



MAY 28 2013

Ms. Melinda Hicks
Kern Oil & Refining Company
7724 E Panama Lane
Bakersfield, CA 93307

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-37
Project # 1131410**

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. The project authorizes a 3000 bbl tank to be connected to an existing vapor control 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. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

Enclosures

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

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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Newspaper notice for publication in Bakersfield Californian and for posting on valleyair.org

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed significant modification of Kern Oil & Refining Company at Bakersfield, California. The project authorizes a 3000 bbl tank to be connected to an existing vapor control system. The project results in an increase in VOC emissions of 241 lb/yr.

The District's analysis of the legal and factual basis for this proposed action, project #1131410, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and at any District office. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact the District at (661) 392-5500. Written comments on the proposed initial permit must be submitted by July 1, 2013 to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.**

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Authorization of organic liquid storage tank connected to existing VCS

Facility Name: Kern Oil & Refining Co
Mailing Address: 7724 E Panama Lane
Bakersfield, CA 93307
Contact Person: Melinda Hicks and Angelica Jackson
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Fax: (661) 845-3561
E-Mail: mhicks@kernoil.com
Application #(s): S-37-8-3 and '-150-0
Project #: S-1121674
Deemed Complete: July 9, 2012

Date: May 20, 2013
Engineer: Richard Edgehill
Lead Engineer: Richard Karrs

I. Proposal

Kern Oil & Refining Co (KOR) is requesting an Authority to Construct (ATC) for a 3000 bbl fixed-roof organic liquid storage tank (KOR Tank #3015) vented to vapor control system (VCS) S-37-8. Tank #3015 is existing and was previously exempt.

The project results in an increase in VOC emissions. BACT, offsets, and public notice are required.

Current PTO S-37-8-30 is included in **Attachment I**.

KOR is a major stationary source with a Title V permit. Kern received their Title V Permit on December 17, 2002. The project is a Federal Major Modification and therefore it is classified as a Title V Significant Modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. KOR must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410	Prevention of Significant Deterioration (June 16, 2011) – not applicable – see Section VII
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99) Subpart Kb
Rule 4102	Nuisance (12/17/92)

Rule 4455 Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants (4/20/05) ~~–not applicable–~~ exempts closed vapor recovery components

Definition

3.5 Closed-vent System: an APCO-approved system that is not open to the atmosphere and that is composed of hard-piping, ductwork connections and, if necessary, flow inducing devices that transport gas or vapor from a piece or pieces of equipment to an APCO-approved control device that has an overall VOC collection and destruction or removal efficiency of at least 95%, or that transports gases or vapors back to a process system.

Exemption

4.2.1 Pressure relief devices, pumps, and compressors equipped with a closed vent system as defined in Section 3.0.

Rule 4621 Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk Plants (12/20/07) ~~–not applicable–~~ facility not a bulk plant

Rule 4622 Gasoline Transfer into Motor Vehicle Fuel Tanks (12/20/07) ~~–not applicable–~~ transfers to delivery vessels only, not fuel tanks

Rule 4623 Storage of Organic Liquids (05/19/05)

Rule 4624 Transfer of Organic Liquids (12/20/07)

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 at 7724 East Panama Lane, Bakersfield, CA. 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 operates a petroleum refining operation engaging in the production of petroleum distillates.

Organic liquid storage tank S-37-150 will be served by existing VCS S-37-8.

A facility plot plan is included in **Attachment II**.

V. Equipment Listing

Pre-Project Equipment Description:

PTO S-37-8-30: ORGANIC LIQUID LOADING AREAS AND REFINERY VAPOR RECOVERY SYSTEM INCLUDING COMPRESSOR(S), LOADING RACKS WITH 10 PRODUCT LINES AND 9 VAPOR RETURN LINES

Proposed Modification:

PTO S-37-8-31: MODIFICATION OF ORGANIC LIQUID LOADING AREAS AND REFINERY VAPOR RECOVERY SYSTEM INCLUDING COMPRESSOR(S), LOADING RACKS WITH 10 PRODUCT LINES AND 9 VAPOR RETURN LINES:CONNECT TANK '-150 TO VAPOR CONTROL SYSTEM

Post Project Equipment Description:

PTO S-37-8-30: ORGANIC LIQUID LOADING AREAS AND REFINERY VAPOR RECOVERY SYSTEM INCLUDING COMPRESSOR(S), LOADING RACKS WITH 10 PRODUCT LINES AND 9 VAPOR RETURN LINES

PTO S-37-150-0: 3000 BBBL ORGANIC LIQUID STORAGE TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-37-8

VI. Emission Control Technology Evaluation

Liquid transfer operation S-37-8 utilizes operational procedures to ensure that there are no leaks or excess organic liquid drainage at disconnections. Furthermore, Condition #2 of the current PTO states:

2. All liquids and gases from the transfer operation shall be routed to one of the following systems: a vapor collection and control system; a fixed roof container that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids); a floating roof container that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids); or a pressure vessel equipped with an APCO-approved vapor recovery system that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids); or a closed VOC emission control system. [District Rules 4623 and 4624] Y

Vapor control efficiency is expected to be at least 99%.

VII. General Calculations

A. Assumptions

S-38-8

- No change in VOC emissions for S-37-8 is proposed (connecting the new tank will not change the emissions)
- The proposed change to S-37-8 is not a NSR Modification which is consistent with FYI-111 Category 11. Therefore only PE2 will be calculated for inclusion in the PAS emissions profile.

S-37-150 (KOR #3015)

- The tank operates 24 hours per day, 7 days per week, and 52 weeks per year.
- Emissions consist of VOC only
- VOC content of hydrocarbons is assumed to be 100% by weight
- DEL includes fugitive emissions from components affixed to the tank and on piping from tank to vapor control system trunk line
- Please note that tank S-37-150 (KOR #3015) is not new and was previously exempt pursuant to Rule 2020 Section 6.6.5 as it stored mineral spirits with a boiling point of 310°F – 395°F (**Attachment III**). Pre-project emissions are calculated for demonstration that the project results in a decrease in emissions and therefore the project is not a NSPS modification.
- Pre-project organic liquid is mineral spirits with RVP = 0.13 (MSDS in **Attachment III**) and throughput = 642 bbl/day (application)

B. Emission Factors

Both the daily and annual pre-project emissions for S-37-150 (KOR #3015) are based on the results from the District's Microsoft Excel spreadsheets for Tank Emissions - Fixed Roof Crude Oil 26° API and higher located in **Attachment III**.

Fugitive VOC emissions from piping/vapor components are estimated using CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2a (Feb 1999) 1995 EPA Protocol Refinery Screening Value Range Emissions Factors (**Attachment IV**).

C. Calculations

1. Pre-Project Potential to Emit (PE1)

For NSPS applicability (mineral spirits) PE1 = 9.0 lb VOCs/day, 1,516 lb/yr (**Attachment III**).

S-37-150

The permit unit is new and therefore PE1 = 0.

2. Post Project Potential to Emit (PE2)

PTO S-37-8-30

16. VOC emission rate from diesel loading rack shall not exceed any of the following: Fugitive emissions: 0.12 lb/hr and vapor recovery system: 0.09 lb/hr. [District Rule 2201] Y
17. VOC emission rate from fugitive components associated with the refinery vapor control system shall not exceed 6.9 lb/day. [District Rule 2201] Y

$$PE2 = (0.12 + 0.09) \times 24 + 6.9 = 11.9 \text{ lb/day (4358 lb/yr)}$$

There is no change in emissions for S-37-8.

VOCs

Post-Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
S-37-8-31	11.9	4,358
S-37-150-0	0.66~0.7	241

Greenhouse Gas (GHG) Emissions

The project results in 241 lb/yr increase in annual VOC emissions. Assuming this is 100% methane (CH₄), which has a GWP for methane of 23 lb CO_{2e}/lb CH₄, the increase is 5,543 lb CO_{2e}/yr (~3 tons CO_{2e}/yr) which is much less than the threshold of 230 mtons CO_{2e}/yr.

The emissions profiles are included in **Attachment V**.

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

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

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 Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for VOC emissions; therefore, 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

Rule 2201 Major Source Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
Facility emissions pre-project*	162,903	93,441	40,581	922,334	303,886
SSIPE	0	0	0	0	241
Facility emissions – post project	162,903	93,441	40,581	922,334	304,127
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	Yes	Yes

*SSPE Calculator

This source is an existing Major Source for NO_x, CO, and VOC emissions and will remain a Major Source for these air contaminants. 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 source categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore the following PSD Major Source threshold is 100 tpy for any regulated NSR pollutant and 100,000 tpy for CO_{2e}.

PSD Major Source Determination (tons/year)							
	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀	CO _{2e}
Estimated Facility PE before Project Increase	81	152	47	461	20	20	>100,000*
PSD Major Source Thresholds	100	100	100	100	100	100	100,000
PSD Major Source ? (Y/N)	N	Y	N	Y	N	N	Y

*the facility has PTOs for natural gas combustion devices exceeding a combined heat input of 200 MMBtu/hr

$$200 \text{ MMBtu/hr} \times 8760 \text{ hr/yr} = 1,752,000 \text{ MMBtu/yr}$$

$$\text{CO}_2 \text{ Emissions} = 1,752,000 \text{ MMBtu/yr} \times 116.89 \text{ lb/MMBtu} / 2000 \text{ lb/ton} \\ = 102,395 \text{ tons-CO}_2(\text{eq})/\text{yr}$$

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

6. Baseline Emissions (BE)

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

Pursuant to Section 3.7 of District Rule 2201, BE = Pre-project Potential to Emit 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 Section 3.22 of District Rule 2201.

S-37-150

Since this is a new emissions unit, BE = PE1 = 0 for VOCs.

7. SB 288 Major Modification

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

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

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO _x	0	50,000	No
SO _x	0	80,000	No
PM ₁₀	0	30,000	No
VOC	241	50,000	No

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute a SB288 Major Modification.

8. Federal Major Modification

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. Emissions increase exceeding the thresholds listed in the following table are considered significant.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NO _x *	0	0	No
VOC*	241	0	Yes
PM ₁₀	0	30,000	Step 2 Not Required
SO _x	0	80,000	Step 2 Not Required

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 is an increase in VOC emissions, this project constitutes a Federal Major Modification, and no further analysis is required.

Since the Federal Major Modification Thresholds have not been surpassed for PM10 and SO_x emissions, Step 2 is not required.

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 non attainment. The pollutants which must be addressed in the PSD applicability determination for sources in the San Joaquin Valley and which are emitted in this project are (See 40 CFR 52.21 (b)(23) definition of Significant):

- Greenhouse gases (GHG): CO₂ and CH₄

The first step of this PSD applicability determination consists of determining whether the facility is or is not an existing PSD Major Source (See Section VII.C.5 of this document).

If the case the facility is an existing PSD Major Source, the second step to determine PSD applicability is to determine if the project results in a significant emissions increase and if so, also a significant net emissions increase for any PSD pollutant.

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 Emission Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if total potential to emit from all new and modified units is below this threshold, no further analysis will be needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)						
	NO2	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units	0	0	0	0	0	3
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	N	N	N	N	N	N

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

10. Quarterly Net Emissions Change (QNEC)

VOCs			
	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
S-37-150	241	0	60

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless exempted pursuant to Section 4.2, BACT shall be required for the following actions:*

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 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 authorize a 3000 bbl tank under vapor control with VOC emissions less than 2 lb/day for VOC. BACT is not triggered for new emissions unit purposes.

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.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project constitutes a Federal Major Modification for VOC emissions; therefore BACT is triggered for VOC.

2. BACT Guideline

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

3. Top-Down BACT Analysis

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

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

S-37-150

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

B. Offsets

1. Offset Applicability

Pursuant to Section 4.5.3, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the post-project stationary source Potential to Emit (SSPE2) equals to or exceeds the offset threshold levels in Table 4-1 or Rule 2201.

The following table compares the post-project facility-wide annual emissions in order to determine if offsets will be required for this project.

Offset Applicability			
Pollutant	SSPE2 (lb/yr)	Offset Threshold Levels (lb/yr)	Offsets Calculations Required?
VOC	> 20,000	20,000	Yes

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for VOCs, the only air contaminant emitted from the tanks. Therefore offset calculations will be required for this project.

Per Sections 4.7.1 and 4.7.3, the quantity of offsets in pounds per year for VOCs 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) = $(\Sigma[PE2 - BE] + ICCE) \times DOR$, for all new or modified emissions units in the project,

Where,

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

BE = Baseline Emissions, (lb/year)

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

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = Pre-project Potential to Emit 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)

The facility is proposing to install one new emissions unit; therefore Baseline Emissions are equal to zero. Also, there are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

Offsets Required (lb/year) = $([PE2 - BE] + ICCE) \times DOR$

PE2 (VOCs) = 241 lb/year
 BE (VOCs) = 0 lb/year
 ICCE = 0 lb/year
 DOR = 1.5 (Federal Major Modification)

Offsets Required (lb/year) = $241 \text{ lb/yr} \times 1.5 / 4$
 = 90 lb/qr

The applicant has stated that the facility plans to use ERC certificate S-4023-1 to offset the increase in VOC emissions associated with this project. The following quantities have been reserved for the project:

<u>Pollutant</u>	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
VOC	90	90	90	90

Proposed Rule 2201 (offset) Conditions:

Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: 90 lb VOC/quarter. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). [District Rule 2201] Y

ERC Certificate Number S-4023-1 (or certificate split from this certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Y

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications

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

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

b. PE > 100 lb/day

Applications which include a new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit with PE>100 lb/day, therefore public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

The following table compares the pre-project SSPE1 with the post-project SSPE2 in order to determine if any offset thresholds have been surpassed.

Offset Threshold				
Pollutant	SSPE1 (lb/yr)	SSPE2 (lb/yr)	Offset Levels (lb/yr)	Public Notice Required?
VOC	> 20,000	> 20,000	20,000	No

Since the VOC offset threshold was not surpassed, public noticing is not triggered for offsets threshold purposes.

d. SSIPE > 20,000 lb/year

$$\text{SSIPE} = \text{SSPE2} - \text{SSPE1}$$

Stationary Source Increase in Permitted Emissions (SSIPE)			
Pollutant	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)
VOC	> 20,000	>20,000	241

As shown in the above table, the SSIPE for this project does not exceed the 20,000 lb/yr public notice threshold. Therefore, public noticing is not required for SSIPE purposes.

2. Public Notice Action

As discussed above, public noticing is required for this project as it is a Federal Major Modification. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

Daily Emission Limits, DELs, are required by Rule 2201 Section 5.7.2. DELs for the emission units in this project will be included on the ATCs in the form of tanks' throughput and the tank contents' maximum true vapor pressure (TVP). The permittee will be required to maintain accurate records of tank content TVP and tanks monthly average daily throughput to validate the DEL.

VOC fugitive emissions from the components affixed to the tank and on piping from tank to vapor control system trunk line shall not exceed 0.7 lb/day. [District Rule 2201] Y

E. Compliance Assurance

The following measures shall be taken to ensure continued compliance with District Rules:

1. Source Testing

Source testing is not required.

2. Monitoring

Monitoring is not required. The following NSPS monitoring conditions are included:

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] Y

3. Record Keeping

Record keeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following NSPS recordkeeping conditions are included on the ATC:

Permittee shall maintain with the permit accurate fugitive component counts for components affixed to the tank on piping from the tank to the vapor control system trunk line and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2a (Feb 1999) 1995 EPA Protocol Refinery Screening Value Range Emissions Factors . [District Rules 2201 and 4455] Y

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] Y

All records required by this permit shall be retained for a minimum period of 5 years and shall be made available to the APCO, ARB and US EPA upon request. [District Rules 2201 and 4623 and CFR 60.115b(c)(2)] Y

4. Reporting

No reporting for Rule 2201 is required.

F. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a 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 above, the project is a Federal Major Modification, therefore this requirement is applicable. Included in **Attachment VIII** is Kern Oil's Title V Compliance Certification form and Statewide Compliance Certification document.

G. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to authorize a tank. Since the project is at the current facility 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 2520 Federally Mandated Operating Permits

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

The project is Federal Major Modification and therefore is also a Title V Significant Modification. As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Included in **Attachment IX** is Kern Oil's Title V Compliance Certification form. Continued compliance with this rule is expected.

Rule 4001 New Source Performance Standards (NSPS)

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 function is the reduction of air pollutants, except when an emission control system is removed or replaced by a system which the Administrator determines to be less environmentally beneficial”.*

No newly constructed or reconstructed units are proposed in this project, nor is the unit being modified (as defined above). There is no change in emissions from S-37-8. Tank S-37-150 (KOR #3015) is existing and installation of the vapor control system results in a decrease in emissions as demonstrated in Section VII.

Compliance is expected.

Rule 4101 Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 or 20% opacity. Increasing the RVP and throughput limits is not expected to affect the compliance status of the rule.

Continued compliance is expected.

Rule 4102 Nuisance

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (**Attachment X**), 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-37-150	0.00827 per million	No

The project is approvable without TBACT.

Rule 4624 Transfer of Organic Liquid

The purpose of this rule is to limit volatile organic compound (VOC) emissions from the transfer of organic liquids. This rule applies to any facility transferring organic liquids as defined by the following classifications:

- Class 1 Organic Liquid Transfer Facility: any location transferring 20,000 gallons or more on any one day of organic liquids with a TVP of 1.5 psia or greater to or from tank trucks, trailers, or railroad tank cars.
- Class 2 Organic Liquid Transfer Facility: any location transferring 4,000 gallons or more but less than 20,000 gallons on any one day of organic liquids with a TVP of 1.5 psia or greater to or from tank trucks, trailers, or railroad tank cars.

The facility is currently operating in compliance with the rule and the project is not expected to affect compliance status. Continued compliance is expected.

Rule 4623 Storage of Organic Liquids

The tank stores liquid having a true vapor pressure range varying between 1.5 psia and 11.0 psia with a capacity exceeding 39,600 gallons and therefore must be equipped with an internal floating roof, external floating roof, or vapor recovery system.

The subject tank is will be equipped with a vapor control system meeting the requirements of Section 5.6.

No throughput/TVP records are required to be kept for fixed-roof tanks equipped with vapor control.

Compliance is expected.

Rule 4801 Sulfur Compounds

Sulfur emissions from internal floating roof tanks are not expected provided the equipment is maintained in proper operation. Compliance 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

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project. The District’s engineering evaluation demonstrates that the project would not result in an increase in project specific greenhouse gas emissions greater than 230 metric tons-CO2e/year. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

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

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATC S-37-111-6 subject to the permit conditions on the attached draft ATC in **Attachment XI**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-37-8	3020-01-F	415 HP	\$607.00
S-37-150	3020-05-E	126,000 gallons	\$246.00

Attachments

- I: Current PTO S-37-8-30
- II: Facility Plot Plan
- III: Tank #3015 Emissions Calculation
- IV: Fugitive Emissions Calculations
- V: Emissions Profile
- VI: BACT Guideline
- VII: BACT Analysis
- VIII: Statewide Compliance Statement
- IX: Title V Compliance Certification Form
- X: HRA Summary
- XI: Draft ATC

ATTACHMENT I
PTO S-37-8-30

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-37-8-30

EXPIRATION DATE: 08/31/2016

SECTION: 25 TOWNSHIP: 30S RANGE: 28E

EQUIPMENT DESCRIPTION:

ORGANIC LIQUID LOADING AREAS AND REFINERY VAPOR RECOVERY SYSTEM INCLUDING COMPRESSOR(S),
LOADING RACKS WITH 10 PRODUCT LINES AND 9 VAPOR RETURN LINES

PERMIT UNIT REQUIREMENTS

1. Transfer Racks N and F may be used for loading and unloading. Transfer Racks A, K, and L shall be used only for loading. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All liquids and gases from the transfer operation shall be routed to one of the following systems: a vapor collection and control system; a fixed roof container that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids); a floating roof container that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids); or a pressure vessel equipped with an APCO-approved vapor recovery system that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids); or a closed VOC emission control system. [District Rules 4623 and 4624] Federally Enforceable Through Title V Permit
3. A floating roof container that meets the applicable control requirements of Section 5.0 of Rule 4623 (Storage of Organic Liquids) shall be considered not leaking when receiving unloaded liquids for compliance with Rule 4624. [District Rule 4624] Federally Enforceable Through Title V Permit
4. For the transfer of gasoline only, transfer to any stationary storage container with 250 gallon capacity or more, that is not subject to Rule 4623, shall not be allowed unless the container is equipped with a permanent submerged fill pipe and an ARB certified Phase I vapor recovery system, which is maintained and operated according to the manufacturer's specifications, or a vapor recovery system with 95% control approved by the District. [District Rule 4621] Federally Enforceable Through Title V Permit
5. All delivery tanks which previously contained organic liquids, including gasoline, with a TVP 1.5 psia or greater at the storage container's maximum organic liquid storage temperature shall be filled only at Class 1 or Class 2 loading facilities that meet the vapor collection and control requirements of District Rule 4624 or listed herein. [District Rule 4624] Federally Enforceable Through Title V Permit
6. Construction, reconstruction (as defined in District Rule 4001) or expansion of any top loading facility shall not be allowed. [District Rule 4624] Federally Enforceable Through Title V Permit
7. The organic liquid and gasoline loading operation shall be equipped with bottom loading equipment with a vapor collection and control system meeting the requirements listed in this permit. [District Rules 4621 and 4624] Federally Enforceable Through Title V Permit
8. Transfer rack and vapor collection and control equipment shall be designed, installed, maintained in accordance with the manufacturers specifications, and operated such that there are no leaks or excess organic liquid drainage at disconnections as defined herein. [District Rules 4621 and 4624] Federally Enforceable Through Title V Permit
9. During unloading of gasoline, a leak shall be defined as the dripping of VOC-containing liquid at a rate of more than three drops per minute or a reading greater than 100 percent of the Lower Explosive Limit (21,000 ppmv as propane) in accordance with EPA Method 21. [District Rule 4621] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. For components used in the gasoline loading operation, a leak shall be defined as the dripping of VOC-containing liquid at a rate of more than three drops per minute or the detection of organic compounds, in excess of 10,000 ppm as methane measured at a distance of one centimeter from the potential source in accordance with EPA Method 21. Excess liquid drainage shall be defined as exceeding 10 milliliters per average of 3 consecutive disconnects. [District Rules 4621 and 4624] Federally Enforceable Through Title V Permit
11. For delivery vessels and components used in the organic liquid transfer operation, a leak shall be defined as the detection of organic compounds, in excess of 1,000 ppm as methane measured at a distance of one centimeter from the potential source in accordance with EPA Method 21. [District Rule 4624] Federally Enforceable Through Title V Permit
12. Equipment under vapor control shall not vent to atmosphere. [District Rules 4621 and 4624.] Federally Enforceable Through Title V Permit
13. The vapor collection and control system shall operate such that VOC emissions do not exceed 0.08 lb/1000 gallons of organic liquid loaded; maintains at least 95% capture and control efficiency of VOC and which operates so the delivery tank does not exceed 18 inches water column pressure nor 6 inches water column vacuum. [District Rule 4624] Federally Enforceable Through Title V Permit
14. No gasoline delivery vessel shall be used or operated unless it is leak-free. No gasoline delivery vessel shall be operated or loaded unless valid State of California decals are displayed on the cargo tank, attesting to the vapor integrity of the tank as verified by annual performance of CARB required Certification and Test Procedures for Vapor Recovery Systems for Cargo Tanks (Executive Order G-70-10-A) or EPA Method 27 for testing delivery vessels owned or operated by this facility. [District Rule 4621, Health & Safety Code, section 41962, and CCR, Title 17 section 94004] Federally Enforceable Through Title V Permit
15. Measurements of leak concentrations for organic liquid delivery vessels, including gasoline, shall be conducted according to the ARB Test Procedure for Determination of Leaks, TP-204.3, or EPA Method 21. [District Rules 4621 and 4624] Federally Enforceable Through Title V Permit
16. VOC emission rate from diesel loading rack shall not exceed any of the following: Fugitive emissions: 0.12 lb/hr and vapor recovery system: 0.09 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
17. VOC emission rate from fugitive components associated with the refinery vapor control system shall not exceed 6.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
18. During loading of a delivery vessel, the truck-mounted vapor return line shall be connected to the vapor recovery system listed on this permit. [District Rules 2201 and 4621] Federally Enforceable Through Title V Permit
19. A delivery vessel loading gasoline shall discontinue if its pressure relief valve opens. Corrective action shall be taken should this condition occur. [District Rules 2520 and 4621] Federally Enforceable Through Title V Permit
20. Switch loading shall not be conducted unless such transfer is made using an ARB certified vapor recovery system. [District Rules 2201 and 4621] Federally Enforceable Through Title V Permit
21. Operators shall conduct all performance tests required by the facility installation and operations manual as per the frequency outlined therein or as designated by the APCO. [District Rules 4621 and 4624] Federally Enforceable Through Title V Permit
22. The operator shall perform and record the results of monthly leak and drainage inspections of the loading and vapor collection equipment at each loading arm. During the loading of gasoline or organic liquids, leak detection shall be conducted using EPA Method 21 measuring at a distance of one centimeter from the potential source. When not in current operation, excess drainage inspections shall be conducted before 10:00 am at the disconnect of each loading arm by collecting all drainage at disconnect in a container and determining the volume within one (1) minute of collection [District Rules 2520, 40 CFR 60.502(j) and 4624] Federally Enforceable Through Title V Permit
23. The leak detection instrument shall be calibrated each day of its use, prior to use, by the procedures specified in Method 21 using the following calibration gases: A) Zero air (less than 10 ppm of hydrocarbon in air); and B) Mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rules 2520, 9.3.2 and 4624] Federally Enforceable Through Title V Permit

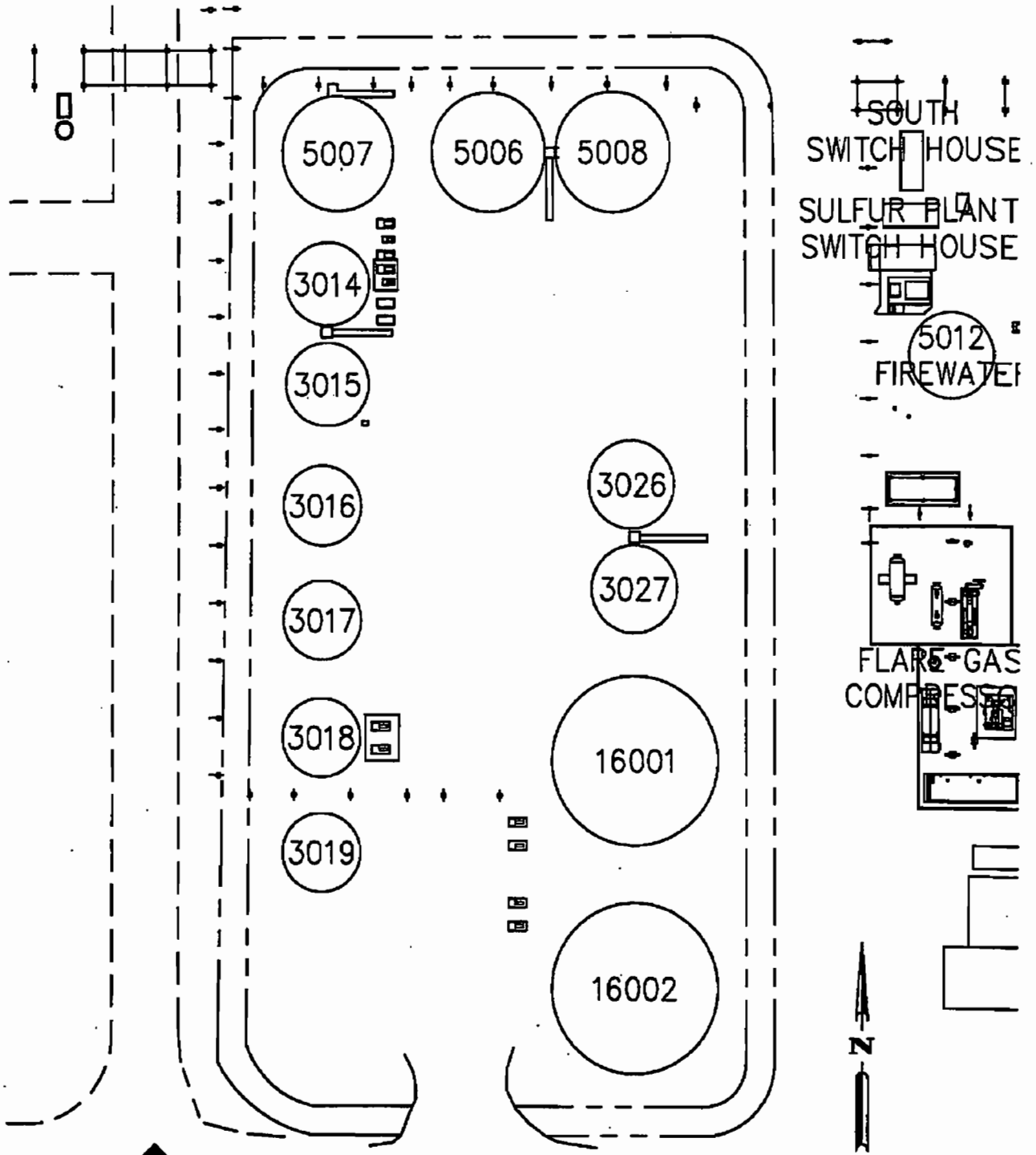
PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

24. Corrective steps shall be taken at any time the operator observes a leak or excess drainage at disconnect. All equipment found leaking shall be repaired or replaced within 72 hours. If the leaking component cannot be repaired or replaced within 72 hours, the component shall be taken out of service until such time the component is repaired or replaced. The repaired or replacement equipment shall be reinspected the first time the equipment is in operation after the repair or replacement. [District Rule 4624] Federally Enforceable Through Title V Permit
25. All inspections shall be documented within the inspection log. Inspection records shall include, at a minimum, 1) date of inspection, 2) location and description of any missing, loose, leaking, or damaged equipment and any malfunction requiring repair, 3) corrective steps taken to repair or replace the equipment, 4) test method and results for leak and drainage inspections, 5) location and description of any of equipment which shall be inspected upon commencing operation after repair or replacement and 6) inspector name and signature. [District Rules 4621 and 4624] Federally Enforceable Through Title V Permit
26. Records of daily throughput of each loading rack shall be maintained and made available to the APCO, ARB, or EPA during normal business hours. [District Rules 2201, 4621, and 4624] Federally Enforceable Through Title V Permit
27. The permittee shall maintain accurate records of exempt and non-exempt components and their associated function in the Operator Management Plan (OMP) as required in section 6.1 of Rule 4455. Permit holder shall update the Operator Management Plan when new components are installed. By January 30 of each year, an annual report indicating any changes to an existing Operator Management Plan shall be submitted to the APCO. [District Rule 4455] Federally Enforceable Through Title V Permit
28. 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), CAPCOA-Revised 1995 EPA Correlation Equations and Factors for Refineries and Marketing Terminals. Components shall be screened and leak rate shall be measured at least once each quarter. If compliance with the daily emission limit is shown during each of five (5) consecutive quarterly inspections, the inspection frequency may be changed from quarterly to annual. If any annual inspection shows non-compliance with the daily emission limit, then quarterly inspections shall be resumed. [District Rule 2201] Federally Enforceable Through Title V Permit
29. 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 Rules 1070, 4621, 4624, and 4455, 6.2.2, 6.2.3 & 6.2.4] Federally Enforceable Through Title V Permit

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

ATTACHMENT II
Facility Plot Plan



1

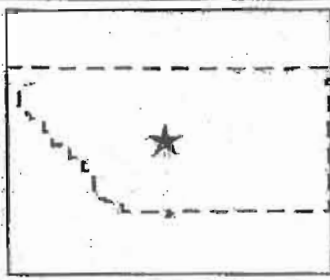
KERN OIL & REFINING CO. PLOT PLAN

DATE: 04/03/13

BY: HRP

SCALE: NTS

Receptor Distances



Legend

- Roads**
- Arterial
 - Collector
 - Highway
 - Local
 - Ramp
 - Unpaved
- County of Kern
- Assessment Parcels
- Aerial Photo 2008

0 300 600 Feet

Scale: 1:5,098

This map is a user-generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

ATTACHMENT III
Tank #3015 Emissions Calculation

MINERAL SPIRITS

MNS

CAUTIONARY RESPONSE INFORMATION			
Common Synonyms Naphtha Petroleum spirits	Watery liquid	Colorless	Gaseous-like odor
Flasks on water.			
Keep people away. Avoid contact with liquid. Shut off ignition sources and call fire department. Notify local health and pollution control agencies.			
Fire	Combustible. Extinguish with water, dry chemical, foam or carbon dioxide. Cool exposed containers with water.		
Exposure	CALL FOR MEDICAL AID. LIQUID Irritating to skin and eyes. Harmful if swallowed. Remove concentrated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk. DO NOT INDUCE VOMITING.		
Water Pollution	Effect of low concentrations on aquatic life is unknown. Floating to shoreline. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.		

1. CORRECTIVE RESPONSE ACTIONS	2. CHEMICAL DESIGNATIONS
Slip discharge Contain Collection System: Steam Chemical and Physical Treatment: Burn Clean shore line Salvage waterborne	2.1 CG Compatibility Group: 34; Miscellaneous Hydrocarbon Mixtures 2.2 Formula: Not applicable 2.3 IMDG/UN Designation: 3.2/1300 2.4 DOT ID No.: 1258 2.5 CAS Registry No.: Currently not available 2.6 NAERG Guide No.: 129 2.7 Standard Industrial Trade Classification: 33429
3. HEALTH HAZARDS	
3.1 Personal Protective Equipment: Plastic gloves; goggles or face shield (as for gasoline). 3.2 Symptoms Following Exposure: INHALATION: mild irritation of respiratory tract. ASPIRATION: severe lung irritation and rapidly developing pulmonary edema; central nervous system excitement followed by depression. INGESTION: irritation of stomach. 3.3 Treatment of Exposure: INHALATION: remove victim to fresh air. ASPIRATION: ruborous bed rest; give oxygen; call a doctor. INGESTION: do NOT induce vomiting; guard against aspiration into lungs. EYES: wash with copious amounts of water. SKIN: wipe off and wash with soap and water. 3.4 TLV-TWA: Not listed. 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 2; LD ₅₀ = 0.5 to 5 g/kg 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Currently not available. 3.10 Vapor (Gas) Irritant Characteristics: Vapor are nonirritating to the eyes and throat. 3.11 Liquid or Solid Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause staining and reddening of the skin. 3.12 Odor Threshold: Currently not available. 3.13 IDLH Values: Not listed. 3.14 OSHA PEL-TWA: Not listed. 3.15 OSHA PEL-STEL: Not listed. 3.16 OSHA PEL-Ceiling: Not listed. 3.17 EPA ADCL: Not listed	

4. FIRE HAZARDS	7. SHIPPING INFORMATION
4.1 Flash Point: 103-140°F C.C., depending on grade 4.2 Flammable Limits in Air: 0.6%-5.0% 4.3 Fire Extinguishing Agents: Foam, carbon dioxide, dry chemical 4.4 Fire Extinguishing Agents Not to Be Used: Do not use straight hose water stream. 4.5 Special Hazards of Combustion Products: Not pertinent 4.6 Behavior in Fire: Not pertinent 4.7 Auto Ignition Temperature: 540°F 4.8 Electrical Hazards: Not pertinent 4.9 Burning Rate: 4 mm/min. 4.10 Adiabatic Flame Temperature: Currently not available 4.11 Stoichiometric Air to Fuel Ratio: Not pertinent. 4.12 Flame Temperature: Currently not available 4.13 Combustion Heat Ratio (Reactant to Product): Not pertinent. 4.14 Minimum Oxygen Concentration for Combustion (MOC): Not listed	7.1 Grades of Purity: Various grades available. 70-100% of the materials are derived from petroleum, and 0-30% are aromatic hydrocarbons like benzene and toluene. Flash points vary with the exact composition but are usually above 100°F. 7.2 Storage Temperature: Ambient 7.3 Inert Atmosphere: No requirement 7.4 Venting: Open (flame arrester) 7.5 OBO Pollution Category: Currently not available 7.6 Ship Type: Currently not available 7.7 Barge Hull Type: Currently not available
5. CHEMICAL REACTIVITY	8. HAZARD CLASSIFICATIONS
5.1 Reactivity with Water: No reaction 5.2 Reactivity with Common Materials: No reaction 5.3 Stability During Transport: Stable 5.4 Neutralizing Agents for Acids and Corrosives: Not pertinent 5.5 Polymerization: Not pertinent 5.6 Inhibitor of Polymerization: Not pertinent	8.1 49 CFR Category: Flammable liquid 8.2 49 CFR Class: 3 8.3 49 CFR Package Group: III 8.4 Marine Pollutant: Yes 8.5 NFPA Hazard Classification: Category Classification Health Hazard (Blue) 0 Flammability (Red) 2 Instability (Yellow) 0 8.6 EPA Reportable Quantity: Not listed. 8.7 EPA Pollution Category: Not listed. 8.8 RCRA Waste Number: Not listed. 8.9 EPA FWPCA List: Not listed
6. WATER POLLUTION	9. PHYSICAL & CHEMICAL PROPERTIES
6.1 Aquatic Toxicity: Currently not available 6.2 Waterfowl Toxicity: Currently not available 6.3 Biological Oxygen Demand (BOD): 0%, 5 days 6.4 Food Chain Concentration Potential: None 6.5 GHSAMP Hazard Profile: Not listed	9.1 Physical State at 15° C and 1 atm: Liquid 9.2 Molecular Weight: Not pertinent 9.3 Boiling Point at 1 atm: 310-385°F = 154-202°C = 428-475°K 9.4 Freezing Point: Not pertinent 9.5 Critical Temperature: Not pertinent 9.6 Critical Pressure: Not pertinent 9.7 Specific Gravity: 0.78 at 20°C (liquid) 9.8 Liquid Surface Tension: Currently not available 9.9 Liquid Water Interfacial Tension: Currently not available 9.10 Vapor (Gas) Specific Gravity: Not pertinent 9.11 Ratio of Specific Heats of Vapor (Gas): (est.) 1.030 9.12 Latent Heat of Vaporization: Currently not available 9.13 Heat of Combustion: Currently not available 9.14 Heat of Decomposition: Not pertinent 9.15 Heat of Solution: Not pertinent 9.16 Heat of Polymerization: Not pertinent 9.17 Heat of Fusion: Currently not available 9.18 Limiting Value: Currently not available 9.19 Reid Vapor Pressure: 0.13 psia
NOTE	

MINERAL SPIRITS

MNS

9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
60	44.850	10	0.433	10	0.923	60	6.343
62	44.830	15	0.435	20	0.918	62	6.541
64	44.810	20	0.436	30	0.914	64	6.370
66	44.800	25	0.440	40	0.908	66	7.527
68	44.800	30	0.443	50	0.903	68	7.511
70	44.800	35	0.446	60	0.897	70	7.116
72	44.800	40	0.448	70	0.892	72	6.791
74	44.800	45	0.450	80	0.886	74	6.404
76	44.800	50	0.453	90	0.881	76	6.073
78	44.800	55	0.455	100	0.875	78	6.770
80	44.800	60	0.458	110	0.869	80	6.481
82	44.800	65	0.460	120	0.864	82	5.937
84	44.800	70	0.463	130	0.858	84	4.850
86	44.800	75	0.465	140	0.853	86	4.707
88	44.800	80	0.467	150	0.847	88	4.677
90	44.800	85	0.470	160	0.842	90	4.350
92	44.800	90	0.472	170	0.836	92	4.035
94	44.800	95	0.475	180	0.831	94	3.832
96	44.800	100	0.477	190	0.825	96	3.670
98	44.800	105	0.480	200	0.820	98	3.536
100	44.800			210	0.814	100	3.342
				220	0.808		3.187
				230	0.803		3.040
				240	0.797		2.901
				250	0.792		2.770
				260	0.786		2.646

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	I S O L U B I L I T Y	90	0.094		N O T		N O T
		100	0.124				
		110	0.163				
		120	0.211				
		130	0.272		P E R T I N E N T		P E R T I N E N T
		140	0.347				
		150	0.440				
		160	0.553				
		170	0.691				
		180	0.856				
		190	1.054				
		200	1.290				
		210	1.569				
		220	1.897				
		230	2.281				
		240	2.723				
		250	3.247				
		260	3.846				
		270	4.528				
		280	5.323				
		290	6.221				
		300	7.241				
		310	8.394				
		320	9.688				
		330	11.160				
		340	12.790				

Tank Input Data	
permit number (S-xxxx-xx-xx)	—
facility tank I.D.	—
nearest city {1: Bakersfield, 2: Fresno, 3: Stockton}	1
tank ROC vapor pressure (psia)	0.13
liquid bulk storage temperature, T_b (°F)	100
is this a constant-level tank? {yes, no}	no
will flashing losses occur in this tank (only if first-line tank)? {yes, no}	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	30
capacity of tank (bbbl)	3,000
conical or dome roof? {c, d}	c
shell height of tank (feet)	24
average liquid height (feet)	20
are the roof and shell the same color? {yes,no}	yes
For roof:	
color {1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White}	4
condition {1: Good, 2: Poor}	1
— This row only used if shell is different color from roof —	3
— This row only used if shell is different color from roof —	1

Liquid Input Data	
maximum daily fluid throughput (bbbl)	642
maximum annual fluid throughput (bbbl)	97,286
— This row only used if flashing losses occur in this tank —	100
— This row only used if flashing losses occur in this tank —	36,500
molecular weight, M_w (lb/lb-mol)	100

Calculated Values	A	B
daily maximum ambient temperature, T_{ax} (°F)		77.65
daily minimum ambient temperature, T_{an} (°F)		53.15
daily total solar insolation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P_a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T_{lx}), P_{vx} (psia)	99.0	0.9259
water vapor pressure at daily minimum liquid surface temperature (T_{ln}), P_{vn} (psia)	88.2	0.6653
water vapor pressure at average liquid surface temperature (T_{la}), P_{va} (psia)	93.6	0.7903
roof outage, H_{ro} (feet)		0.3125
vapor space volume, V_v (cubic feet)		3048.33
paint factor, α		0.68
vapor density, W_v (lb/cubic foot)		0.0022
daily vapor temperature range, ΔT_v (degrees Rankine)		49.04
vapor space expansion factor, K_e		0.1032

Results	lb/year	lb/day
Standing Storage Loss	251	0.69
Working Loss	1,265	8.35
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	1,516	9.0

Summary Table	
Permit Number	--
Facility Tank I.D.	--
Tank capacity (bbl)	3,000
Tank diameter (ft)	30
Tank shell height (ft)	24
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	642
Maximum Annual Fluid Throughput (bbl/year)	97,286
Maximum Daily Oil Throughput (bbl/day)	N/A
Maximum Annual Oil Throughput (bbl/year)	N/A
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	9.0
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	1,516

ATTACHMENT IV
Fugitive Emissions Calculations

TABLE IV-2a: 1995 EPA PROTOCOL REFINERY
SCREENING VALUE RANGE EMISSION FACTORS^a

Component Type	Service Type	< 10,000 ppmv Emission Factor (kg/hr/source) ^b	≥ 10,000 ppmv Emission Factor (kg/hr/source) ^b
Valves	Gas	6.0E-04	2.626E-01
	Light liquid	1.7E-03	8.52E-02
	Heavy liquid	2.3E-04	2.3E-04
Pump seals ^c	Light liquid	1.20E-02	4.37E-01
	Heavy liquid	1.35E-02	3.885E-01
Compressor seals	Gas	8.94E-02	1.608
Pressure relief valves	Gas	4.47E-02	1.691
Connectors	All	6.0E-05	3.75E-02
Open-ended lines	All	1.5E-03	1.195E-02

^aSource: 1995 EPA Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017, November 1995) which referenced the 1982 Petroleum Refining Study (EPA-450/3-82-010, 1982). These factors are based on the 1980 and 1982 refining fugitive emissions studies.

^bThese factors are for non-methane organic compound emission rates.

^cThe light liquid pump seals factor can be used to estimate the leak rate from agitator seals.

Project # Tank 3015

Fugitive Emissions Using Screening Emission Factors

California Implementation Guidelines for Estimating Mass Emissions
of Fugitive Hydrocarbon Leaks at Petroleum Facilities
Table IV-2a. 1995 EPA Protocol Refinery
Screening Value Range Emission Factors

Percentage of components with > 10,000 ppmv leaks allowed? 0 %
Weight percentage of VOC in the total organic compounds in gas? 100 %
Weight percentage of VOC in the total organic compounds in oil? 100 %

Equipment Type	Service	Component Count	Total allowable leaking components	Screening Value (lb/day/abn) (10,000 ppm)	EF TOCS (lb/day/abn) (10,000 ppm)	VOC Emissions (lb/day)
Valves	Gas	9	0.00	3.175E-02	1.389E+01	0.29
	Light Liquid	0	0.00	8.995E-02	4.508E+00	0.00
	Heavy Liquid	0	0.00	1.217E-02	1.217E-02	0.00
Pump Seals	Light Liquid	0	0.00	6.349E-01	2.312E+01	0.00
	Heavy Liquid	0	0.00	7.143E-01	2.056E+01	0.00
Compressor Seals	Gas	0	0.00	4.730E+00	8.508E+01	0.00
	Hydrogen	0	0.00	a	a	0.00
Pressure Relief Valves	All (w/o rupture disk)	0	0.00	2.365E+00	8.947E+01	0.00
	All (w/ rupture disk)	0	0.00	b	b	0.00
Connectors	All (flanges)	117	0.00	3.175E-03	1.984E+00	0.37
	All (THD)	0	0.00	3.175E-03	1.984E+00	0.00
Open-ended Lines	All	0	0.00	7.937E-02	1.032E+00	0.00

Total VOC Emissions = 0.7 lb/day
0.1 ton/yr

ATTACHMENT V
Emissions Profiles

Permit #: S-37-8-31	Last Updated:
Facility: KERN OIL & REFINING CO.	05/03/2013 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	4358.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	11.9
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-37-150-0	Last Updated
Facility: KERN OIL & REFINING CO.	05/20/2013 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	241.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.7
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	60.0
Q2:	0.0	0.0	0.0	0.0	60.0
Q3:	0.0	0.0	0.0	0.0	60.0
Q4:	0.0	0.0	0.0	0.0	61.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					90.0
Q2:					90.0
Q3:					90.0
Q4:					90.0

ATTACHMENT VI
BACT Guideline

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

Best Available Control Technology (BACT) Guideline 7.3.1*

Last Update 10/1/2002

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

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

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

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

***This is a Summary Page for this Class of Source**

ATTACHMENT VII BACT Analysis

Step 1 - Identify All Possible Control Technologies

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

Current District BACT Guideline 7.3.1

	Achieved in Practice BACT	Technologically Feasible BACT	Alternate Basic Equipment
VOC	PV relief valve set to within 10% of maximum allowable pressure.	99% control (waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of uncondensed vapors to gas pipeline or reinjection to formation (if appropriate wells are available).	None Identified

Step 2 - Eliminate Technologically Infeasible Options

The technologically feasible control measures of re-injecting the vapors into the formation and transfer of non-condensable vapors to gas pipeline are not feasible because neither gas injection wells nor a gas pipeline currently exist at the project site. Further, no candidate geologic formations are available for gas re-injection at the project site. All of the above remaining control options identified above are technologically feasible for the proposed equipment and are not eliminated.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

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

Step 4 - Cost Effectiveness Analysis

The proposed tank will be connected to a vapor recovery system venting a refinery pipeline which is subject to a stringent Rule 4455 I&M Program.

Therefore, the highest ranked control identified is proposed. A cost effectiveness analysis is not required.

Step 5 - Select BACT

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

ATTACHMENT VIII
Statewide Compliance Statement



Kern Oil & Refining Co.

7724 E. PANAMA LANE
BAKERSFIELD, CALIFORNIA 93307-9210
(661) 845-0761 FAX (661) 845-0330

May 7, 2013

Mt. Leonard Scandura
SJVAPCD
34946 Flyover Court
Bakersfield, CA 93308

**Subject: Kern Oil & Refining Co. – Compliance Certification
Project Application for Tank 3015 with Vapor Recovery
APCD Project Number 1131410**

Dear Mr. Scandura:

District Rule 2201, Section 4.15.2, requires that an owner or operator proposing a Federal Major Modification certify that all major stationary sources owned or operated by such person (or by any entity controlling, controlled by, or under common control with such person) in California are either in compliance or on a schedule for compliance with all applicable emission limitations and standards. This letter certifies compliance for Kern Oil & Refining Co.

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.

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.

If you have any questions, please call Melinda Hicks, EHS Manager, at (661) 845-0761.

Sincerely,

Robert Winchester
Chief Financial Officer

cc: Melinda Hicks
Bruce Cogswell

ATTACHMENT IX
Title V Compliance Certification Form

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

RECEIVED
APR 09 2013
SJVAPCD
Southern Region

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE AMENDMENT
 MINOR PERMIT MODIFICATION

COMPANY NAME:	FACILITY ID: S-37
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Kern Oil Refining Co.	
3. Agent to the Owner: n/a	

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

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

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

Bruce Cogswell
Signature of Responsible Official

4/8/13
Date

Bruce Cogswell
Name of Responsible Official (please print)

Vice President - Manufacturing
Title of Responsible Official (please print)

ATTACHMENT X
HRA

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Richard Edgehill – Permit Services
From: Ester Davila – Technical Services
Date: April 24, 2013
Facility Name: Kern Oil & Refining Company
Location: 7724 E. Panama Lane, Bakersfield
Application #(s): S-37-8-31 & 150-0
Project #: S-1131410

A. RMR SUMMARY

RMR Summary			
Categories	Organic Liq. Storage Tank (Unit 150-0)	Project Totals	Facility Totals
Prioritization Score	0.002	0.002	>1.0
Acute Hazard Index	0.00	0.00	0.83
Chronic Hazard Index	0.00	0.00	0.26
Maximum Individual Cancer Risk	8.27E-09	8.27E-09	9.83E-06*
T-BACT Required?	No		
Special Permit Conditions?	No		

*The Maximum Individual Cancer Risk has almost reached its facilitywide total limit of 9.99E-06.

Proposed Permit Conditions

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

Unit # 150-0

1. No special conditions required.

B. RMR REPORT

I. Project Description

Technical Services received a request on April 24, 2013, to perform a Risk Management Review for a new organic liquid storage tank (#3015) connected to existing vapor control system S-37-8.

II. Analysis

Technical Services performed a prioritization using the District's HEARTs database. Since the facilitywide total prioritization scores were greater than one, a refined health risk assessment was required and performed. Toxic emissions were calculated using toxic fugitive emission factors from oilfield equipment. AERMOD was used, with area source parameters outlined below, and the five year concatenated meteorological data from 2005-2009 for Bakersfield to determine maximum dispersion factors at the nearest residential and business receptors. These dispersion factors were input into the HARP model to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Unit 150-0			
Source Type	Area	Closest Receptor (m)	396
Release Height (m)	7.32	Closest Receptor Type	Residential
Size of "x" Width (m)	4.6	Project Location Type	Rural
Size of "y" Width (m)	4.6	Annual Hours Operation	8760
VOC Emission Rate (lb/hr)	0.03	VOC Emission Rate (lb/yr)	256

III. Conclusion

The acute and chronic indices are below 1.0; and the maximum individual cancer risk associated with the project is **8.27E-09**, which is less than the 1 in a million threshold. In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).

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

Attachments:

1. RMR Request Form
2. Additional Information
3. Prioritization Score
4. Emission Summary Sheet
5. HARP Report
6. Facility Summary

ATTACHMENT XI
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-37-8-31

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

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

SECTION: 25 TOWNSHIP: 30S RANGE: 28E

EQUIPMENT DESCRIPTION:

MODIFICATION OF ORGANIC LIQUID LOADING AREAS AND REFINERY VAPOR RECOVERY SYSTEM INCLUDING COMPRESSOR(S), LOADING RACKS WITH 10 PRODUCT LINES AND 9 VAPOR RETURN LINES:CONNECT TANK '150 TO VAPOR CONTROL SYSTEM

CONDITIONS

1. Transfer Racks N and F may be used for loading and unloading. Transfer Racks A, K, and L shall be used only for loading. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All liquids and gases from the transfer operation shall be routed to one of the following systems: a vapor collection and control system; a fixed roof container that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids); a floating roof container that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids); or a pressure vessel equipped with an APCO-approved vapor recovery system that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids); or a closed VOC emission control system. [District Rules 4623 and 4624] Federally Enforceable Through Title V Permit
3. A floating roof container that meets the applicable control requirements of Section 5.0 of Rule 4623 (Storage of Organic Liquids) shall be considered not leaking when receiving unloaded liquids for compliance with Rule 4624. [District Rule 4624] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

6-27-6-31 : May 3 2013 1:41PM - EDG:ELR : Joint Inspection NOT Required

4. For the transfer of gasoline only, transfer to any stationary storage container with 250 gallon capacity or more, that is not subject to Rule 4623, shall not be allowed unless the container is equipped with a permanent submerged fill pipe and an ARB certified Phase I vapor recovery system, which is maintained and operated according to the manufacturer's specifications, or a vapor recovery system with 95% control approved by the District. [District Rule 4621] Federally Enforceable Through Title V Permit
5. All delivery tanks which previously contained organic liquids, including gasoline, with a TVP 1.5 psia or greater at the storage container's maximum organic liquid storage temperature shall be filled only at Class 1 or Class 2 loading facilities that meet the vapor collection and control requirements of District Rule 4624 or listed herein. [District Rule 4624] Federally Enforceable Through Title V Permit
6. Construction, reconstruction (as defined in District Rule 4001) or expansion of any top loading facility shall not be allowed. [District Rule 4624] Federally Enforceable Through Title V Permit
7. The organic liquid and gasoline loading operation shall be equipped with bottom loading equipment with a vapor collection and control system meeting the requirements listed in this permit. [District Rules 4621 and 4624] Federally Enforceable Through Title V Permit
8. Transfer rack and vapor collection and control equipment shall be designed, installed, maintained in accordance with the manufacturers specifications, and operated such that there are no leaks or excess organic liquid drainage at disconnections as defined herein. [District Rules 4621 and 4624] Federally Enforceable Through Title V Permit
9. During unloading of gasoline, a leak shall be defined as the dripping of VOC-containing liquid at a rate of more than three drops per minute or a reading greater than 100 percent of the Lower Explosive Limit (21,000 ppmv as propane) in accordance with EPA Method 21. [District Rule 4621] Federally Enforceable Through Title V Permit
10. For components used in the gasoline loading operation, a leak shall be defined as the dripping of VOC-containing liquid at a rate of more than three drops per minute or the detection of organic compounds, in excess of 10,000 ppm as methane measured at a distance of one centimeter from the potential source in accordance with EPA Method 21. Excess liquid drainage shall be defined as exceeding 10 milliliters per average of 3 consecutive disconnects. [District Rules 4621 and 4624] Federally Enforceable Through Title V Permit
11. For delivery vessels and components used in the organic liquid transfer operation, a leak shall be defined as the detection of organic compounds, in excess of 1,000 ppm as methane measured at a distance of one centimeter from the potential source in accordance with EPA Method 21. [District Rule 4624] Federally Enforceable Through Title V Permit
12. Equipment under vapor control shall not vent to atmosphere. [District Rules 4621 and 4624.] Federally Enforceable Through Title V Permit
13. The vapor collection and control system shall operate such that VOC emissions do not exceed 0.08 lb/1000 gallons of organic liquid loaded; maintains at least 95% capture and control efficiency of VOC and which operates so the delivery tank does not exceed 18 inches water column pressure nor 6 inches water column vacuum. [District Rule 4624] Federally Enforceable Through Title V Permit
14. No gasoline delivery vessel shall be used or operated unless it is leak-free. No gasoline delivery vessel shall be operated or loaded unless valid State of California decals are displayed on the cargo tank, attesting to the vapor integrity of the tank as verified by annual performance of CARB required Certification and Test Procedures for Vapor Recovery Systems for Cargo Tanks (Executive Order G-70-10-A) or EPA Method 27 for testing delivery vessels owned or operated by this facility. [District Rule 4621, Health & Safety Code, section 41962, and CCR, Title 17 section 94004] Federally Enforceable Through Title V Permit
15. Measurements of leak concentrations for organic liquid delivery vessels, including gasoline, shall be conducted according to the ARB Test Procedure for Determination of Leaks, TP-204.3, or EPA Method 21. [District Rules 4621 and 4624] Federally Enforceable Through Title V Permit
16. VOC emission rate from diesel loading rack shall not exceed any of the following: Fugitive emissions: 0.12 lb/hr and vapor recovery system: 0.09 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
17. VOC emission rate from fugitive components associated with the refinery vapor control system shall not exceed 6.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

18. During loading of a delivery vessel, the truck-mounted vapor return line shall be connected to the vapor recovery system listed on this permit. [District Rules 2201 and 4621] Federally Enforceable Through Title V Permit
19. A delivery vessel loading gasoline shall discontinue if its pressure relief valve opens. Corrective action shall be taken should this condition occur. [District Rules 2520 and 4621] Federally Enforceable Through Title V Permit
20. Switch loading shall not be conducted unless such transfer is made using an ARB certified vapor recovery system. [District Rules 2201 and 4621] Federally Enforceable Through Title V Permit
21. Operators shall conduct all performance tests required by the facility installation and operations manual as per the frequency outlined therein or as designated by the APCO. [District Rules 4621 and 4624] Federally Enforceable Through Title V Permit
22. The operator shall perform and record the results of monthly leak and drainage inspections of the loading and vapor collection equipment at each loading arm. During the loading of gasoline or organic liquids, leak detection shall be conducted using EPA Method 21 measuring at a distance of one centimeter from the potential source. When not in current operation, excess drainage inspections shall be conducted before 10:00 am at the disconnect of each loading arm by collecting all drainage at disconnect in a container and determining the volume within one (1) minute of collection [District Rules 2520, 40 CFR 60.502(j) and 4624] Federally Enforceable Through Title V Permit
23. The leak detection instrument shall be calibrated each day of its use, prior to use, by the procedures specified in Method 21 using the following calibration gases: A) Zero air (less than 10 ppm of hydrocarbon in air); and B) Mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rules 2520, 9.3.2 and 4624] Federally Enforceable Through Title V Permit
24. Corrective steps shall be taken at any time the operator observes a leak or excess drainage at disconnect. All equipment found leaking shall be repaired or replaced within 72 hours. If the leaking component cannot be repaired or replaced within 72 hours, the component shall be taken out of service until such time the component is repaired or replaced. The repaired or replacement equipment shall be reinspected the first time the equipment is in operation after the repair or replacement. [District Rule 4624] Federally Enforceable Through Title V Permit
25. All inspections shall be documented within the inspection log. Inspection records shall include, at a minimum, 1) date of inspection, 2) location and description of any missing, loose, leaking, or damaged equipment and any malfunction requiring repair, 3) corrective steps taken to repair or replace the equipment, 4) test method and results for leak and drainage inspections, 5) location and description of any of equipment which shall be inspected upon commencing operation after repair or replacement and 6) inspector name and signature. [District Rules 4621 and 4624] Federally Enforceable Through Title V Permit
26. Records of daily throughput of each loading rack shall be maintained and made available to the APCO, ARB, or EPA during normal business hours. [District Rules 2201, 4621, and 4624] Federally Enforceable Through Title V Permit
27. The permittee shall maintain accurate records of exempt and non-exempt components and their associated function in the Operator Management Plan (OMP) as required in section 6.1 of Rule 4455. Permit holder shall update the Operator Management Plan when new components are installed. By January 30 of each year, an annual report indicating any changes to an existing Operator Management Plan shall be submitted to the APCO. [District Rule 4455] Federally Enforceable Through Title V Permit
28. 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), CAPCOA-Revised 1995 EPA Correlation Equations and Factors for Refineries and Marketing Terminals. Components shall be screened and leak rate shall be measured at least once each quarter. If compliance with the daily emission limit is shown during each of five (5) consecutive quarterly inspections, the inspection frequency may be changed from quarterly to annual. If any annual inspection shows non-compliance with the daily emission limit, then quarterly inspections shall be resumed. [District Rule 2201] Federally Enforceable Through Title V Permit
29. 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 Rules 1070, 4621, 4624, and 4455, 6.2.2, 6.2.3 & 6.2.4] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-37-150-0

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

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

EQUIPMENT DESCRIPTION:
3000 BBBL ORGANIC LIQUID STORAGE TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-37-8

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. 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
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. 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

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

6-37-150-0 : May 20 2013 1:35PM - EDG/ELA : Joint Inspection NOT Required

6. Permittee shall maintain with the permit accurate fugitive component counts for components affixed to the tank and on piping from the tank to the vapor control system trunk line and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2a (Feb 1999) 1995 EPA Protocol Refinery Screening Value Range Emissions Factors . [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
7. VOC fugitive emissions from the components affixed to the tank and on piping from tank to vapor control system trunk line shall not exceed 0.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. 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] Federally Enforceable Through Title V Permit
10. 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 on 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] Federally Enforceable Through Title V Permit
11. 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] Federally Enforceable Through Title V Permit
12. 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
13. 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
14. The permittee shall maintain accurate records of exempt and non-exempt components and their associated function in the Operator Management Plan (OMP) as required in section 6.1 of Rule 4455. Permit holder shall update the Operator Management Plan when new components are installed. By January 30 of each year, an annual report indicating any changes to an existing Operator Management Plan shall be submitted to the APCO. [District Rule 4455]
15. All records required by this permit shall be retained for a minimum period of 5 years and shall be made available to the APCO, ARB and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
16. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: 90 lb VOC/quarter. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
17. ERC Certificate Number S-4023-1 (or certificate split from this certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

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