37-96-7: 10,000 BBL FIXED-ROOF ORGANIC LIQUID STORAGE TANK (#10004) VENTING TO A 2,000 LB CARBON CANISTER (SHARED WITH PERMIT UNIT S-37-95) LISTED ON TANK S-37-166 (#12002)

Proposed Modification:

S-37-111-8: MODIFICATION OF 55,000 BBL ORGANIC LIQUID INTERNAL FLOATING ROOF TANK (#55000), WELDED CONSTRUCTION WITH MECHANICAL SHOE PRIMARY SEAL AND RIM-MOUNTED SECONDARY SEAL: CONVERT TO FIXED ROOF AND CONNECT TO VAPOR RECOVERY SYSTEM

Post Project Equipment Description:

S-37-111-8: 55,000 BBL FIXED ROOF ORGANIC LIQUID STORAGE TANK (#55000) VENTED TO VAPOR RECOVERY SYSTEM LISTED ON TANK S-37-166 (#12002)

S-37-166-0: 12,000 BBL FIXED ROOF ORGANIC LIQUID STORAGE TANK (#12002) WITH VAPOR RECOVERY SYSTEM INCLUDING A COMPRESSOR SHARED WITH TANKS S-37-111, -167[1]

S-37-167-0: 12,000 BBL FIXED ROOF ORGANIC LIQUID STORAGE TANK (#12003 VENTED TO VAPOR RECOVERY SYSTEM LISTED ON TANK S-37-166 (#12002)

VI. Emission Control Technology Evaluation

The tanks will be connected to the proposed tank vapor recovery system including a compressor that will route captured vapors to be treated in the existing amine system listed under permit S-37-120 with treated vapors used as fuel gas for process heaters or flared in permit S-37-7. The efficiency of the vapor control system is at least 99%.

VII. General Calculations

A. Assumptions

- Facility operates 24 hr/day, 365 day/year.
- Only fugitive VOCs emitted from components in gas service are calculated.

[1] It is District practice to list a shared vapor recovery system on the lowest permit number. However, since the vapor recovery system is shared and controlling emissions from three tanks (one existing and two new), there are different requirements for the system: for example, existing tank is subject to 40 CFR 60 Subpart K, while the new tanks are subject to Subpart Kb which has more stringent requirements for the system. In an effort to try to eliminate any future confusion, the vapor recovery system in this project will be listed on the tank with lowest permit number with the most stringent requirements.

- Fugitive emissions from heavy oil liquid service components are negligible.
- The potential to emit from the tanks will be recalculated using California Implementation Guidelines for Estimating Mass Emissions of fugitive Hydrocarbon Leaks at Petroleum Facilities, CAPCOA/CARB, February 1999. Applicant is proposing use of the correlation emission factors.
- Pre-project emissions are calculated using EPA TANKS 4.0.9d program. Daily emissions were calculated based on the throughput restriction included in the existing permit.
- Post-project component counts used to calculate emissions were provided by the applicant.

B. Emission Factors

Pre-Project:
Tanks 4.0.9d will be used to calculate the pre-project emissions from the tank.

Post-Project:
Fugitive VOC emissions from piping/vapor components of the new tanks are estimated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-3a (1995) EPA Correlations Equations for Refineries and Marketing Terminals.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

The PE1 is calculated using TANKS 4.0.9d using the throughput stated on the permit for S-37-111. The calculations for S-37-111 are presented in Appendix G and the emissions from S-37-166 and -167 are 0 since they are new units; PE1 is summarized below:

PE1 – VOC Emissions		
Permit Unit	**Daily Emissions (lb/day)**	**Annual Emissions (lb/year)**
S-37-111	20.8	7,607
S-37-166	0.0	0
S-37-167	0.0	0

2. Post Project Potential to Emit (PE2)

The PE2 are calculated based on fugitive component counts. The calculations are presented in Appendix H and summarized below:

PE2 – VOC Emissions		
Permit Unit	**Daily Emissions (lb/day)**	**Annual Emissions (lb/year)**
S-37-111	1.1	412
S-37-166 (tank)	0.3	100
S-37-166 (VRS)	5.5	2,004
S-37-167	0.3	100

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

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

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

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

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

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

5. Major Source Determination

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

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

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

PSD Major Source Determination (tons/year)	
	CO
Estimated Facility PE before Project Increase	>100*
PSD Major Source Thresholds	100
PSD Major Source ? (Y/N)	Y

* The facility has conceded in previous Project S-1181577 that emissions are greater than 100 tons/year.

As shown above, the facility is an existing PSD major source for at least one pollutant.

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.

BE VOC

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.

The existing tank permitted under S-37-111 in this project is currently equipped with a floating roof with primary metal shoe seals and secondary wiper seals, or equivalent, which is stated in BACT Guideline 7.3.3 to have a 95% control efficiency. (See Appendix C for BACT Guideline 7.3.3)

Therefore, BE=PE1 for the tank.

Additionally, since the tanks listed under permit -166 and -167 are new tanks, the BE = 0.

BE – VOC Emissions	
Permit Unit	**Annual Emissions (lb/year)**
S-37-111	7,607
S-37-166	0
S-37-167	0

7. SB 288 Major Modification

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

Since this 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?**
VOC	2,616	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.

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

Step 1

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project.

Since there are two new tanks, there is an increase in emissions.

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

Federal Major Modification Thresholds for Emission Increases			
Pollutant	**Total Emissions Increases (lb/yr)**	**Thresholds (lb/yr)**	**Federal Major Modification?**
VOC*	> 0	0	Yes

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

Federal Offset Quantities:

The Federal offset quantity is only calculated 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 emissions unit multiplied by the applicable federal offset ratio. There are no special calculations performed for units covered by an SLC.

The AE are calculated in Appendix I.

VOC **Federal Offset Ratio** **1.5**

Permit No.	Actual Emissions (lb/year)	Potential Emissions (lb/year)	Emissions Change (lb/yr)
S-37-111	2,946	412	**-2,534**
S-37-166	0	3,104	**3,104**
S-37-167	0	100	**100**
		Net Emission Change (lb/year):	**670**
		Federal Offset Quantity: (NEC * 1.5)	**1,005**

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)

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10

I. Project Location Relative to Class 1 Area

As demonstrated in the "PSD Major Source Determination" Section above, the facility was determined to be a existing PSD Major Source. Because the project is not located within 10 km (6.2 miles) of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

II. Project Emission Increase – Significance Determination

a. Evaluation of Calculated Post-project Potential to Emit for New or Modified Emissions Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the post-project potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if the total potentials to emit from all new and modified units are below the applicable thresholds, no futher PSD analysis is needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)					
	NO_2	SO_2	CO	PM	PM_{10}
Total PE from New and Modified Units	0	0	0	0	0
PSD Significant Emission Increase Thresholds	40	40	100	25	15
PSD Significant Emission Increase?	N	N	N	N	N

As demonstrated above, because the post-project total potentials to emit from all new and modified emission units are below the PSD significant emission increase thresholds, this project is not subject to the requirements of Rule 2410 and no further discussion is required.

10. Quarterly Net Emissions Change (QNEC)

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

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 Adjusted Increase in Permitted Emissions (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 seen in Section VII.C.2 above, the applicant is proposing to convert an existing floating roof tank to fixed roof tank and install two new fixed roof tanks. For the purposes of BACT, since the existing tank is being converted to a new class and category it is treated as a new unit; however, all the tanks have a PE less than 2 lb/day for all emissions[2]. 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

As discussed in Section I above, there are no modified emissions units associated with this project. Therefore BACT is not triggered.

[2] Although the vapory recovery system does not have emissions less than 2.0 lb/day, it is a control device and not an emissions unit; therefore, BACT cannot be triggered since it is not an emissions unit.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.8 above, this project constitutes a Federal Major Modification for VOC emissions. Therefore BACT is triggered for VOC for all emissions units in the project for which there is an emission increase.

2. BACT Guideline

BACT Guideline 7.3.2, applies to the fixed roof storage tanks. [Petroleum and Petrochemical Production - Fixed Roof Organic Liquid Storage or Processing Tank, = or > 5,000 bbl Tank capacity] (See Appendix C)

3. Top-Down BACT Analysis

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

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

VOC: 99% Control (Waste gas incinerated in process heaters or flare and inspection and maintenance program)

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals 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)	
	VOC
SSPE2	> 20,000
Offset Thresholds	20,000
Offsets triggered?	Yes

2. Quantity of Offsets Required

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

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

Offsets Required (lb/year) = (Σ[PE2 – BE] + ICCE) x DOR, for all new or modified emissions units in the project,

Where,
PE2 = Post Project Potential to Emit, (lb/year)
BE = Baseline Emissions, (lb/year)
ICCE = Increase in Cargo Carrier Emissions, (lb/year)
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 for:

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

otherwise,

BE = HAE

As calculated in Section VII.C.6 above, the BE from S-37-111 is equal to the PE1 since the unit is a Clean Emissions Unit.

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

Offsets Required (lb/year) = ([$PE2_{unit\text{-}111}$ – $BE_{unit\text{-}111}$ + $PE2_{unit\text{-}166}$ – $BE_{unit\text{-}166}$ + $PE2_{unit\text{-}167}$ – $BE_{unit\text{-}167}$] + ICCE) x DOR

VOC Emissions		
Permit Unit	**PE1 = BE (lb/year)**	**PE2 (lb/year)**
S-37-111	7,607	412
S-37-166 (tank)	0	100
S-37-166 (VRS)	0	2,004
S-37-167	0	100

Offsets Required (lb/year) = ([(412 – 7,607) + (100 + 2,004 – 0) + (100 – 0) x DOR
= [(-7,195 + 2,104 + 100) + 0] x DOR
= 0 lb VOC/year

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

C. Public Notification

1. Applicability

Public noticing is required for:
a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
c. Any project which results in the offset thresholds being surpassed,
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant, and/or
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.8, this project is a Federal Major Modification. Therefore, public noticing for 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?**
VOC	> 20,000	> 20,000	20,000 lb/year	No

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

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	**PE2 for All Units in This Project (lb/year)**	**PE1 for All Units in This Project (lb/year)**	**SSIPE (lb/year)**	**SSIPE Public Notice Threshold**	**Public Notice Required?**
VOC	2,616	7,607	-4,991	20,000 lb/year	No

As demonstrated above, the SSIPE for all pollutants was 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, public noticing is required for this project for being a Federal Major Modification and a Title V significant modification. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATCs for this equipment.

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.

All Units

- {2499} All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]
- {2502} Any tank gauging or sampling device on a tank vented to the vapor control system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]
- Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201]
- {2501} A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623]

S-37-111

- {Modified 2498} The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to approved control devices having a destruction efficiency of at least 99% by weight as determined by EPA Test Method 21. [District Rules 2201 and 4623 and 40 CFR 60.112(a)(2)]
- VOC fugitive emissions from the components in gas service on tank shall not exceed 1.1 lb/day. [District Rule 2201]

S-37-166

- {Modified 2498} The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to permit S-37-120 and combusted in approved fired equipment having a destruction efficiency of at least 99% by weight as determined by EPA Test Method 21. [District Rules 2201 and 4623 and 40 CFR 60.112b(a)(3)(ii)]
- The closed vent system shall operate with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in 40 CFR 60.485(b). Emissions from the closed vent system in excess of this limit shall be considered a leak. [40 CFR 60.112b(a)(3)(i)]

- Other fugitive components and tank appurtenances such as piping, valves and fittings not considered to be part of the vapor recovery system shall be maintained in a leak-free condition. [District Rule 2201 and 4623, 5.6.3]
- VOC fugitive emissions from the components in gas service on tank shall not exceed 0.3 lb/day. [District Rule 2201]
- VOC fugitive emissions from the components in gas service on tank vapor collection system shall not exceed 5.5 lb/day. [District Rule 2201]

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- {Modified 2498} The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to approved control devices having a destruction efficiency of at least 99% by weight as determined by EPA Test Method 21. [District Rules 2201 and 4623 and 40 CFR 60.112b(a)(3)(ii)]
- VOC fugitive emissions from the components in gas service on tank shall not exceed 0.3 lb/day. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

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

2. Monitoring

Fugitive emissions monitoring is required. The following permit conditions will ensure compliance:

All Units

- Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623, Table 3]
- Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623, Table 3]
- Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48

hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623]

- Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623, Table 3]
- Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623, Table 3]
- If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623, Table 3]
- Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623, Table 3]

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201 and also requirements from Rule 4623. The following conditions are listed on the permits to operate:

All Units

- Permittee shall maintain accurate fugitive component counts and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," February 1999, Table IV-3a: CAPCOA-Revised 1995 EPA Correlation Equations and Factors for Refineries and Marketing Terminals. Permittee shall update such records when new components are approved and installed. [District Rule 2201]
- The permittee shall keep accurate records of the dates of inspection and monitoring and the components inspected and monitored. [District Rule 2201]
- Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]
- {2490} All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An Ambient Air Quality Analysis (AAQA) was requested; however, since there is no AAQA standard for VOC's and the project only consists of VOC emission, no AAQA was completed.

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 Federal Major Modification, therefore this requirement is applicable. Kern Oil & Refining Co.'s compliance certification is included in Appendix K.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to convert an existing storage tank from floating roof to fixed roof and install two new tanks with all of them connected to a vapor recovery system.

Since the project is for an existing tank and new tanks to 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. A significant permit modification is defined as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

Section 3.20.5 states that a minor permit modification is a permit modification that does not meet the definition of modification as given in Section 111 or Section 112 of the Federal Clean Air Act. Since this project is a Title I modification (i.e. Federal Major Modification), the proposed project is considered to be a modification under the Federal Clean Air Act. As a result, the proposed project constitutes a Significant Modification to the Title V Permit pursuant to Section 3.29.

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

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. 40 CFR Part 60, Subparts, K, Ka, Kb, GGGa and OOOO could potentially apply to the units in this project.

S-37-111
40 CFR Part 60, Subpart A, Section 14, defines the meaning of modification to which the the standards are applicable. §60.14, paragraph (e)(5) states that the following will not be considered as a modification: *"the addition or use of any system or device whose primary funtion is the reduction of air pollutants, except when an emission control system is removed or replaced by a system which the Administrator determines to be less environmentally beneficial".*

This tank is not being modified; however, it was constructed, reconstructed or modified after June 11, 1973 and prior to May 19, 1978.

Since construction, reconstruction, or modification of this unit was was prior to May 19, 1978, Subparts Ka and Kb do not apply to this unit. The following existing condition will also be included on the ATC issued in this project:

- {2611} This unit commenced construction, modification, or reconstruction prior to May 19, 1978. Therefore, the requirements of 40 CFR 60 Subpart Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2]

Subpart K - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978 is applicable to the tank listed under permit S-37-111 since it was constructed, reconstructed or modified prior to May 19, 1978.

Pursuant to 40 CFR 60.112(a)(2), the tank requirements are satisfied with a vapor recovery system which collects all VOC vapors and gases discharged from the tank and a vapor disposal system.

As a mechanism to ensure compliance, the following condition will be listed on permit S-37-111:

- {Modified 2498} The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to approved control devices having a destruction efficiency of at least 99% by weight as determined by EPA Test Method 21. [District Rules 2201 and 4623 and 40 CFR 60.112(a)(2)]

Compliance with this Subpart is expected.

S-37-166 & -167
Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 is applicable to the tanks listed under permits S-37-166 and -167 since they will be installed after July 23, 1984.

Pursuant to 40 CFR 60.112b(a)(3), the new tank requirements are satisfied with a closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, Sec. 60.485(b).
(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (Sec. 60.18) of the General Provisions.

As a mechanism to ensure compliance with paragraph (i), the following condition will be listed on the permit that contains the vapor recovery system, permit S-37-166:

- The closed vent system shall operate with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in 40 CFR 60.485(b). Emissions from the closed vent system in excess of this limit shall be considered a leak. [District Rule 4623, 5.6.2 and 40 CFR 60.112b(a)(3)(i)]

As a mechanism to ensure compliance with paragraph (ii), the following condition will be listed on permits S-37-166 & -167:

- {Modified 2498} The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to approved control devices having a destruction efficiency of at least 99% by weight as determined by EPA Test Method 21. [District Rules 2201 and 4623 and 40 CFR 60.112b(a)(3)(ii)]

Pursuant to 40 CFR 60.113b(c)(1)(i) the owner or operator is required provide documentation (sample calculation) indicating that the control device will achieve the required control efficiency during maximum filling conditions.

Pursuant to 40 CFR 60.115b(c) the owner or operator shall keep the following records: (1) a copy to the operating plan and (2) a record of the measured values of the parameters monitored in accordance with § 60.113b(c)(2).

As a mechanism to ensure compliance, the following condition will be listed on permits S-37-166:

- As part of its notification required by 40 CFR 60.7(a)(1) or 60.7(a)(2), the operator shall submit to the APCO for approval an operating plan as described in 40 CFR 60.113b(c) and shall operate the closed vent system and monitor the parameters of the system in accordance with the approved operating plan. The operator shall keep a record of the measured values of the parameters monitored in accordance with the approved operating plan. The operating plan shall be retained for the life of the control equipment. [40 CFR 60.113b(c), 60.115b(c)]

Compliance with this Subpart is expected.

S-37-166
Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 is applicable to the compressor associated with the vapor recovery system.

Section 60.592a(a) requires that each owner or operator subject to the provisions of this subpart shall comply with the requirements of §§ 60.482-1a to 60.482-10a as soon as practicable, but no later than 180 days after initial startup.

Section 60.482-1a(b) requires that compliance be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in § 60.485a.

Section 60.482-1a(c)(1) states that an owner or operator may request a determination of equivalence of a means of emission limitation to the requirements of 40 CFR 60.482-3a as provided in 40 CFR 60.484a.

Section 60.482-1a(c)(2) states that if the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of 40 CFR 60.482-3a, an owner or operator shall comply with the requirements of that determination.

Section 60.482-1a(d) states that equipment that is in vacuum service is excluded from the requirements of 40 CFR 60.482-3a if it is identified as required in 40 CFR 60.486a(e)(5).

Section 60.482-3a(a), (b), and (c) state the following:
That each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in § 60.482-1a(c) and paragraphs (h), (i), and (j) of this section.

Each compressor seal system as required in paragraph (a) of this section shall be:
(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or
(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of § 60.482-10a; or

(3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

Section 60.482-3a(i) states that any compressor that is designated, as described in §60.486a(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a) through (h) of this section if the compressor meets the requirements specified in 40 CFR 60.482-3a(i)(1) and (2).

Section 60.593a(c) states that any existing reciprocating compressor that becomes an affected facility under provisions of § 60.14 or § 60.15 is exempt from § 60.482-3a(a), (b), (c), (d), (e), and (h) provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of § 60.482-3a(a), (b), (c), (d), (e), and (h).

Since the following conditions are included on the facility-wide permit, S-37-0:

- 40 CFR PART 60 SUBPART VVa / GGGa CONDITION: Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of 40 CFR 60.482-3a for all equipment within 180 days of initial startup. [40 CFR 60.482-1a(a)]
- 40 CFR PART 60 SUBPART VVa / GGGa CONDITION: Compliance with 40 CFR 60.482-3a shall be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 40 CFR 60.485a. [40 CFR 60.482-1a(b)]
- 40 CFR PART 60 SUBPART VVa / GGGa CONDITION: An owner or operator may request a determination of equivalence of a means of emission limitation to the requirements of 40 CFR 60.482-3a as provided in 40 CFR 60.484a. [40 CFR 60.482-1a(c)(1)]
- 40 CFR PART 60 SUBPART VVa / GGGa CONDITION: If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of 40 CFR 60.482-3a, an owner or operator shall comply with the requirements of that determination. [40 CFR 60.482-1a(c)(2)]
- 40 CFR PART 60 SUBPART VVa / GGGa CONDITION: Equipment that is in vacuum service is excluded from the requirements of 40 CFR 60.482-3a if it is identified as required in 40 CFR 60.486a(e)(5). [40 CFR 60.482-1a(d)]
- 40 CFR PART 60 SUBPART VVa / GGGa CONDITION: Unless exempt under 40 CFR 60.482-3a, each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in 40 CFR 60.482-3a(h) and (i). The barrier fluid system shall be in heavy liquid service or shall not be in VOC service. Each compressor shall be operated and equipped as specified in 40 CFR 60.482-3a(b)(1), (2), or (3). [40 CFR 60.482-3a(a), (b), and (c)]
- 40 CFR PART 60 SUBPART VVa / GGGa CONDITION: Any compressor that is designated, as described in 40 CFR 60.486a(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, is exempt from the requirements of 40 CFR 60.482-3a(a) through (h) if the compressor meets the requirements specified in 40 CFR 60.482-3a(i)(1) and (2). [40 CFR 60.482-3a(i), and District Rule 2201]

- 40 CFR PART 60 SUBPART VVa / GGGa CONDITION: Any existing reciprocating compressor in a process unit which becomes an affected facility under the provisions of 40 CFR 60.14 or 40 CFR 60.15 is exempt from 40 CFR 60.482a(a), (b), (c), (d), (e), and (h), provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of 40 CFR 60.482-3a(a), (b), (c), (d), (e), and (h). [40 CFR 60.593a(c)]

The following condition will be included on ATC S-37-166 and will serve as a mechanism to ensure compliance:

- This permit unit shall comply with applicable District Rule 4001 (NSPS, Subpart GGGa) requirements on facility wide permit S-37-0. [District Rule 4001]

Compliance with this Subpart is expected.

S-37-111
Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems is applicable to the tank when used as an oil-water separator when it stores oily wastewater from refinery operations. Since the storage tank is located between the individual drain systems and the wastewater treatment equipment, when storing oily wastewater, the tank is considered an "oil-water separator under this Subpart.

Section 60.692-3(d) states that storage vessels that are subject to subparts K, Ka, or Kb are not subject to the requirements of this section. Therefore, the following condition will be included on the permit:

- Permittee shall comply with NSPS Subpart QQQ when storing oily wastewater. Compliance with Subpart QQQ is achieved through compliance with NSPS Subpart K. [40 CFR 60.692-3(d)]

Compliance with this Subpart is expected.

All Units
40 CFR Part 60, Subpart OOOO—Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution (constructed, reconstructed, or modified after 8/23/11) applies to single storage vessel, located in the oil and natural gas production segment, natural gas processing segment or natural gas transmission and storage segment. The subject tanks are subject to this subpart. However, Subpart OOOO has no standards for tanks with annual VOC emissions less than 6 tons per year. Therefore, the subject tanks are not an affected facility and subpart OOOO does not apply.

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

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63.

40 CFR 63, Subpart CC - National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries. The maximum achievable control technology (MACT) standard for petroleum refineries stems from the Clean Air Act Amendments of 1990. Under the Act, emissions of 189 hazardous air pollutants (HAPs), also known as air toxics, must be regulated. Refineries that are major HAP sources with a potential to emit > 10 tons per year (tpy) of any of the 189 HAPs or potential to emit > 25 tpy of total HAPs need to comply with the requirements of the MACT standard.

Per initial Title V Engineering Evaluation S-961097 (1997), Kern Oil & Refining Co. did not have the potential to emit either 10 tpy of any of the 189 HAPs or 25 tpy of total HAPs and therefore was not subject to the requirements of the Petroleum Refinery MACT Standard.

Since 1997, Kern Oil & Refining Co. has reduced the health risk from the facility through retirement of equipment and refinement of health risk data, including emission rates. Although some new equipment has been added, older, higher emitting equipment has been retired. Therefore, the current potential to emit of HAPs is expected to be less than 10 tpy of any single HAP and 25 tpy of all HAPs. Therefore, the facility is not subject to MACT requirements.

Rule 4101 Visible Emissions

Rule 4101 states that no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity).

As long as the equipment is properly maintained and operated, compliance with visible emissions limits is expected under normal operating conditions.

The following condition included on the facility-wide serves as a mechanism to ensure compliance:

- {4383} No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)]

Rule 4102 Nuisance

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (Appendix E), 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-37-111	8.95E-09	No
S-37-166	4.82E-08	No
S-37-167	2.27E-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.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District's significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 20 in a million). As outlined by the HRA Summary in Appendix E of this report, the emissions increases for this project was determined to be less than significant.

Rule 4623 Storage of Organic Liquids

The purpose of this rule is to limit volatile organic compound (VOC) emissions from the storage of organic liquids. This rule applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held, or stored.

The tanks in this project have a capacity greater than 1,100 gallons, so this rule is applicable to the tanks and the vapor control system that serves the tanks.

Section 5.1 VOC Control System Requirements

Section 5.1.1 General VOC Control System Requirements

Except for small producers who are required to comply with the VOC control system requirements in Section 5.1.2, an operator shall not place, hold, or store organic liquid in any tank unless such tank is equipped with a VOC control system identified in Table 1. The specifications for the VOC control system are described in Sections 5.2, 5.3, 5.4, 5.5, and 5.6.

Table 1 - General VOC Control System Requirements

Tank Capacity (gal)	TVP and Crude Oil Throughput		
	0.5 psia to <1.5 psia	1.5 psia to <11 psia	≥11.0 psia
(Group A) 1,100 to 19,800	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Pressure vessel or vapor recovery system
(Group B) >19,800 to 39,600	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Internal floating roof, or external floating roof, or vapor recovery system	Pressure vessel or vapor recovery system
(Group C) >39,600	Internal floating roof, or external floating roof, or vapor recovery system	Internal floating roof, or external floating roof, or vapor recovery system	Pressure vessel or vapor recovery system

The tanks in this project will be connected to the vapor recovery system listed on permit S-37-166 including a compressor that will route captured vapors to be treated in the existing amine system listed under permit S-37-120 with treated vapors used as fuel gas for process heaters or flared in permit S-37-7; therefore, they satisfy the control requirements of Table 1. The following conditions will be listed on the tank ATCs to ensure compliance with the control requirements of Table 1:

All Units:

- {Modified 2498} The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to approved control devices having a destruction efficiency of at least 99% by weight as determined by EPA Test Method 21. [District Rules 2201 and 4623 and 40 CFR 60.112]

Section 5.2 Specifications for Pressure-Valve Setting

This section sets forth the requirements for tanks which satisfy the requirements of Section 5.1 above with the use of a pressure-vacuum relief valve. As shown above, the tanks included with this project satisfy the requirements of Section 5.1 above with the use of a vapor recovery system. Therefore, the pressure-vacuum valve setting requirements of this section are not applicable and no further discussion is required.

Section 5.3 and 5.4 Specifications for External Floating Roof Tanks and Internal Floating Roof Tanks

These sections set forth the requirements for tanks that are external or internal floating roof tanks. Since the tank proposed in this project will no longer be an external floating roof tank nor will it be an internal floating roof tank, the requirements of these sections are not applicable and no further discussion is required.

Section 5.5 Floating Roof Deck Fitting Requirements

This section sets forth the requirements for floating roof tanks. Since the tanks proposed in this project are no longer floating roof tanks, the requirements of this section are not applicable and no further discussion is required.

Section 5.6 Specifications for Vapor Recovery Systems

Section 5.6.1 requires fixed roof tanks to be fully enclosed and maintained in a leak free condition. An APCO-approved vapor recovery system shall consist of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak free condition. The VOC control device shall be one of the following:

> 5.6.1.1 A condensation or vapor return system that connects to one of the following: a gas processing plant, a field gas pipeline, a pipeline distributing Public Utility Commission quality gas for sale, an injection well for disposal of vapors as approved by the California Department of Conservation, Division of Oil Gas, and Geothermal Resources (DOGGR), or
>
> 5.6.1.2 A VOC control device that reduces the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6.

Section 5.6.2 requires any tank gauging or sampling device on a tank vented to the vapor recovery system to be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling.

Section 5.6.3 requires all piping, valves, and fittings to be constructed and maintained in a leak free condition.

The following conditions will be included on the ATCs to ensure compliance with Section 5.6 requirements:

All Units:

- {2499} All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]
- {modified 2501} A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 shall be reported as a deviation. [District Rules 2201 and 4623]
- Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]

Section 5.7 Voluntary Tank Preventive Inspection and Maintenance, and Tank Interior Cleaning Program

This section involves with the voluntary tank-cleaning, inspection and maintenance provisions. The facility has requested to include tank cleaning conditions on the ATCs with this project.

The following conditions are taken from District Policy SSP 2210, Organic Liquid Storage Tanks – Cleaning Requirements and will be listed on the permits to ensure compliance:

- Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rules 4623]
- This tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water. or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623]
- During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623]

- To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623]
- This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623]
- After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623]
- While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623]
- Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623]
- If this tank was holding organic liquids with a TVP of 1.5 psia or greater, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623]
- If this tank was holding organic liquids with a TVP of 1.5 psia or greater, permitee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623]
- If this tank was holding organic liquids with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623]

Additionally, Policy SSP 2210 requires that for facilities that are subject to the requirements of Rule 4623, requesting inclusion in the Voluntary Tank Interior Cleaning Program also requires enrollment into the Voluntary Tank Preventive Inspection and Maintenance Program (I&M Program). Therefore, the following conditions are taken from District Policy SSP 2215, Organic Liquid Storage Tanks – Voluntary Inspection and Maintenance Program and will be listed on the permits to ensure compliance:

- Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623, Table 3]
- Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623, Table 3]

- Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623, Table 3]
- Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623, Table 3]
- Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623, Table 3]
- If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623, Table 3]
- Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623, Table 3]

Section 6.2 TVP and API Gravity Testing of Stored Organic Liquids in Uncontrolled Fixed Roof Tanks

Section 6.2 concerns TVP and API gravity testing of stored organic liquids in uncontrolled fixed roof tanks. This section requires initial and periodic testing of the TVP and API gravity of the oil stored. The API gravity determines which TVP test method is appropriate. This section also allows for representative testing of the organic liquid in a tank battery provided the enumerated criteria are met.

Section 6.2.3 exempts tanks subject to the control requirements in Table 1 (Group A) or Table 2 (Group A and B) of this rule from the initial and periodic testing requirements. The tanks in this project will be connected to a vapor control system; therefore, the tanks are not subject to the testing requirements of this rule.

Section 6.3 Recordkeeping

This section requires an operator to retain accurate records required by this rule for a period of five years and must be made available to the APCO upon request.

Section 6.3.1 requires an operator whose tanks are subject to the requirements of this rule shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP and API gravity. The requirement of Section 6.3.1 shall not apply to fixed roof tanks equipped with a vapor recovery system, external floating roof tanks, or internal floating roof tanks that meet the requirements of this rule. These tanks are fixed roof tanks served by a vapor recovery system and are not subject to the requirements of Section 6.3.1.

- All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623]

Section 6.4 Test Methods

These tanks are not subject to periodic API gravity or TVP testing requirements. Therefore, the approved test methods for API gravity and TVP will not be listed on the permits.

Therefore, compliance with the requirements of this rule is expected.

Rule 4455 Components at Petroleum Refineries, Gas Liquids Processing, Facilities, and Chemical Plants

The purpose of District Rule 4455 is to limit VOC emissions from leaking components at petroleum refineries, gas liquids processing facilities, and chemical plants.

Section 4.0 sets forth the exemptions for the Rule. The following conditions are included on the facility-wide permit, S-37-0; therefore, compliance with the requirements is expected:

- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: Except for complying with the applicable requirements of Sections 6.1 and 7.3, the requirements of this rule shall not apply to 1) components subject to Rule 4623 (adopted 5/19/05), 2) pressure relief devices, pumps, and compressors equipped with a closed vent system as defined in Section 3.0, 3) components buried below ground, 4) components exclusively handling liquid streams which have less than 10 percent by weight (<10 wt%) evaporation at 150 C, 5) components exclusively handling liquid streams with a VOC content less than ten percent by weight (<10 wt%), 6) components exclusively handling gas/vapor streams with a VOC content of less than one percent by weight (<1wt%), 7) components incorporated in lines exclusively in vacuum service, 8) components exclusively handling commercial natural gas, and 9) one-half inch nominal or less stainless steel tube fittings which have been demonstrated to the Air Pollution Control Officer (APCO) to be leak-free based on initial inspection. [District Rule 4455, 4.1 & 4.2]

- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: Except for components subject to Rule 4623 (Storage of Organic Liquids) or for components included in the inspection and maintenance (I&M) program implemented pursuant to Section 5.7 of Rule 4623, the operator shall not use any component that leaks in excess of the allowable leak standards of Rule 4455, or is found to be in violation of the provisions specified in Section 5.1.3. A component identified as leaking in excess of an allowable leak standard may be used provided it has been identified with a tag for repair, has been repaired, or is awaiting re-inspection after repair, within the applicable time period specified within the rule. [District Rule 4455, 5.1.1]

Section 5.0 sets forth the operating requirements for components that are not specifically exempted from the requirements of this rule in accordance with Sections 4.1 and 4.2. The following condition is included on the facility-wide permit, S-37-0; therefore, compliance with the requirements is expected:

- The operator shall meet operating, inspection and re-inspection, maintenance, process pressure relief device (PRD) and component identification requirements of District Rule 4455 (4/20/05) for all components containing or contacting VOC, except for those components specifically exempted in Sections 4.1 and 4.2. [District Rule 4455, 5.0]

Section 5.1 requires that a facility operator shall not use any component that leaks in excess of the applicable leak standards of this rule. A leaking component can be put back into service if it has been identified with a tag for repair, is repaired, or is awaiting re-inspection after being repaired in a timely manner.

Section 5.1.2 applies directly to operation of hatches.

Sections 5.1.3 identifies how to determine compliance with leak standards of the rule.

Section 5.1.4 provides leak standards for all applicable components.

The following conditions are included on the facility-wide permit, S-37-0; therefore, compliance with the requirements is expected:

- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: Except for components subject to Rule 4623 (Storage of Organic Liquids) or for components included in the inspection and maintenance (I&M) program implemented pursuant to Section 5.7 of Rule 4623, the operator shall not use any component that leaks in excess of the allowable leak standards of Rule 4455, or is found to be in violation of the provisions specified in Section 5.1.3. A component identified as leaking in excess of an allowable leak standard may be used provided it has been identified with a tag for repair, has been repaired, or is awaiting re-inspection after repair, within the applicable time period specified within the rule. [District Rule 4455, 5.1.1]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4455, 5.1.2]

- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: The operator shall be in violation of Rule 4455 if any District inspection demonstrates that one or more of the conditions in Section 5.1.4 (Leak Standards) exist at the facility. [District Rule 4455, 5.1.3.1]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: Except for annual operator inspection described in Section 5.1.3.2.3, any operator inspection that demonstrates that one or more of the conditions in Section 5.1.4 exist at the facility shall not constitute a violation of Rule 4455 if the leaking components are repaired as soon as practicable but not later than the time frame specified in Rule 4455. Such components shall not be counted towards determination of compliance with the provisions of Section 5.1.4. [District Rule 4455, 5.1.3.2.1]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: Leaking components detected during operator inspection pursuant Section 5.1.3.2.1 that are not repaired, replaced, or removed from operation as soon as practicable but not later than the time frame specified in Rule 4455 shall be counted toward determination of compliance with the provisions of Section 5.1.4. [District Rule 4455, 5.1.3.2.2]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: Any operator inspection conducted annually for a component type (including operator annual inspections pursuant to Section 5.2.5, 5.2.6, 5.2.7, or 5.2.8) that demonstrates one or more of the conditions in Section 5.1.4 exist at the facility shall constitute a violation of Rule 4455 regardless of whether or not the leaking components are repaired, replaced, or removed from operation within the allowable repair time frame specified in Rule 4455. [District Rule 4455, 5.1.3.2.3]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: A component shall be considered leaking if one or more of the conditions specified in Sections 5.1.4.1 through 5.1.4.4 of Rule 4455 exist at the facility. Readings shall be taken as methane using a portable hydrocarbon detection instrument and shall be made in accordance with the methods specified in Section 6.4.1 of Rule 4455. [District Rule 4455, 5.1.4]

Section 5.2 requires equipment to be inspected and re-inspected for leak detection and leaking equipment identification. The following conditions are included on the facility-wide permit, S-37-0; therefore, compliance with the requirements is expected:

- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: The operator shall audio-visually inspect for leaks all accessible operating pumps, compressors and Pressure Relief Devices (PRDs) in service at least once every 24 hours, except when operators do not report to the facility for that given 24 hours. Any identified leak that cannot be immediately repaired shall be reinspected within 24 hours using a portable analyzer. If a leak is found, it shall be repaired as soon as practical but not later than the time frame specified in Table 3. [District Rule 4455, 5.2.1 & 5.2.2]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: The operator shall inspect all components at least once every calendar quarter, except for inaccessible components, unsafe-to-monitor components and pipes. Inaccessible components, unsafe-to-monitor components and pipes shall be inspected in accordance with the requirements set forth in Sections 5.2.5, 5.2.6, and 5.2.7. New, replaced, or repaired fittings, flanges and threaded connections shall be inspected immediately after being placed into service. Components shall be inspected using EPA Method 21. [District Rule 4455, 5.2.3, 5.2.4, 5.2.5, 5.2.6 & 5.2.7]

- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: The operator may apply for a written approval from the APCO to change the inspection frequency from quarterly to annually for a component type, provided the operator meets all the criteria specified in Sections 5.2.8.1 through 5.2.8.3. This approval shall apply to accessible component types, specifically designated by the APCO, except pumps, compressors, and PRDs which shall continue to be inspected on a quarterly basis. [District Rule 4455, 5.2.8]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: An annual inspection frequency approved by the APCO shall revert to quarterly inspection frequency for a component type if either the operator inspection or District inspection demonstrates that a violation of the provisions of Sections 5.1, 5.2 and 5.3 of the rule exists for that component type, or the APCO issued a Notice of Violation for violating any of the provisions of Rule 4455 during the annual inspection period for that component type. When the inspection frequency changes from annual to quarterly inspections, the operator shall notify the APCO in writing within five (5) calendar days after changing the inspection frequency, giving the reason(s) and date of change to quarterly inspection frequency. [District Rule 4455, 5.2.9 & 5.2.10]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: The operator shall initially inspect a process PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the time of the release. To insure that the process PRD is operating properly, and is leak-free, the operator shall re-inspect the process PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the date of the release using EPA Method 21. If the process PRD is found to be leaking at either inspection, the PRD leak shall be treated as if the leak was found during quarterly operator inspections. [District Rule 4455, 5.2.11]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: Except for process PRD, a component shall be inspected within 15 calendar days after repairing the leak or replacing the component using EPA Method 21. [District Rule 4455, 5.2.12]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. Any attempt by an operator to count such District inspections as part of the mandatory operator's inspections is considered to be willful circumvention and is a violation of this rule. [District Rule 4455, 5.2.13]

Section 5.3 requires leaking equipment to be tagged and requires repair or replacement upon a schedule based on the leak rate. The following conditions are included on the facility-wide permit, S-37-0; therefore, compliance with the requirements is expected:

- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: Upon detection of a leaking component, the operator shall affix to that component a weatherproof readily visible tag that contains the information specified in Section 5.3.3. The tag shall remain affixed to the component until the leaking component has been repaired or replaced; has been re-inspected using EPA Method 21; and is found to be in compliance with the requirements of Rule 4455. [District Rule 4455, 5.3.1 5.3.2 and 5.3.3]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: An operator shall minimize all component leaks immediately to the extent possible, but not later than one (1) hour after detection of leaks in order to stop or reduce leakage to the atmosphere. [District Rule 4455, 5.3.4]

- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: If the leak has been minimized but the leak still exceeds the applicable leak standards of Rule 4455, an operator shall repair or replace the leaking component, vent the leaking component to a closed vent system, or remove the leaking component from operation as soon as practicable but not later than the time period specified in Table 3. For each calendar quarter, the operator may be allowed to extend the repair period as specified in Table 3, for a total number of leaking components, not to exceed 0.05 percent of the number of components inspected, by type, rounded upward to the nearest integer where required. [District Rule 4455, 5.3.5]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: If the leaking component is an essential component or a critical component and which cannot be immediately shut down for repairs, the operator shall minimize the leak within one hour after detection of the leak. If the leak has been minimized, but the leak still exceeds any of the applicable leak standards of Rule 4455, the essential component or critical component shall be repaired or replaced to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4455 5.3.6]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: For any component that has incurred five repair actions for major gas leaks or major liquid leaks, or any combination of major gas leaks and major liquid leaks within a continuous 12-month period, the operator shall comply with at least one of the requirements specified in Sections 5.3.7.1, 5.3.7.2, 5.3.7.3, or 5.3.7.4 by the applicable deadlines specified in Sections 5.3.7.5 and 5.3.7.6. If the original leaking component is replaced with a new like-in-kind component before incurring five repair actions for major leaks within 12-consecutive months, the repair count shall start over for the new component. An entire compressor or pump need not be replaced provided the compressor part(s) or pump part(s) that have incurred five repair actions as described in Section 5.3.7 are brought into compliance with at least one of the requirements of Sections 5.3.7.1 through 5.3.7.6. [District Rule 4455, 5.3.7]

Section 5.4 provides specific performance requirements for process pressure relief devices. The tanks in this project are not equipped with pressure relief devices; therefore, this section does not apply and no further discussion is necessary.

Section 5.5 requires clear and visible physical identification of major and critical components. The following conditions are included on the facility-wide permit, S-37-0; therefore, compliance with the requirements is expected:

- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: All major components and critical components shall be physically identified clearly and visibly for inspection, repair, and recordkeeping purposes. The physical identification shall consist of labels, tags, manufacturer's nameplate identifier, serial number, or model number, or other system approved by the APCO that enables an operator or District personnel to locate each individual component. The operator shall replace tags or labels that become missing or unreadable as soon as practicable but not later than 24 hours after discovery. The operator shall comply with the requirements of Sections 6.1.4 if there is any change in the description of major components or critical components. [District Rule 4455, 5.5.1 & 5.5.2]

Section 6.0 details the administrative and record keeping requirements, including the operation management plan, inspection log, process pressure lease device release notification, and test methods.

The operator management plan (OMP) required by section 6.1 must be submitted to the District for review. The District must respond with written notice of approval or incompleteness within 60 days of receiving the plan.

The following conditions are included on the facility-wide permit, S-37-0; therefore, compliance with the requirements is expected:

- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: The operator shall keep a copy of the OMP at the facility and make it available to the APCO, ARB and US EPA upon request. By January 30 of each year, the operator shall submit to the keep a record of each instrument calibration in accordance with requirements as set forth Section 6.2.3 of the rule. [District Rule 4455, 6.4; 40 CFR 60.485(b)]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: The operator shall keep a copy of the operator management plan at the facility and make it available to the APCO, ARB and US EPA upon request. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved operator management plan. [District Rule 4455, 6.1.2 & 6.1.4]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: The operator shall maintain an inspection log containing, at a minimum, 1) total number of components inspected, and total number and percentage of leaking components found by component types, 2) location, type, name or description of each leaking component, and description of any unit where the leaking component is found, 3) date of leak detection and method of leak detection, 4) for gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak, 5) date of repair, replacement, or removal from operation of leaking components, 6) identification and location of essential component and critical components found leaking that cannot be repaired until the next process unit turnaround or not later one year after leak detection, whichever comes earlier, 7) methods used to minimize the leak from essential components and critical components that cannot be repaired until the next process unit turnaround or not later one year after leak detection, whichever comes earlier, 8) after the component is repaired or is replaced, the date of reinspection and the leak concentration in ppmv, 9) inspector's name, business mailing address, and business telephone number, and 10) the facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log. [District Rule 4455, 6.2.1]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, analyzer reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. [District Rule 4455, 6.2.3]

- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: The operator shall notify the APCO, by telephone or other methods approved by the APCO, of any process PRD release described in Sections 5.4.4 and 5.4.5, and any release in excess of the reportable quantity limits as stipulated in 40 CFR, Part 117, Part 302 and Part 355, including any release in excess of 100 pounds of VOC, within one hour of such occurrence or within one hour of the time said person knew or reasonably should have known of its occurrence. [District Rule 4455, 6.3.1]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: The operator shall submit a written report to the APCO within thirty (30) calendar days following a PRD release subject to 6.3.1. The written report shall include 1) process PRD type, size, and location, 2) date, time and duration of the process PRD release, 3) types of VOC released and individual amounts, in pounds, including supporting calculations, 4) cause of the process PRD release, and 5) corrective actions taken to prevent a subsequent process PRD release. [District Rule 4455 6.3.2]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: Copies of all records shall be retained for a minimum of five (5) years after the date of an entry. Such records shall be made available to the APCO, ARB, or US EPA upon request. [District Rule 4455, 6.2.2, 6.2.3 & 6.2.4]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: Measurements of gaseous leak concentrations shall be conducted according to US EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in US EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. [District Rule 4455, 6.4.1]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: The VOC content of exempt streams shall be determined using American Society of Testing and Materials (ASTM) D 1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 for liquids. [District Rule 4455, 6.4.2]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: For exempt streams, the percent by volume liquid evaporated at 150 deg C shall be determined using ASTM D 86. [District Rule 4455, 6.4.3]
- RULE 4455 LEAK DETECTION AND REPAIR CONDITION: Equivalent test methods other than specified in Sections 6.4.1 through 6.4.5 may be used provided such test methods have received prior approval from the US EPA, ARB, and APCO. [District Rule 4455, 6.4]

Since the conditions for this Rule are included on the facility-wide permit, S-37-0, the following condition will be included on permit S-37-166 as a mechanism to ensure compliance:

- This unit is subject to Rule 4455 Leak Detection and Repair Conditions on the facility wide permit S-37-0. [District Rule 4455]

Compliance with this rule is expected.

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

Oil and gas operations in Kern County must comply with the *Kern County Zoning Ordinance – 2015 (C) Focused on Oil and Gas Local Permitting*. In 2015, Kern County revised the Kern County Zoning Ordinance Focused on Oil and Gas Activities (Kern Oil and Gas Zoning Ordinance) in regards to future oil and gas exploration, and drilling and production of hydrocarbon resource projects occurring within Kern County.

Kern County served as lead agency for the revision to their ordinance under the California Environmental Quality Act (CEQA), and prepared an Environmental Impact Report (EIR) that was certified on November 9, 2015. The EIR evaluated and disclosed to the public the environmental impacts associated with the growth of oil and gas exploration in Kern County, and determined that such growth will result in significant GHG impacts in the San Joaquin Valley. As such, the EIR included mitigation measures for GHG.

The District is a Responsible Agency for the project because of its discretionary approval power over the project via its Permits Rule (Rule 2010) and New Source Review Rule (Rule 2201), (CEQA Guidelines §15381). As a Responsible Agency, the District is limited to mitigating or avoiding impacts for which it has statutory authority. The District does not have statutory authority for regulating GHGs. The District has determined that the applicant is responsible for implementing GHG mitigation measures imposed in the EIR by the Kern County for the Kern County Zoning Ordinance.

District CEQA Findings

The proposed project is located in Kern County and is thus subject to the Kern County Zoning Ordinance – 2015 (C) Focused on Oil and Gas Local Permitting. The Kern County Zoning Ordinance was developed by the Kern County Planning Agency as a comprehensive set of goals, objectives, policies, and standards to guide development, expansion, and operation of oil and gas exploration within Kern County.

In 2015, Kern County revised their *Kern County Zoning Ordinance* in regards to exploration, drilling and production of hydrocarbon resources projects. Kern County, as the lead agency, is the agency that will enforce the mitigation measures identified the EIR, including the mitigation requirements of the Oil and Gas ERA. As a responsible agency the District complies with CEQA by considering the EIR prepared by the Lead Agency, and by reaching its own conclusion on whether and how to approve the project involved (CCR §15096). The District has reviewed the EIR prepared by Kern County, the Lead Agency for the project, and finds it to be adequate. The District also prepared a full findings document. The full findings document, *California Environmental Quality Act (CEQA) Statement of Findings for the Kern County Zoning Ordinance EIR* contains the details of the District's findings regarding the Project. The District's implementation of the Kern Zoning Ordinance and its EIR applies to ATC applications received for any new/modified equipment used in oil/gas production in Kern County, including new wells. The full findings applies to the Project and the Project's related activity equipment(s) is covered under the Kern Zoning Ordinance. To reduce project related impacts on air quality, the District evaluates emission controls for the project such as Best Available Control Technology (BACT) under District Rule 2201 (New and Modified Stationary Source Review). In addition, the District is requiring the applicant to surrender emission reduction credits (ERC) for stationary source emissions above the offset threshold.

Thus, the District concludes that through a combination of project design elements, permit conditions, and the Oil and Gas ERA, the project will be fully mitigated to result in no net increase in emissions. Pursuant to CCR §15096, prior to project approval and issuance of ATCs the District prepared findings.

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 revision to the *Kern County Zoning Ordinance* went through an extensive public process that included a Notice of Preparation, a preparation of an EIR, scoping meetings, and public hearings. The process led to the certification of the final EIR and approval of the revised *Kern County Zoning Ordinance* in November 2015 by the Kern County Board of Supervisors. As mentioned above, the proposed project will be fully mitigated and will result in no net increase in emissions. In addition, the proposed project is not located at a facility of concern; 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. Pending a successful NSR Public Noticing period and ARB and EPA commenting period, issue ATCs S-37-111-8, -166-0, -167-0 subject to the permit conditions on the attached draft ATC in Appendix A.

X. Billing Information

Annual Permit Fees			
Permit Number	**Fee Schedule**	**Fee Description**	**Annual Fee**
S-37-111-8	3020-05-G	2,310,000 GALLONS	$440
S-37-166-0	3020-05-F	504,000 GALLONS	$346
S-37-167-0	3020-05-F	504,000 GALLONS	$346

Appendices

A: Draft ATCS
B: Current PTOs
C: BACT Guidelines
D: BACT Analysis
E: HRA Summary
F: Compliance Certification Form
G: PE1 Calculations
H: PE2 Calculations
I: AE Calculations
J: Quarterly Net Emissions Change
K: Statewide Compliance Certification

APPENDIX A
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-37-111-8 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: KERN OIL & REFINING CO.
MAILING ADDRESS: 7724 E PANAMA LN
BAKERSFIELD, CA 93307-9210

LOCATION: PANAMA LN & WEEDPATCH HWY
BAKERSFIELD, CA 93307-9210

SECTION: 25 **TOWNSHIP:** 30E **RANGE:** 28E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 55,000 BBL ORGANIC LIQUID INTERNAL FLOATING ROOF TANK (#55000), WELDED CONSTRUCTION WITH MECHANICAL SHOE PRIMARY SEAL AND RIM-MOUNTED SECONDARY SEAL: CONVERT TO FIXED ROOF AND CONNECT TO VAPOR RECOVERY SYSTEM

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to approved control devices having a destruction efficiency of at least 99% by weight as determined by EPA Test Method 21. [District Rules 2201 and 4623 and 40 CFR 60.112(a)(2)] 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.

Samir Sheikh, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

S-37-111-8 Sep 26 2018 7 17AM – GARCIAJ Joint Inspection NOT Required

4. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. VOC fugitive emissions from the components in gas service on tank shall not exceed 1.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times [District Rule 2201] Federally Enforceable Through Title V Permit
9. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. This tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water. or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
11. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623] Federally Enforceable Through Title V Permit
12. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
13. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623] Federally Enforceable Through Title V Permit
14. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623] Federally Enforceable Through Title V Permit
15. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

17. If this tank was holding organic liquids with a TVP of 1.5 psia or greater, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit

18. If this tank was holding organic liquids with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit

19. If this tank was holding organic liquids with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit

20. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

21. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

22. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

23. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

24. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

25. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

26. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate fugitive component counts and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," February 1999, Table IV-3a: CAPCOA-Revised 1995 EPA Correlation Equations and Factors for Refineries and Marketing Terminals. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit

28. The permittee shall keep accurate records of the dates of inspection and monitoring and the components inspected and monitored. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

29. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

30. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

31. Permittee shall comply with NSPS Subpart QQQ when storing oily wastewater. Compliance with Subpart QQQ is achieved through compliance with NSPS Subpart K. [40 CFR 60.692-3(d)] Federally Enforceable Through Title V Permit

32. {2611} This unit commenced construction, modification, or reconstruction prior to May 19, 1978. Therefore, the requirements of 40 CFR 60 Subpart Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-37-166-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: KERN OIL & REFINING CO.
MAILING ADDRESS: 7724 E PANAMA LN
BAKERSFIELD, CA 93307-9210

LOCATION: PANAMA LN & WEEDPATCH HWY
BAKERSFIELD, CA 93307-9210

EQUIPMENT DESCRIPTION:
12,000 BBL FIXED ROOF ORGANIC LIQUID STORAGE TANK (#12002) WITH VAPOR RECOVERY SYSTEM INCLUDING A COMPRESSOR SHARED WITH TANKS S-37-111, -167

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. Within 90 days of startup of the equipment authorized by this Authority to Construct, Permit to Operate S-37-95 shall be surrendered to the District and the associated equipment shall be removed or rendered inoperable. [District Rule 2201] Federally Enforceable Through Title V Permit
4. As part of its notification required by 40 CFR 60.7(a)(1) or 60.7(a)(2), the operator shall submit to the APCO for approval an operating plan as described in 40 CFR 60.113b(c) and shall operate the closed vent system and monitor the parameters of the system in accordance with the approved operating plan. The operator shall keep a record of the measured values of the parameters monitored in accordance with the approved operating plan. The operating plan shall be retained for the life of the control equipment. [40 CFR 60.113b(c), 60.115b(c)] 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.

Samir Sheikh, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

S-37-166-0 : Oct 19 2018 8:54AM – GARCIAJ : Joint Inspection NOT Required

5. The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to permit S-37-120 and combusted in approved fired equipment having a destruction efficiency of at least 99% by weight as determined by EPA Test Method 21. [District Rules 2201 and 4623 and 40 CFR 60.112b(a)(3)(ii)] Federally Enforceable Through Title V Permit

6. The closed vent system shall operate with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in 40 CFR 60.485(b). Emissions from the closed vent system in excess of this limit shall be considered a leak. [District Rule 2201 and 40 CFR 60.112b(a)(3)(i)] Federally Enforceable Through Title V Permit

7. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

8. Other fugitive components and tank appurtenances such as piping, valves and fittings not considered to be part of the vapor recovery system shall be maintained in a leak-free condition. [District Rules 2201 and 4623, 5.6.3] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

10. VOC fugitive emissions from the components in gas service on tank shall not exceed 0.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. VOC fugitive emissions from the components in gas service on tank vapor collection system shall not exceed 5.5 lb/day. [District Rule 2201]

12. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

14. This tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water. or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit

15. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623] Federally Enforceable Through Title V Permit

16. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

17. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623] Federally Enforceable Through Title V Permit

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

19. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit

20. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit

21. If this tank was holding organic liquids with a TVP of 1.5 psia or greater, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit

22. If this tank was holding organic liquids with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit

23. If this tank was holding organic liquids with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit

24. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

25. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

26. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

27. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

28. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

29. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

30. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

31. Permittee shall maintain accurate fugitive component counts and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," February 1999, Table IV-3a: CAPCOA-Revised 1995 EPA Correlation Equations and Factors for Refineries and Marketing Terminals. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit

32. The permittee shall keep accurate records of the dates of inspection and monitoring and the components inspected and monitored. [District Rule 2201] Federally Enforceable Through Title V Permit

33. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

34. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

35. This unit is subject to Rule 4455 Leak Detection and Repair Conditions on the facility wide permit S-37-0. [District Rule 4455] Federally Enforceable Through Title V Permit

36. This permit unit shall comply with applicable District Rule 4001 (NSPS, Subpart GGGa) requirements on facility wide permit S-37-0. [District Rule 4001] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-37-167-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: KERN OIL & REFINING CO.
MAILING ADDRESS: 7724 E PANAMA LN
BAKERSFIELD, CA 93307-9210

LOCATION: PANAMA LN & WEEDPATCH HWY
BAKERSFIELD, CA 93307-9210

EQUIPMENT DESCRIPTION:
12,000 BBL FIXED ROOF ORGANIC LIQUID STORAGE TANK (#12003 VENTED TO VAPOR RECOVERY SYSTEM LISTED ON TANK S-37-166 (#12002)

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. Within 90 days of startup of the equipment authorized by this Authority to Construct, Permit to Operate S-37-96 shall be surrendered to the District and the associated equipment shall be removed or rendered inoperable. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to approved control devices having a destruction efficiency of at least 99% by weight as determined by EPA Test Method 21. [District Rules 2201 and 4623 and 40 CFR 60.112b(a)(3)(ii)] 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.

Samir Sheikh, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

S-37-167-0 Sep 26 2018 7:18AM – GARCIAJ : Joint Inspection NOT Required

5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. VOC fugitive emissions from the components in gas service on tank shall not exceed 0.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
11. This tank shall be degassed before commencing interior cleaning by one of the following methods (1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or (2) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water. or produced water derived from crude oil having a TVP less than 0.5 psia; or (3) displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
12. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623] Federally Enforceable Through Title V Permit
13. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
14. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623] Federally Enforceable Through Title V Permit
15. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623] Federally Enforceable Through Title V Permit
16. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

18. If this tank was holding organic liquids with a TVP of 1.5 psia or greater, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit

19. If this tank was holding organic liquids with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit

20. If this tank was holding organic liquids with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit

21. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

22. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

23. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

24. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

25. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

26. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

27. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623, Table 3] Federally Enforceable Through Title V Permit

28. Permittee shall maintain accurate fugitive component counts and resulting emissions calculated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," February 1999, Table IV-3a: CAPCOA-Revised 1995 EPA Correlation Equations and Factors for Refineries and Marketing Terminals. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit

29. The permittee shall keep accurate records of the dates of inspection and monitoring and the components inspected and monitored. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

30. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

31. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

APPENDIX B
Current PTOs

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-37-111-7 **EXPIRATION DATE:** 08/31/2022

SECTION: 25 **TOWNSHIP:** 30E **RANGE:** 28E

EQUIPMENT DESCRIPTION:
55,000 BBL ORGANIC LIQUID INTERNAL FLOATING ROOF TANK (#55000), WELDED CONSTRUCTION WITH MECHANICAL SHOE PRIMARY SEAL AND RIM-MOUNTED SECONDARY SEAL

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] Federally Enforceable Through Title V Permit
2. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623, 5.4.1, 5.3.2.1.1] Federally Enforceable Through Title V Permit
3. The cumulative length of all primary seal gaps greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623, 5.4.1, 5.3.2.1.1] Federally Enforceable Through Title V Permit
4. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623, 5.4.1, 5.3.2.1.1] Federally Enforceable Through Title V Permit
5. No continuous gap greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623, 5.4.1, 5.3.2.1.1] Federally Enforceable Through Title V Permit
6. No gap between the tank shell and the secondary seal shall exceed 1/2 inch. [District Rule 4623, 5.4.1, 5.3.2.1.2] Federally Enforceable Through Title V Permit
7. The cumulative length of all secondary seal gaps greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623, 5.4.1, 5.3.2.1.2] Federally Enforceable Through Title V Permit
8. The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. [District Rule 4623, 5.4.1, 5.3.2.1.3] Federally Enforceable Through Title V Permit
9. The maximum gap between the shoe and the tank shell shall be no greater than double the gap allowed by the seal gap criteria for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623, 5.4.1, 5.3.2.1.4] Federally Enforceable Through Title V Permit
10. There shall be no tears, holes or openings in the secondary seal or in the primary seal envelope surrounding the annular vapor space enclosed by the roof edge, stored liquid surface, shoe, and seal fabric. [District Rule 4623, 5.4.1, 5.3.2.1.5] Federally Enforceable Through Title V Permit
11. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623, 5.4.1, 5.3.2.1.6] Federally Enforceable Through Title V Permit
12. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623, 5.4.1, 5.3.2.1.7] Federally Enforceable Through Title V Permit
13. Pressure-vacuum valves shall be set to within ten (10) percent of the maximum allowable working pressure of the roof. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

14. All roof openings used for sampling and gauging, except pressure vacuum valves, shall be closed at all times, with no visible gaps and be leak free (as defined in Rule 4623), except when the roof opening is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Any roof drain shall be provided with a slotted membrane fabric cover, or equivalent, that covers at least 90% of the area of the opening. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The permittee shall keep accurate records of Reid vapor pressure, storage temperature, daily tank throughput, and types of liquids stored, for a period of five years, and shall make such records available for District inspection upon request. [District Rules 2201 & 4623] Federally Enforceable Through Title V Permit
17. Daily tank throughput shall not exceed 30,000 bbl/day of fluid. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Reid vapor pressure of the stored liquid shall not exceed 11 psia. [District Rules 2201 & 4623] Federally Enforceable Through Title V Permit
19. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually inspect the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 5] Federally Enforceable Through Title V Permit
20. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 5] Federally Enforceable Through Title V Permit
21. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 5] Federally Enforceable Through Title V Permit
22. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 5] Federally Enforceable Through Title V Permit
23. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 5 shall constitute a violation of this rule. [District Rule 4623, Table 5] Federally Enforceable Through Title V Permit
24. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 5]
25. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 5] Federally Enforceable Through Title V Permit
26. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

27. This unit commenced construction, modification, or reconstruction prior to May 19, 1978. Therefore, the requirements of 40 CFR 60 Subpart Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

28. Permittee shall comply with all applicable requirements of 40 CFR 60, Subpart K. [District Rule 4001]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-37-95-8 **EXPIRATION DATE:** 08/31/2022

SECTION: 25 **TOWNSHIP:** 30S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
10,000 BBL FIXED-ROOF ORGANIC LIQUID STORAGE TANK (#10003) VENTING TO A 2,000 LB CARBON CANISTER (SHARED WITH PERMIT UNIT S-37-96)

PERMIT UNIT REQUIREMENTS

1. Except as otherwise authorized by this permit, tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. Collected vapors shall be directed to approved control devices having a control efficiency of at least 95% by weight as determined by the test method specified in District Rule 4623. [District NSR Rule, District Rule 4623] Federally Enforceable Through Title V Permit
2. Tank shall be vented to vapor control system when storing organic liquids with a TVP of 0.0181 psi or greater. When storing organic liquids with a TVP less than 0.0181 psia or water that meets the VOC standard specified in the definition of "clean produced water" in Rule 1020, vapor control system may be disconnected. Vapor control requirements of Rule 4623 shall not be required when vapor control system is disconnected. Prior to removal of the vapor control system permittee shall provide to the District test results of TVP of the oil or VOC content of the clean produced water as applicable. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Throughput shall not exceed 28,767 gallons/day when storing organic liquids with a TVP less than of 0.0181 psi. There is no throughput limit when storing clean produced water. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Within one week after switching from storage of organic liquids with TVP less than 0.0181 psia to storage of organic liquids with TVP greater than 0.0181 psia, vapor control system fugitive emissions components shall be inspected by the facility operator to ensure compliance with the provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from vapor control system requirement. If the tank stores crude oil or petroleum distillates, the operator shall also conduct an API gravity testing. [District Rules 2201 and 4623, 6.2.2] Federally Enforceable Through Title V Permit
6. Except for crude oil with a API gravity 26 degrees or less, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures from the oil and gas section of "ARB Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588," dated August 1989 (see Rule 4623, Appendix B). As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. In lieu of performing a TVP test, an operator may use Appendix A of District Rule 4623 to determine the TVP of the stored organic liquid provided the storage temperature listed in Appendix A is not exceeded at any time. [District Rule 4623, 6.4.2 and 6.4.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

7. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. The TVP testing shall be conducted at the actual storage temperature of the organic liquid in the tank. [District Rules 2201 and 4623, 6.4.4] Federally Enforceable Through Title V Permit
8. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287-92 (2000) 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 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of true vapor pressure, storage temperature and types of liquids stored, for a period of five years, and shall make such records available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. The tank shall be equipped with a vapor loss prevention system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 95%. [District Rule 4623, 5.6] Federally Enforceable Through Title V Permit
11. Except as otherwise provided on this permit, this tank shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
12. Except as otherwise provided in this permit, all tank gauging or sampling devices shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
13. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak- free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
14. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
17. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

19. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
20. Any component found to be leaking on two consecutive annual inspections is in violation of Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 1070] Federally Enforceable Through Title V Permit
22. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 4623, 6.3] Federally Enforceable Through Title V Permit
23. Carbon canister shall be replaced when vapor concentration exceeds 150% of the initial vapor concentration. If the initial vapor concentration is less than 7 ppmv the canister shall be replaced when the concentration is greater than 10 ppmv. [District NSR Rule] Federally Enforceable Through Title V Permit
24. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 1.3 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
26. Permit holder shall maintain accurate component count and resultant emissions according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-3a (Feb 1999), Correlation Equations Method. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Operator shall maintain records to demonstrate compliance with fugitive VOC emissions limit of this permit annually. Compliance shall be demonstrated by calculation, using the correlation equations, zero default and 10,000 ppmv pegged factors set forth in the CAPCOA California implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-3a, February 1999, and the average emission concentrations of total organic compounds measured for each component during all inspections conducted during the prior 365 day period. [District Rule 2201] Federally Enforceable Through Title V Permit
28. The operator shall ensure that the granular activated carbon vapor control system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. Operator shall maintain records of dates and times of disconnection and connection of tank vapor control system. [District Rule 1070] Federally Enforceable Through Title V Permit
30. 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] Federally Enforceable Through Title V Permit
31. The permittee shall keep accurate records of each organic liquid stored in the tank, throughput, storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
32. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

33. This unit commenced construction, modification, or reconstruction before June 11, 1973. Therefore, the requirements of 40 CFR 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-37-96-7 **EXPIRATION DATE:** 08/31/2022

SECTION: 25 **TOWNSHIP:** 30S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
10,000 BBL FIXED-ROOF ORGANIC LIQUID STORAGE TANK (#10004) VENTING TO A 2,000 LB CARBON CANISTER (SHARED WITH PERMIT UNIT S-37-95)

PERMIT UNIT REQUIREMENTS

1. Except as otherwise authorized by this permit, tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in District Rule 4623. [District NSR Rule, District Rule 4623] Federally Enforceable Through Title V Permit
2. Tank shall be vented to vapor control system when storing organic liquids with a TVP of 0.0181 psi or greater. When storing organic liquids with a TVP less than 0.0181 psia or water that meets the VOC standard specified in the definition of "clean produced water" in Rule 1020, vapor control system may be disconnected. Vapor control requirements of Rule 4623 shall not be required when vapor control system is disconnected. Prior to removal of the vapor control system permittee shall provide to the District test results of TVP of the oil or VOC content of the clean produced water as applicable. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Throughput shall not exceed 28,767 gallons/day when storing organic liquids with a TVP less than of 0.0181 psi. There is no throughput limit when storing clean produced water. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Within one week after switching from storage of organic liquids with TVP less than 0.0181 psia to storage of organic liquids with TVP greater than 0.0181 psia, vapor control system fugitive emissions components shall be inspected by the facility operator to ensure compliance with the provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from vapor control system requirement. If the tank stores crude oil or petroleum distillates, the operator shall also conduct an API gravity testing. [District Rules 2201 and 4623, 6.2.2] Federally Enforceable Through Title V Permit
6. Except for crude oil with a API gravity 26 degrees or less, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures from the oil and gas section of "ARB Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588," dated August 1989 (see Rule 4623, Appendix B). As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. In lieu of performing a TVP test, an operator may use Appendix A of District Rule 4623 to determine the TVP of the stored organic liquid provided the storage temperature listed in Appendix A is not exceeded at any time. [District Rule 4623, 6.4.2 and 6.4.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

7. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. The TVP testing shall be conducted at the actual storage temperature of the organic liquid in the tank. [District Rules 2201 and 4623, 6.4.4] Federally Enforceable Through Title V Permit
8. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287-92 (2000) 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 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of true vapor pressure, storage temperature and types of liquids stored, for a period of five years, and shall make such records available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. The tank shall be equipped with a vapor loss prevention system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 95%. [District Rule 4623, 5.6] Federally Enforceable Through Title V Permit
11. Except as otherwise provided on this permit, this tank shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
12. Except as otherwise provided in this permit, all tank gauging or sampling devices shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
13. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak- free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
14. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
17. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
18. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

19. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
20. Any component found to be leaking on two consecutive annual inspections is in violation of Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 1070] Federally Enforceable Through Title V Permit
22. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 4623, 6.3] Federally Enforceable Through Title V Permit
23. Carbon canister shall be replaced when vapor concentration exceeds 150% of the initial vapor concentration. If the initial vapor concentration is less than 7 ppmv the canister shall be replaced when the concentration is greater than 10 ppmv. [District NSR Rule] Federally Enforceable Through Title V Permit
24. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 1.3 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
26. Permit holder shall maintain accurate component count and resultant emissions according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-3a (Feb 1999), Correlation Equations Method. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Operator shall maintain records to demonstrate compliance with fugitive VOC emissions limit of this permit annually. Compliance shall be demonstrated by calculation, using the correlation equations, zero default and 10,000 ppmv pegged factors set forth in the CAPCOA California implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-3a, February 1999, and the average emission concentrations of total organic compounds measured for each component during all inspections conducted during the prior 365 day period. [District Rule 2201] Federally Enforceable Through Title V Permit
28. The operator shall ensure that the granular activated carbon vapor control system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. Operator shall maintain records of dates and times of disconnection and connection of tank vapor control system. [District Rule 1070] Federally Enforceable Through Title V Permit
30. 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] Federally Enforceable Through Title V Permit
31. The permittee shall keep accurate records of each organic liquid stored in the tank, throughput, storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
32. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

33. This unit commenced construction, modification, or reconstruction before June 11, 1973. Therefore, the requirements of 40 CFR 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

APPENDIX C
BACT Guidelines

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 7.3.2*

Last Update: 10/01/2002

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

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	99% Control (Waste gas incinerated in steam generator, heater treater or other fired equipment and inspection and maintenance program, or equal)	99% control (Transfer of noncondensable vapors to gas pipeline; reinjection to formation (if appropriate wells are available); thermal or catalytic oxidizer; carbon adsorption; or equal).	
SOx		95% control (Vapor collection system and either a) sulfur removal by scrubber with inspection and maintenance program or b) vapors no greater than 0.2 gr S/100 dscf; transfer of non-condensable vapors to gas pipeline; reinjection to formation (if appropriate wells are available), or equal)	
PM10	50% control, (Waste gas incinerated at scrubbed steam generator, heater treater or incinerator or compressed and injected in injection wells and inspection and maintenance program, or equal)	99% control (Transfer of noncondensable vapors to gas pipeline; reinjection to formation (if appropriate wells are available); or equal).	

** Converted from Determinations 7.1.4 and 7.1.12 (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 s 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**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 7.3.3*

Last Update: 10/01/2002

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

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

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

APPENDIX D
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 7.3.2 lists the controls that are considered potentially applicable to petroleum and petrochemical production - fixed roof organic liquid storage or processing tank, = or > 5,000 bbl tank capacity. The VOC control measures are summarized below.

Technologically feasible:

99% control (Transfer of noncondensable vapors to gas pipeline; reinjection to formation (if appropriate wells are available); thermal or catalytic oxidizer; carbon adsorption; or equal).

Achieved in Practice:

99% Control (Waste gas incinerated in steam generator, heater treater or other fired equipment and inspection and maintenance program, or equal)

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

Both control options achieve an equivalent reduction in emissions at 99% control efficiency.

Step 4 - Cost Effectiveness Analysis

The applicant is proposing the most effective control technology – collection and control system with collected gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program at 99% control. Therefore, a cost effectiveness analysis is not required.

Step 5 - Select BACT

The applicant proposes to collect the waste gas and incinerate in steam generators, or other fired equipment and is enrolled in an inspection and maintenance program; therefore, BACT is satisfied.

APPENDIX E
HRA Summary

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Jesse Garcia – Permit Services
From:	Kyle J Melching – Technical Services
Date:	September 28, 2018
Facility Name:	KERN OIL & REFINING CO.
Location:	PANAMA LN & WEEDPATCH HWY, BAKERSFIELD
Application #(s):	S-37-111-8, -166-0, -167-0
Project #:	S-1182896

1. Summary

1.1 RMR

Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required	Special Permit Requirements
111	0.08	0.00	0.00	8.95E-09	No	No
166	0.41	0.06	0.00	4.82E-08	No	No
167	0.02	0.00	0.00	2.27E-09	No	No
Project Totals	<1	0.06	0.00	5.94E-04		
Facility Totals	>1	0.98	0.09	17.9E-06		

1.2 Proposed Permit Requirements

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

Unit # 111-8, 166-0, & 167-0

1. No special requirements.

2. Project Description

Technical Services received a request on August 14, 2018 to perform a Risk Management Review (RMR) and Ambient Air Quality Analysis for the following:

- unit -111-8: modification of 55,000 bbl organic liquid internal floating roof tank (#55000), welded construction with mechanical shoe primary seal and rim-mounted secondary seal: convert to fixed roof tank connected to vapor control
- unit -166-0: 12,000 bbl organic liquid fixed roof storage tank (#12002) venting to shared vapor recovery system listed on permit s-37-168

- unit -167-0: 12,000 bbl organic liquid fixed roof storage tank (#12003) venting to shared vapor recovery system listed on permit s-37-168

Health risk scores for unit -11 for projects S1001372 and S1121674 were removed from the facility totals since the latest modeling reviewed the total PE2 emissions from the unit.

3. RMR Report

3.1 Analysis

The District performed an analysis pursuant to the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, May 28, 2015) to determine the possible cancer and non-cancer health impact to the nearest resident or worksite. This policy requires that an assessment be performed on a unit by unit basis, project basis, and on a facility-wide basis. If a preliminary prioritization analysis demonstrates that:

- A unit's prioritization score is less than the District's significance threshold and;
- The project's prioritization score is less than the District's significance threshold and;
- The facility's total prioritization score is less than the District's significance threshold

Then, generally no further analysis is required.

The District's significant prioritization score threshold is defined as being equal to or greater than1.0. If a preliminary analysis demonstrates that either the unit(s) or the project's or the facility's total prioritization score is greater than the District threshold, a screening or a refined assessment is required

If a refined assessment is greater than one in a million but less than 20 in one million for carcinogenic impacts (Cancer Risk) and less than 1.0 for the Acute and Chronic hazard indices(Non-Carcinogenic) on a unit by unit basis, project basis and on a facility-wide basis the proposed application is considered less than significant. For unit's that exceed a cancer risk of 1 in one million, Toxic Best Available Control Technology (TBACT) must be implemented.

Toxic emissions for this project were calculated using the following methods:

- Toxic emissions from Oilfield Fugitives were calculated using emission factors derived from 1991 source tests of central valley sites.

These emissions were input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy, risks from the proposed unit's toxic emissions were prioritized using the procedure in the 2016 CAPCOA Facility Prioritization Guidelines. 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 07-11 from Arvin (rural dispersion coefficient selected) 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 review:

Source Process Rates					
Unit ID	**Process ID**	**Process Material**	**Process Units**	**Hourly Process Rate**	**Annual Process Rate**
111	1	District Oil Field Fugitives	VOC	0.05	412
166	1	District Oil Field Fugitives	VOC	0.24	2,104
167	1	District Oil Field Fugitives	VOC	0.01	100

Circular Area Source Parameters				
Unit ID	**Unit Description**	**Release Height (m)**	**Radius (m)**	**Area (m^2)**
111	Tank 111	12.19	30.48	2919
166	Tank 166	1.00	8.53	229
167	Tank 167	1.00	8.53	229

4. Conclusion

4.1 RMR

The cumulative acute and chronic indices for this facility, including this project, are below 1.0; and the cumulative cancer risk for this facility, including this project, is less than 20 in a million. In addition, the cancer risk for each unit in this 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).**

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

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

An Ambient Air Quality Analysis (AAQA) was requested; however, since there is no AAQA standard for VOC's and the project only consists of VOC emission, no AAQA was completed.

5. Attachments

A. Modeling request from the project engineer
B. Additional information from the applicant/project engineer
C. Prioritization score w/ toxic emissions summary
D. Facility Summary

APPENDIX F
Compliance Certification Form

San Joaquin Valley Air Pollution Control District

HEALTHY AIR LIVING

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

☐ ADMINISTRATIVE AMENDMENT ☐ MINOR MODIFICATION ☒ SIGNIFICANT MODIFICATION

COMPANY NAME: Kern Oil & Refining Co.	FACILITY ID: S-37
1. Type of Organization: ☒ Corporation ☐ Sole Ownership ☐ Government ☐ Partnership ☐ Utility	
2. Owner's Name: Kern Oil & Refining Co.	
3. Agent to the Owner:	

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

(BC) 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).

(BC) 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.

(BC) Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

(BC) 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.

(BC) 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:

Bruce W Cogswell
Signature of Responsible Official

8/9/18
Date

Bruce W. Cogswell
Name of Responsible Official (please print)

Senior Vice President, Chief Operating Officer
Title of Responsible Official (please print)

APPENDIX G
PE1 Calculations

Source	Stream	Capacity	Throughput	Turnover
		gal	gal/year	
Tank 10003	Distillate Oil	420,000	153,300,000	365
Tank 10004	Distillate Oil	420,000	153,300,000	365
Tank 55000	Crude (RVP 11)	2,310,000	459,900,000	199

Source	Stream	VOC Emissions (lb/yr)			VOC Emissions (tpy)		
		(Working)	(Standing)	(Total)	(Working)	(Standing)	(Total)
Tank 10003	Distillate Oil						
Tank 10004	Distillate Oil						
Tank 55000	Crude (RVP 11)	4,662.74	2,944.41	7,607.15	2.33	1.47	3.80
Tank Totals		**4,662.74**	**2,944.41**	**7,607.15**	**2.33**	**1.47**	**3.80**

Source	Stream	VOC Emissions (lb/yr)					
			lb/day	lb/year			
Tank 10003	Distillate Oil		1.30	474.50			
Tank 10004	Distillate Oil		1.30	474.50			
Tank 55000	Crude (RVP 11)		20.84	7,607.15			
Tank Totals			**23.44**	**8,556.15**			

APPENDIX H
PE2 Calculations

S-77-111

55000	Service	Component Count	% Default Zero	% Pegged	% in Correlation Range	Default Zero	Pegged Factor @9,999 ppmv	Correlation	VOC Emissions
			%	%	%	(lb/day)	(lb/day)	(lb/day)	(lb/day)
Valves	All	26	50%	1.0%	49.0%	0.005	0.031	0.136	**0.173**
Compressor Seals/Pump Seals	All	0	50%	1.0%	49.0%	0.000	0.000	0.000	**0.000**
Others	All	18	50%	1.0%	49.0%	0.002	0.031	0.122	**0.154**
Connectors	All	86	50%	1.0%	49.0%	0.017	0.061	0.282	**0.360**
Flanges	All	46	50%	1.0%	49.0%	0.000	0.073	0.368	**0.441**
Open-Ended Lines	All	0	50%	1.0%	49.0%	0.000	0.000	0.000	**0.000**
80001 Total									1.129

S-77-166 (Tank)

10003	Service	Component Count	% Default Zero	% Pegged	% in Correlation Range	Default Zero	Pegged Factor @9,999 ppmv	Correlation	VOC Emissions
			%	%	%	(lb/day)	(lb/day)	(lb/day)	(lb/day)
Valves	All	6	50%	1.0%	49.0%	0.001	0.007	0.031	**0.039**
Compressor Seals/Pump Seals	All	0	50%	1.0%	49.0%	0.000	0.000	0.000	**0.000**
Others	All	11	50%	1.0%	49.0%	0.001	0.018	0.073	**0.093**
Connectors	All	31	50%	1.0%	49.0%	0.006	0.022	0.102	**0.130**
Flanges	All	1	50%	1.0%	49.0%	0.000	0.002	0.010	**0.012**
Open-Ended Lines	All	0	50%	1.0%	49.0%	0.000	0.000	0.000	**0.000**
37000 Total									0.274

S-77-166 (VRS)

VRS	Service	Component Count	% Default Zero	% Pegged	% in Correlation Range	Default Zero	Pegged Factor @499 ppmv	Correlation	VOC Emissions
			%	%	%	(lb/day)	(lb/day)	(lb/day)	(lb/day)
Valves	All	154	50%	2.0%	48.0%	0.032	0.038	0.778	**0.848**
Compressor Seals/Pump Seals	All	5	50%	2.0%	48.0%	0.002	0.012	0.257	**0.271**
Others	All	34	50%	2.0%	48.0%	0.004	0.017	0.223	**0.243**
Connectors	All	972	50%	2.0%	48.0%	0.193	0.152	3.106	**3.452**
Flanges	All	82	50%	2.0%	48.0%	0.001	0.031	0.645	**0.677**
Open-Ended Lines	All	0	50%	2.0%	48.0%	0.000	0.000	0.000	**0.000**
VRS Total									**5.491**

S-77-167

10004	Service	Component Count	% Default Zero	% Pegged	% in Correlation Range	Default Zero	Pegged Factor @9,999 ppmv	Correlation	VOC Emissions
			%	%	%	(lb/day)	(lb/day)	(lb/day)	(lb/day)
Valves	All	6	50%	1.0%	49.0%	0.001	0.007	0.031	**0.039**
Compressor Seals/Pump Seals	All	0	50%	1.0%	49.0%	0.000	0.000	0.000	**0.000**
Others	All	11	50%	1.0%	49.0%	0.001	0.018	0.073	**0.093**
Connectors	All	31	50%	1.0%	49.0%	0.006	0.022	0.102	**0.130**
Flanges	All	1	50%	1.0%	49.0%	0.000	0.002	0.010	**0.012**
Open-Ended Lines	All	0	50%	1.0%	49.0%	0.000	0.000	0.000	**0.000**
80000 Total									**0.274**

APPENDIX I
AE Calculations

2016 Tank Inventory and Emissions for Baseline Actual Emission (BAE) Determination

Source	Stream	Capacity	Throughput	Turnover
		gal	gal/year	
Tank 55000 - 2016	Crude (RVP 11)	2,310,000	11,468	0.005

Source	Stream	VOC Emissions (lb/yr)			VOC Emissions (tpy)		
		(Working)	(Standing)	(Total)	(Working)	(Standing)	(Total)
Tank 55000 - 2016	Crude (RVP 11)	0.12	2,944.41	2,944.52	0.00	1.47	1.47
Tank Totals		**0.12**	**2,944.41**	**2,944.52**	**0.00**	**1.47**	**1.47**

2017 Tank Inventory and Emissions for Baseline Actual Emission (BAE) Determination

Source	Stream	Capacity	Throughput	Turnover
		gal	gal/year	
Tank 55000 - 2017	Crude (RVP 11)	2,310,000	234,192	0

Source	Stream	VOC Emissions (lb/yr)			VOC Emissions (tpy)		
		(Working)	(Standing)	(Total)	(Working)	(Standing)	(Total)
Tank 55000 - 2017	Crude (RVP 11)	2.37	2,944.41	2,946.78	0.00	1.47	1.47
Tank Totals		**2.37**	**2,944.41**	**2,946.78**	**0.00**	**1.47**	**1.47**

APPENDIX J
Quarterly Net Emissions Change

Quarterly Net Emissions Change (QNEC)

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

QNEC = PE2 - PE1, where:

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

Quarterly NEC [QNEC] for S-37-111			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
VOC	103.00	1,901.75	-1,798.75
Quarterly NEC [QNEC] for S-37-166			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
VOC	526.00	0.00	526.00
Quarterly NEC [QNEC] for S-37-167			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
VOC	25.00	0.00	25.00

APPENDIX K
Statewide Compliance Certification

Statement of Statewide Compliance

Kern Oil & Refining Co. (Kern) is the sole owner and operator of a petroleum refining facility, ID S-37, located at 7724 E. Panama Lane in Bakersfield, CA. Kern has Notices of Violation outstanding; however all issues associated with these are currently being addressed.

Kern certifies that all major stationary sources in the state and all stationary sources in the air basin which are owned or operated by Kern Oil & Refining Co., or by an entity controlling, controlled by, or under common control with Kern Oil & Refining Co., are in compliance, or are on approved schedule for compliance with all applicable emission limitations and standards under the Clean Air Act (42 USC 7401 et seq.) and all applicable emission limitations and standards which are part of the State Implementation Plan approved by the Environmental Protection Agency.

This certification is made on information and belief and is based upon a review of Kern's major source facility by employees who have responsibility for compliance and environmental requirements. This certification is as of the date of its execution.

Bruce W. Cogswell

Bruce W. Cogswell
Sr. Vice President, Chief Operating Officer

8/9/18

Date