



May 15, 2020

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

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
Facility Number: S-37
Project Number: S-1201077

Dear Ms. Hicks:

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

The notice of preliminary decision for this project has been posted on the District's website (www.valleyair.org). After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authority to Construct with a Certificate of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

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

Thank you for your cooperation in this matter.

Sincerely,



Arnaud Marjoliet
Director of Permit Services

Enclosures

cc: Courtney Graham, CARB (w/enclosure) via email
cc: Gerardo C. Rios, EPA (w/enclosure) via EPS

Samir Sheikh
Executive Director/Air Pollution Control Officer

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Facility Name:	Kern Oil & Refining Co	Date:	May 13, 2020
Mailing Address:	7724 E Panama Lane	Engineer:	Richard Edgehill
	Bakersfield, CA 93307	Lead Engineer:	Richard Karrs
Contact Person:	Melinda Hicks, David Nielsen, and Lisa Kiehl (Ashworth Leininger Group)		
Telephone:	(661) 845-0761 #4522 (DN), (805) 705-7601 (LK)		
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E-Mail:	mhicks@kernoil.com		
Application #(s):	S-37-8-36, '-44-5, '-171-0 thru '173-0		
Project #:	S-1201077		
Deemed Complete:	March 26, 2020		

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 tanks subject to the requirements of Rule 4623
Rule 4621 Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk Plants (12/20/07)—**not applicable**—facility not a bulk plant
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.

Kern is requesting an ATC permit for Tanks 3016, 3017, 3018 (S-37-171 thru '-173), and 3019 (S-37-44) to connect the tanks to Vapor Control System (VCS) S-37-8 and to allow the storage of organic liquids as defined by Rule 4623. S-37-44 is an existing uncontrolled fixed roof tank permitted to store organic liquids with a True Vapor Pressure (TVP) less than 0.5 psi. S-37-171 thru '-173 are existing permit exempt uncontrolled fixed roof tanks, storing materials (diesel) exempt from permit per Rule 2020, Section 6.6.5 for materials with a boiling point greater than 302 deg F.

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

V. Equipment Listing

Pre-Project Equipment Description:

PTO S-37-8-33: ORGANIC LIQUID LOADING AREAS AND REFINERY VAPOR RECOVERY SYSTEM SERVING TANK S-37-150 AND INCLUDING COMPRESSOR(S), LOADING RACKS (RACKS A, F, K, L, N) WITH 10 PRODUCT LINES AND 9 VAPOR RETURN LINES

PTO S-37-44-4: 126,000 GALLON ORGANIC LIQUID STORAGE TANK (#3019)

Proposed Modification:

ATC S-37-8-36: 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 TANKS '-44 AND '-171 thru '-173 TO VAPOR CONTROL SYSTEM

ATC S-37-44-5: MODIFICATION OF 126,000 GALLON ORGANIC LIQUID STORAGE TANK (#3019): CONNECT TO VAPOR CONTROL SYSTEM '-8

Post Project Equipment Description:

PTO S-37-8-33: ORGANIC LIQUID LOADING AREAS AND REFINERY VAPOR RECOVERY SYSTEM SERVING TANK S-37-150, AND '-171 THRU '-173 AND INCLUDING COMPRESSOR(S), LOADING RACKS (RACKS A, F, K, L, N) WITH 10 PRODUCT LINES AND 9 VAPOR RETURN LINES

S-37-171-0: 126,000 GALLON ORGANIC LIQUID STORAGE TANK (#3016) WITH A SHARED VAPOR RECOVERY SYSTEM (LISTED ON PERMIT UNIT S-37-8).

S-37-172-0: 126,000 GALLON ORGANIC LIQUID STORAGE TANK (#3017) WITH A SHARED VAPOR RECOVERY SYSTEM (LISTED ON PERMIT UNIT S-37-8).

S-37-173-0: 126,000 GALLON ORGANIC LIQUID STORAGE TANK (#3018) WITH A SHARED VAPOR RECOVERY SYSTEM (LISTED ON PERMIT UNIT 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

Operation: 24 hr/day, 365 days/yr
VOC Content of Hydrocarbons: 100% by weight

S-37-8

- No change in VOC emissions for S-37-8 is proposed (connecting the new tanks will not change the emissions)
- The proposed change to S-37-8 is not a NSR Modification. There is no change to emissions or method of operation.

S-37-44

Pre-project emissions for Tank T-3019 is based on the existing emission limit for the tank as described in PTO Condition #3.

3. *The maximum emission rate of volatile organic compounds shall not exceed 14.3 lb/day. [District NSR Rule] Y*

S-37-44, and 171 thru '173

Post-project fugitive VOC emissions from equipment leaks from piping components and fittings were estimated using the existing fugitive component inventory for each tank, plus the estimated number of components to be added to connect the tanks to vapor recovery. Fugitive VOC emissions from equipment leaks are based on the number and type of piping components present within 5 feet of the shell of the tank.

B. Emission Factors

Emission factors used to estimate fugitive VOC emissions from equipment leaks at piping components associated with the tank are from Table IV-3a of the "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Correlation Equation Method" (February 1999).

If the screening value is less than 10,000 ppmv, then

Emissions (lb/yr) = $CF1 \times SV^{CF2} \times (2.20462 \text{ lb/kg}) \times (8760 \text{ hr/yr})$, where

CF1 = Correlation factor 1 for specific component type

SV = Measured screening value, ppmv VOC

CF2 = Correlation factor 2 for specific component type

If the screening value is 10,000 ppmv or more, then the CAPCOA supplies a “Pegged Value” emission rate to use for each component type. Total emissions are determined by summing the emissions from each component.

TABLE IV-3a: CAPCOA-Revised 1995 EPA Correlation Equations and Factors for Refineries and Marketing Terminals^a

Equipment Type	Service	Default Zero Factor ^b	Correlation Equation ^c	Pegged Factor ^d 10,000 ppmv
		(kg/hr)	(kg/hr)	(kg/hr)
Valves	All	0.0000078	$2.27 \times 10^{-6} * (SV)^{0.747}$	0.064
Pump Seals	All	0.000019	$5.07 \times 10^{-5} * (SV)^{0.622}$	0.089
Others ^e	All	0.000004	$8.69 \times 10^{-6} * (SV)^{0.642}$	0.082
Connectors	All	0.0000075	$1.53 \times 10^{-6} * (SV)^{0.736}$	0.03
Flanges	All	0.00000031	$4.53 \times 10^{-6} * (SV)^{0.706}$	0.095
Open-Ended Lines	All	0.000002	$1.90 \times 10^{-6} * (SV)^{0.724}$	0.033

^a Source: SBCAPCD Report, dated May 1, 1997, entitled Review of the 1995 Protocol: Thea Correlation Equation Approach To Quantifying Fugitive Hydrocarbon Emissions At Petroleum Industry Facilities. Technical corrections and adjustments were made to the refineries and marketing terminals bagged data, obtained by use of the blow through method, to account for the hydrocarbon leak flow rate.

^bThe default zero factors apply only when the screening value (SV), corrected for background, equals 0.0 ppmv (i.e., the screening value is indistinguishable from background reading). The default zero factors were based on the combined 1993 refinery and marketing terminal data only; default zero data were not collected from oil and gas production facilities.

^cThe correlation equations apply for actual screening values, corrected for background, between background and 9,999 ppmv and can be used for screening values up to 99,999 ppmv at the discretion of the local district.

^dThe 10,000 ppmv pegged factors apply for screening values, corrected for background, equal to or greater than 10,000 ppmv and are used when the correlation equations are used for screening values between background and 9,999 ppmv.

^eThe “other” component type includes instruments, loading arms, pressure relief valves, vents, compressor seals, dump lever arms, diaphragms, drains, hatches, meters, and polished rods stuffing boxes. This “others” component type should be applied for any component type other than connectors, flanges, open-ended lines, pumps, or valves. H.

Equipment	Component Counts*	% Default Zeros	% Pegged	% in Correlation Range	Correlation Screening Value (ppm)	Default Zero Factor (kg/hr)	Pegged Factor (10,000 ppmv) (kg/hr)
Valves	9,13,17,10	50	0.5	49.5	400	0.0000078	0.064
Pump Seals	0,0,0,0	50	1.0	49.0	1000	0.000019	0.089
Pressure Relief Devices	1,1,1,1	50	0.0	50.0	200	0.000004	0.082
Compressor seals	0,0,0,0	50	0.0	50.0	1000	0.000019	0.082
Others	6,6,6,6	50	0.0	50.0	1000	0.000004	0.082
Connectors	29,31,49,23	50	0.5	49.5	400	0.0000075	0.03
Flanges	18,33,41,26	50	0.5	49.5	400	0.00000031	0.095
Open-ended lines	0,0,0,0	50	0.0	50.0	1000	0.000002	0.033

*component numbers for '-44, '-171, '-172, and '-173, respectively

C. Calculations

1. Pre-Project Potential to Emit (PE1)

PE1		
Permit Unit	Daily Emissions (lb/day)	Annual Emissions (lb/year)
S-37-44 (T-3019)	14.3	5,220
S-37-171 (T-3016)	0.0	0
S-37-172 (T-3017)	0.0	0
S-37-173 (T-3018)	0.0	0

2. Post Project Potential to Emit (PE2)

PE2		
Permit Unit	Daily Emissions (lb/day)	Annual Emissions (lb/year)
S-37-8	11.9	4,358
S-37-44 (T-3019)	0.4	137
S-37-171 (T-3016)	0.5	198
S-37-172 (T-3017)	0.7	258
S-37-173 (T-3018)	0.4	157
Project VOC (excluding '-8 which is not being modified)	2.0	750

Calculations are provided in **Attachment III**. The emissions profiles are included in **Attachment IV**.

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.

The SSPE1 is presented in the Major Source Determination table below.

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.

The SSPE2 calculation is presented in the Major Source Determination table below.

5. Rule 2201 Major Source Determination

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

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

Rule 2201 Major Source Determination (lb/year)						
	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO	VOC
SSPE1*	122,874	66,989	38,914	38,914	433,532	311,337
S-37-44 (pre-project)						-5,220
S-37-44, 171 thru '-173						+750
SSPE2	122,874	66,989	38,914	38,914	433,532	306,867
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	No	Yes	Yes

Note: PM2.5 assumed to be equal to PM10

*SSPE1 was obtained from District permit database records of annual permitted emissions for all PTOs at the facility.

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

Rule 2410 Major Source Determination:

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

PSD Major Source Determination (tons/year)						
	NO₂	VOC	SO₂	CO	PM	PM₁₀
Estimated Facility PE before Project Increase	61	156	34	217	19	19
PSD Major Source Thresholds	100	100	100	100	100	100
PSD Major Source?	No	Yes	No	Yes	No	No

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-37-44

The tank satisfies Achieved-in-Practice BACT which is P/V valve.
Therefore BE = PE1 = 5,220 lb/yr.

S-37-171 thru '-173

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	750	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

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

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

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

$$\text{Emission Increase} = \text{PE} - \text{BAE}$$

Where: PE = Potential to Emit
BAE = Baseline Actual Emissions

S-37-44

PE: As this modification is to install of a vapor control system to control VOC emissions, the post project emissions are set equal to the post project potential to emit. Projected actual emissions are not utilized.

BAE: Baseline actual emissions were calculated based on the average of the 2017 and 2018 actual VOC emissions from emission inventory submittals. This period is within the past 10 years. See BAE summary in Attachment III.

Federal Modification			
Permit Unit	PE	BAE	Increase
S-37-44 (T-3019)	137	545	-508

There is not an emission increase for S-37-44.

S-37-171 thru '-173

For new emissions units ('-171 thru '-173), the increase in emissions is equal to the PE2 for each new unit included in this project. The combined PE2 is 613 lb/yr.

Since the emissions decrease from '-44 may not cancel out the increases in emissions from '-171 thru '-173, the emissions increase for the project is as follows:

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*	613	0	Yes
PM ₁₀	0	30,000	Step 2 Not Required
SO _x	0	80,000	Step 2 Not Required

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

Federal Offset Quantities:

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

VOC		Federal Offset Ratio		1.5
Permit No.	Actual Emissions (lb/year)	Potential Emissions (lb/year)	Emissions Change (lb/yr)	
S-37-171 thru '-173	0	613	613	
			0	
			0	
			0	
Net Emission Change (lb/year):			613	
Federal Offset Quantity: (NEC * 1.5)			920	

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

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

I. Project Location Relative to Class 1 Area

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

II. Project Emission Increase – Significance Determination

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

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

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)					
	NO ₂	SO ₂	CO	PM	PM ₁₀
Total PE from New and Modified Units	0	0	0	0	0
PSD Significant Emission Increase Thresholds	40	40	100	25	15
PSD Significant Emission Increase?	N	N	N	N	N

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

10. Quarterly Net Emissions Change (QNEC)

VOCs			
	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
S-37-44	137	5,220	-1,270.75
S-37-171	198	0	49.5
S-37-172	258	0	64.5
S-37-173	157	0	39.25

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:*

- Any new emissions unit with a potential to emit exceeding two pounds per day,
- The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- 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 three new vapor controlled tanks (S-37-171 thru ‘-173) 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

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

Where,

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

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

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

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

Where,

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

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

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

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

$$\text{EF2} = (1 - 0.99 = 0.01, \text{VCS}), \text{EF1} = (1 - 0.1 = 0.9), \text{P/V valve}$$

S-37-44:

$$\begin{aligned}\text{AIPE} &= 0.4 - (14.3 \times (0.01/0.9)) \\ &= 0.4 - 0.2 \\ &= 0.2 \text{ lb VOC/day}\end{aligned}$$

As demonstrated above, the AIPE is not greater than 2.0 lb/day for VOC emissions. 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 emissions units for all emissions units in the project for which there is an emission increase. In this case, BACT is required for S-33-171 through 173.

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 V**).

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 VI**), BACT has been satisfied with the following:

S-37-171, 172, and 173

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	306,867	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)

As calculated in Section VII.C.6 above, the BE from Tanks 3016, 3017, 3018, and 3019 is based on historical actual emissions from 2017-2018. As calculated below, offsets are not required for this project.

Offsets			
Permit Unit	PE2 (lb/year)	BE (lb/year)	Emissions Increase (lb/year)*
S-37-44 (T-3019)	137	5,220	-5,083
S-37-171 (T-3016)	198	0	0
S-37-172 (T-3017)	258	0	258
S-37-173 (T-3018)	157	0	0
Project VOC			-4,825

*Emission increases less than 0.5 lb/day are rounded to zero by District policy APR 1130.

Offsets will not be required for the project.

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	311,337	306,867	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

SSIPE= SSPE2 – SSPE1

Stationary Source Increase in Permitted Emissions (SSIPE)			
Pollutant	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)
VOC	306,867	311,337	-4,470

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 VII** 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 VIII** 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 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 any of the units being modified (as defined above). There is no change in emissions from S-37-8. Tanks S- 37-44 and ‘-171 through ‘-173 (KOR # 3016 thru # 3019) are existing and installation of the vapor control system results in a decrease in emissions.

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 IX**), 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:

1. Summary

1.1 RMR

Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required	Special Permit Requirements
8	N/A ¹	N/A ¹	N/A ¹	N/A ¹	No	No
44	N/A ¹	N/A ¹	N/A ¹	N/A ¹	No	No
171	0.00	0.00	0.00	1.56E-09	No	No
172	0.01	0.00	0.00	2.06E-09	No	No
173	0.00	0.00	0.00	1.26E-09	No	No
Project Totals	0.02	0.00	0.00	4.88E-09		
Facility Totals	>1	0.99	0.09	18.1E-06		

Notes:

- Units -8 & -44 do not result in increases in emissions; therefore, no risk analysis was completed for these units.

1.2 Proposed Permit Requirements

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

Unit # 8-36, 44-5, 171-0, 172-0, & 173-0

- No special requirements.

Discussion of T-BACT

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

Rule 4623 Storage of Organic Liquids

The 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 tanks 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 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 S-37-8 is currently operating in compliance with the rule and the project is not expected to affect compliance status. Continued 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 (this document) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District

therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing or former use. Furthermore, the District determined that the activity will not have a significant effect on the environment. Therefore, the District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15301 (Existing Facilities), and finds that the project is exempt per the common sense exemption that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

Indemnification Agreement/Letter of Credit Determination

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

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

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue S-37-8-36, '-44-5, '-171-0 thru '173-0 subject to the permit conditions on the attached draft ATC in **Attachment X**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-37-8	3020-01-F	415 HP	\$731.00
S-37-44	3020-05E	126,000 gallons	\$296.00
S-37-171	3020-05E	126,000 gallons	\$296.00
S-37-172	3020-05E	126,000 gallons	\$296.00
S-37-173	3020-05-E	126,000 gallons	\$296.00

Attachments

- I: Current PTOs
- II: Facility Plot Plan
- III: Emissions Calculations
- IV: Emissions Profile
- V: BACT Guideline
- VI: BACT Analysis
- VII: Statewide Compliance Statement
- VIII: Title V Compliance Certification Form
- IX: HRA Summary
- X: Draft ATCs

ATTACHMENT I

Current PTOs

PERMIT UNIT: S-37-8-33

EXPIRATION DATE: 08/31/2022

SECTION: 25 TOWNSHIP: 30S RANGE: 28E

EQUIPMENT DESCRIPTION:

ORGANIC LIQUID LOADING AREAS AND REFINERY VAPOR RECOVERY SYSTEM SERVING TANK S-37-150 AND INCLUDING COMPRESSOR(S), LOADING RACKS (RACKS A, F, K, L, N) 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.

Facility Name: KERN OIL & REFINING CO.
Location: PANAMA LN & WEEDPATCH HWY, BAKERSFIELD, CA 93307-9210
9-21-8-33 JUL 24 2019 11:07AM - EDOEH/EL

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-37-44-4

EXPIRATION DATE: 08/31/2022

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

EQUIPMENT DESCRIPTION:

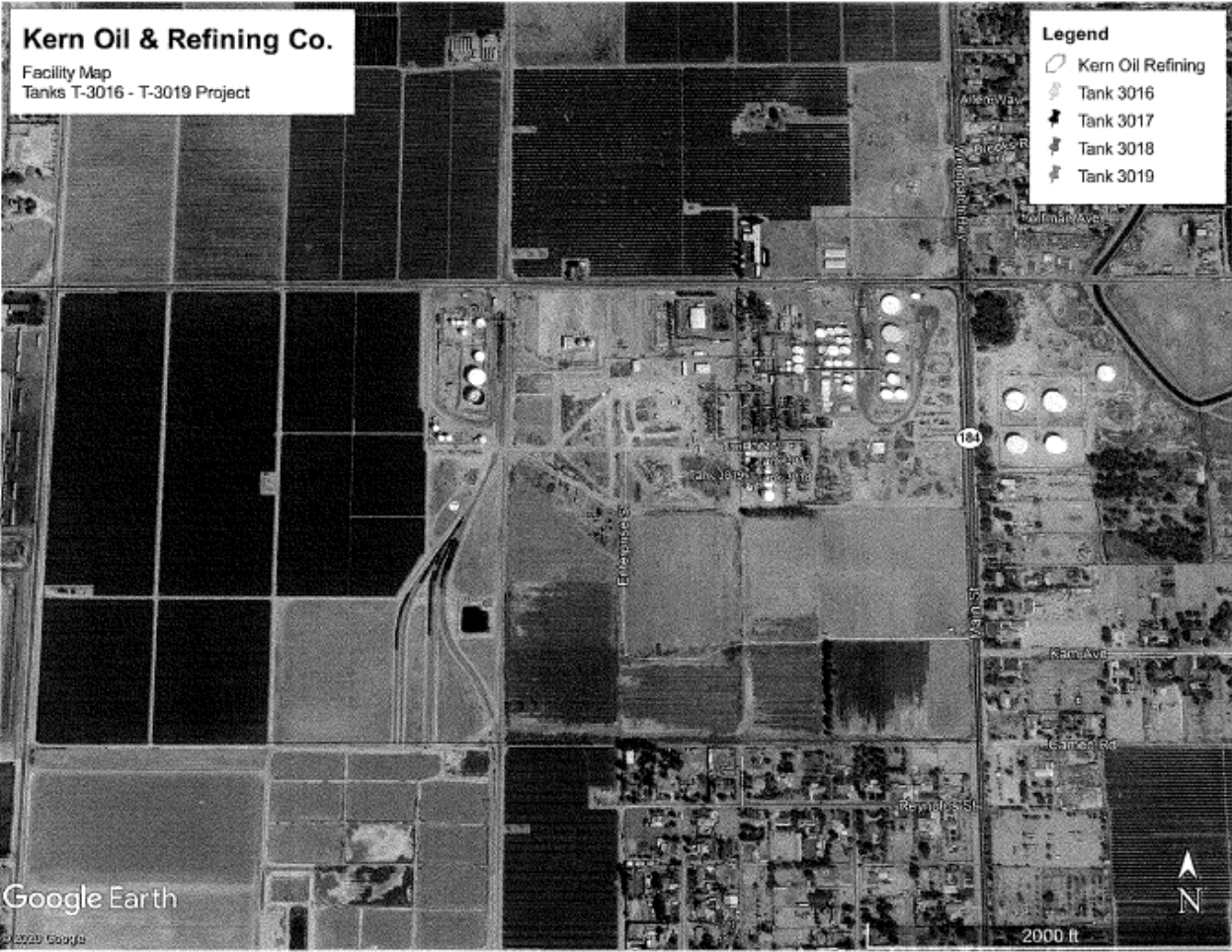
126,000 GALLON ORGANIC LIQUID STORAGE TANK (#3019)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure (TVP) of liquids placed, stored, or held in this tank shall be less than 0.5 psi. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Average daily tank throughput (on annual basis) shall not exceed 193 bbl/day of fluid without prior District approval. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The maximum emission rate of volatile organic compounds shall not exceed 14.3 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Tank shall be equipped with an operational stored liquid temperature indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
5. All tank seams, welds, flanges and joints shall be maintained in leak-free condition. A liquid leak is defined as a leak rate of greater than or equal to 30 drops per minute. A gas leak is defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21. [District NSR Rule and District Rule 4623] Federally Enforceable Through Title V Permit
6. There shall be no open, water draw-off drain. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The operator shall conduct TVP testing on the liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
8. Except for crude oil with a API gravity 26 degrees or less, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures from the oil and gas section of "ARB Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588," dated August 1989. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and US EPA. In lieu of performing a TVP test, an operator may use Appendix A of District Rule 4623 to determine the TVP of the stored organic liquid provided the storage temperature listed in Appendix A is not exceeded at any time. [District Rule 4623, 6.4.2 and 6.4.3] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph," as approved by ARB and US EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

10. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287-92 (2000) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)." Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit
11. The permittee shall keep accurate records of true vapor pressure, storage temperature and daily liquid throughput for a period of five years, and shall make such records available for District inspection upon request. [District NSR Rule and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. This unit commenced construction, modification, or reconstruction before June 11, 1973. Therefore, the requirements of 40 CFR 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

ATTACHMENT II
Facility Plot Plan





ATTACHMENT III Emissions Calculations

Baseline Actual Emissions (only for existing permitted tank S-37-44)

PTO S-37-44

Historical Actual Emissions

Kern Oil & Refining Co.
Fixed Roof Tank VRS Connection

Historical Actual Emissions Data

Average Emissions Data for 2017 - 2018

Tank 3019 PTO S-37-44

Tank Worksheet for Emission Inventory 2017-2018

Permit	Tank #	Reporting Year	Tank Description	Total Throughput For Year (BBLs)	Total Throughput For Year (Gallons)	Most Recent TVP	Date of TVP	VOC Emissions (From Tanks)
44	3019	2018	3000 bbl tank	2,830	115,238	0.4	9/29/2018	568.96
44	3019	2017	3000 bbl tank	1,440	60,480	<0.05	9/30/2017	521.67

2017-2018 Average 545.315

Notes:
Tank 3019 Emissions as reported in Annual Emission Inventory Reports.

Post project potential to Emit

S-37-44

Emission Calculations

Tank 3019	Service	Component Count	% Default Zero	% Pegged	% in Correlation Range	Default Zero	Pegged 9,999 ppmv	Correlation	VOC Emissions
			%	%	%	(lb/day)	(lb/day)	(lb/day)	(lb/day)
Valves	All	9	50.0%	0.50%	49.5%	0.002	0.005	0.047	0.05
Pump Seals	All	0	50.0%	1.00%	49.0%	0.000	0.000	0.000	0.00
Compressor Seals	All	0	50.0%	0.00%	50.0%	0.000	0.000	0.000	0.00
Others	All	6	50.0%	0.00%	50.0%	0.001	0.000	0.041	0.04
Drain	All	1	50.0%	0.00%	50.0%	0.000	0.000	0.003	0.00
Pressure Relief Device	All	1	50.0%	0.00%	50.0%	0.000	0.000	0.003	0.00
Connectors	All	29	50.0%	0.50%	49.5%	0.006	0.010	0.096	0.11
Flanges	All	18	50.0%	0.50%	49.5%	0.000	0.014	0.147	0.16
Open-Ended Lines	All	0	50.0%	0.00%	50.0%	0.000	0.000	0.000	0.00
Tank 3019 Total									0.38

PE2			
Permit Unit		Daily Emissions (lb/day)	Annual Emissions (lb/year)
S-37-44	Tank 3019	0.38	137
Project VOC		0.38	137

Fugitive Component Inventory:

S-37-171

Emission Calculations

Tank 3016	Service	Component Count	% Default Zero	% Pegged	% in Correlation Range	Default Zero	Pegged 9,999 ppmv	Correlation	VOC Emissions
			%	%	%	(lb/day)	(lb/day)	(lb/day)	(lb/day)
Valves	All	13	50.0%	0.50%	49.5%	0.003	0.008	0.068	0.08
Pump Seals	All	0	50.0%	1.00%	49.0%	0.000	0.000	0.000	0.00
Compressor Seals	All	0	50.0%	0.00%	50.0%	0.000	0.000	0.000	0.00
Others	All	6	50.0%	0.00%	50.0%	0.001	0.000	0.041	0.04
Drain	All	1	50.0%	0.00%	50.0%	0.000	0.000	0.003	0.00
Pressure Relief Device	All	1	50.0%	0.00%	50.0%	0.000	0.000	0.003	0.00
Connectors	All	31	50.0%	0.50%	49.5%	0.006	0.011	0.102	0.12
Flanges	All	33	50.0%	0.50%	49.5%	0.000	0.026	0.269	0.30
Open-Ended Lines	All	0	50.0%	0.00%	50.0%	0.000	0.000	0.000	0.00
Tank 3016 Total									0.54

PE2			
Permit Unit		Daily Emissions (lb/day)	Annual Emissions (lb/year)
S-37-xx	Tank 3016	0.54	198
Project VOC		0.54	198

Fugitive Component Inventory:

S-37-172

Emission Calculations

Tank 3017	Service	Component Count	% Default Zero	% Pegged	% in Correlation Range	Default Zero	Pegged 9,999 ppmv	Correlation	VOC Emissions
			%	%	%	(lb/day)	(lb/day)	(lb/day)	(lb/day)
Valves	All	17	50.0%	0.50%	49.5%	0.004	0.010	0.089	0.10
Pump Seals	All	0	50.0%	1.00%	49.0%	0.000	0.000	0.000	0.00
Compressor Seals	All	0	50.0%	0.00%	50.0%	0.000	0.000	0.000	0.00
Others	All	6	50.0%	0.00%	50.0%	0.001	0.000	0.041	0.04
Drain	All	1	50.0%	0.00%	50.0%	0.000	0.000	0.003	0.00
Pressure Relief Device	All	1	50.0%	0.00%	50.0%	0.000	0.000	0.003	0.00
Connectors	All	49	50.0%	0.50%	49.5%	0.010	0.017	0.161	0.19
Flanges	All	41	50.0%	0.50%	49.5%	0.000	0.033	0.334	0.37
Open-Ended Lines	All	0	50.0%	0.00%	50.0%	0.000	0.000	0.000	0.00
Tank 3017 Total									0.71

PE2			
Permit Unit		Daily Emissions (lb/day)	Annual Emissions (lb/year)
S-37-xx	Tank 3017	0.71	258
Project VOC		0.71	258

S-37-173

Emission Calculations

Tank 3018	Service	Component Count	% Default Zero	% Pegged	% in Correlation Range	Default Zero	Pegged 9,999 ppmv	Correlation	VOC Emissions
			%	%	%	(lb/day)	(lb/day)	(lb/day)	(lb/day)
Valves	All	10	50.0%	0.50%	49.5%	0.002	0.006	0.052	0.06
Pump Seals	All	0	50.0%	1.00%	49.0%	0.000	0.000	0.000	0.00
Compressor Seals	All	0	50.0%	0.00%	50.0%	0.000	0.000	0.000	0.00
Others	All	6	50.0%	0.00%	50.0%	0.001	0.000	0.041	0.04
Drain	All	1	50.0%	0.00%	50.0%	0.000	0.000	0.003	0.00
Pressure Relief Device	All	1	50.0%	0.00%	50.0%	0.000	0.000	0.003	0.00
Connectors	All	23	50.0%	0.50%	49.5%	0.005	0.008	0.076	0.09
Flanges	All	26	50.0%	0.50%	49.5%	0.000	0.021	0.212	0.23
Open-Ended Lines	All	0	50.0%	0.00%	50.0%	0.000	0.000	0.000	0.00
Tank 3018 Total									0.43

PE2			
Permit Unit		Daily Emissions (lb/day)	Annual Emissions (lb/year)
S-37-xx	Tank 3018	0.43	157
Project VOC		0.43	157

ATTACHMENT IV Emissions Profiles

 SOUTHNT1 PAS - [View Application Emissions: S-37-8-36]

 File Actions Window

Permit #: S 37 -8 -36 Issued: / /
Implemented: / /

Facility: KERN OIL & REFINING CO.

Last Updated

03/28/20 EDGEHILR

☐ Use PTO
emissions

Equipment
Prebaselined: ☐ Yes
☐ No

PM2.5/PM10 %

PM2.5 (lb/Yr)

NOX

SOX

PM10

CO

VOC

Potential to Emit (lb/Yr):

0

0

0

0

4358

Daily Emis. Limit (lb/Day):

0.0

0.0

0.0

0.0

11.9

Quarterly Net Emissions
Change (lb/Qtr)

1:

0

0

0

0

0

2:

0

0

0

0

0

3:

0

0

0

0

0

4:

0

0

0

0

0

Check if offsets are triggered
but exemption applies

☐

☐

☐

☐

☐

Offset Ratio:

1:

Quarterly Offset
Amounts (lb/Qtr)

2:

3:

4:

SLC ID (PTE):

SLC ID (DEL):

Facility SLC

Exit

Permit #: S 37 -44 -5 Issued: / /
Implemented: / /

Facility: KERN OIL & REFINING CO.

Last Updated:

03/28/20 EDGEHILR

☐ Use PTO
emissions

Equipment
Prebaselined: ☐ Yes
☐ No

PM2.5/PM10 %
PM2.5 (lb/Yr)

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0	0	0	0	137
Daily Emis. Limit (lb/Day):	0.0	0.0	0.0	0.0	0.4
1:	0	0	0	0	(1270)
Quarterly Net Emissions 2:	0	0	0	0	(1271)
Change (lb/Qtr) 3:	0	0	0	0	(1271)
4:	0	0	0	0	(1271)

Check if offsets are triggered
but exemption applies

☐ ☐ ☐ ☐ ☐

Offset Ratio:

1:					
Quarterly Offset 2:					
Amounts (lb/Qtr) 3:					
4:					

SLC ID (PTE):

SLC ID (DEL):

Facility SLC

Exit

Permit #: S 37 -171 -0

Issued: / /
Implemented: / /

Last Updated

04/06/20 EDGEHILR

Facility: KERN OIL & REFINING CO.

☐ Use PTO
emissions

Equipment
Prebaselined: ☐ Yes
☐ No

PM2.5/PM10 %

PM2.5 (lb/Yr)

NOX

SOX

PM10

CO

VOC

Potential to Emit (lb/Yr):

0

0

0

0

198

Daily Emis. Limit (lb/Day):

0.0

0.0

0.0

0.0

0.5

1:

0

0

0

0

49

Quarterly Net Emissions

2:

0

0

0

0

49

Change (lb/Qtr)

3:

0

0

0

0

50

4:

0

0

0

0

50

Check if offsets are triggered
but exemption applies

☐

☐

☐

☐

☐

Offset Ratio:

1:

Quarterly Offset

2:

Amounts (lb/Qtr)

3:

4:

SLC ID (PTE):

SLC ID (DEL):

Facility SLC

Exit

Permit #: S 37 -172 -0

Issued: / /
Implemented: / /

Last Updated

03/28/20 EDGEHILR

Facility: KERN OIL & REFINING CO.

☐ Use PTO
emissions

Equipment
Prebaselined: ☐ Yes
☐ No

PM2.5/PM10 %

PM2.5 (lb/Yr)

NOX

SOX

PM10

CO

VOC

Potential to Emit (lb/Yr):

0

0

0

0

258

Daily Emis. Limit (lb/Day):

0.0

0.0

0.0

0.0

0.7

Quarterly Net Emissions
Change (lb/Qtr)

1:

0

0

0

0

64

2:

0

0

0

0

64

3:

0

0

0

0

65

4:

0

0

0

0

65

Check if offsets are triggered
but exemption applies

☐

☐

☐

☐

☐

Offset Ratio:

Quarterly Offset
Amounts (lb/Qtr)

1:

2:

3:

4:

SLC ID (PTE):

SLC ID (DEL):

Facility SLC

Exit

Permit #: S 37 -173 -0

Issued: / /
Implemented: / /

Last Updated

03/28/20 EDGEHILR

Facility: KERN OIL & REFINING CO.

☐ Use PTO
emissions

Equipment
Prebaselined: ☐ Yes
☐ No

PM2.5/PM10 %

PM2.5 (lb/Yr)

NOX

SOX

PM10

CO

VOC

Potential to Emit (lb/Yr):

0

0

0

0

157

Daily Emis. Limit (lb/Day):

0.0

0.0

0.0

0.0

0.4

1:

0

0

0

0

39

Quarterly Net Emissions 2:

0

0

0

0

39

Change (lb/Qtr) 3:

0

0

0

0

39

4:

0

0

0

0

40

Check if offsets are triggered
but exemption applies

☐

☐

☐

☐

☐

Offset Ratio:

1:

Quarterly Offset 2:

Amounts (lb/Qtr) 3:

4:

SLC ID (PTE):

SLC ID (DEL):

Facility SLC

Exit

ATTACHMENT V

BACT Guideline

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 7.3.1*

Last Update: 10/01/2002

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 VI

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 to the refinery vapor control system 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 VII

Statewide Compliance Statement

Statement of Statewide Compliance:

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

ATTACHMENT VIII

Title V Compliance Certification Form



San Joaquin Valley Air Pollution Control District



TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

☐ ADMINISTRATIVE AMENDMENT ☒ MINOR MODIFICATION ☐ SIGNIFICANT MODIFICATION

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

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

- ☒ 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.
- ☒ For minor modifications, this application meets the criteria for use of minor permit modification procedures pursuant to District Rule 2520.

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



Signature of Responsible Official

3/5/2020

Date

David A McCoy

Name of Responsible Official (please print)

Vice President - Refining

Title of Responsible Official (please print)

**ATTACHMENT IX
HRA SUMMARY**

San Joaquin Valley Air Pollution Control District

Risk Management Review

To: Richard U Edgehill – Permit Services
From: Kyle J Melching – Technical Services
Date: April 01, 2020
Facility Name: KERN OIL & REFINING CO.
Location: PANAMA LN & WEEDPATCH HWY, BAKERSFIELD
Application #(s): S-37-8-36, -44-5, -171-0, -172-0, -173-0
Project #: S-1201077

1. Summary

1.1 RMR

Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required	Special Permit Requirements
8	N/A ¹	N/A ¹	N/A ¹	N/A ¹	No	No
44	N/A ¹	N/A ¹	N/A ¹	N/A ¹	No	No
171	0.00	0.00	0.00	1.56E-09	No	No
172	0.01	0.00	0.00	2.06E-09	No	No
173	0.00	0.00	0.00	1.26E-09	No	No
Project Totals	0.02	0.00	0.00	4.88E-09		
Facility Totals	>1	0.99	0.09	18.1E-06		

Notes:

- Units -8 & -44 do not result in increases in emissions; therefore, no risk analysis was completed for these units.

1.2 Proposed Permit Requirements

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

Unit # 8-36, 44-5, 171-0, 172-0, & 173-0

- No special requirements.

2. Project Description

Technical Services received a request on April 01, 2020 to perform a Risk Management Review (RMR) and Ambient Air Quality Analysis (AAQA) for the following:

- Unit -8-36: MODIFICATION OF ORGANIC LIQUID LOADING AREAS AND REFINERY VAPOR RECOVERY SYSTEM SERVING TANK S-37-150 AND INCLUDING COMPRESSOR(S), LOADING RACKS (RACKS A, F, K, L, N) WITH 10 PRODUCT LINES AND 9 VAPOR RETURN LINES: CONNECT TANKS -44 AND -171 THRU -173 TO VAPOR CONTROL SYSTEM

- Unit -44-5: MODIFICATION OF 126,000 GALLON ORGANIC LIQUID STORAGE TANK (#3019): CONNECT TO SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-37-8.
- Unit -171-0: 126,000 GALLON ORGANIC LIQUID STORAGE TANK (#3016) WITH A SHARED VAPOR RECOVERY SYSTEM (LISTED ON PERMIT UNIT S-37-8).
- Unit -172-0: 126,000 GALLON ORGANIC LIQUID STORAGE TANK (#3017) WITH A SHARED VAPOR RECOVERY SYSTEM (LISTED ON PERMIT UNIT S-37-8).
- Unit -173-0: 126,000 GALLON ORGANIC LIQUID STORAGE TANK (#3018) WITH A SHARED VAPOR RECOVERY SYSTEM (LISTED ON PERMIT UNIT S-37-8).

3. RMR Report

3.1 Analysis

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

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

Then, generally no further analysis is required.

The District's significant prioritization score threshold is defined as being equal to or greater than 1.0. If a preliminary analysis demonstrates that either the unit(s) or the project's or the facility's total prioritization score is greater than the District threshold, a screening or a refined assessment is required.

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

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

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

These emissions were input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy, risks from the proposed unit's toxic emissions were prioritized using the procedure in the 2016 CAPCOA Facility Prioritization Guidelines. The prioritization score for this proposed facility was greater than 1.0 (see RMR Summary Table). Therefore, a refined health risk assessment was required.

The AERMOD model was used, with the parameters outlined below and meteorological data for 2007-2011 from Arvin (rural dispersion coefficient selected) to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a

receptor grid. These dispersion factors were input into the SHARP Program, which then used the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Source Process Rates					
Unit ID	Process ID	Process Material	Process Units	Hourly Process Rate	Annual Process Rate
171	1	VOC	LB	0.023	198
172	1	VOC	LB	0.029	258
173	1	VOC	LB	0.018	157

Circular Area Source Parameters				
Unit ID	Unit Description	Release Height (m)	Radius (m)	Area (m ²)
171	171	10.41	3.81	45.8
172	172	10.41	3.81	45.8
173	173	10.41	3.81	45.8

4. Conclusion

4.1 RMR

The cumulative acute and chronic indices for this facility, including this project, are below 1.0; and the cumulative cancer risk for this facility, including this project, is less than 20 in a million. In addition, the cancer risk for each unit in this project is less than 1.0 in a million. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

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

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

4.2 AAQA

An Ambient Air Quality Analysis was requested; however, since there is no current AAQA standard for VOC's, the analysis was not performed.

5. Attachments

- Modeling request from the project engineer
- Additional information from the applicant/project engineer
- Prioritization score w/ toxic emissions summary
- Facility Summary

ATTACHMENT X
DRAFT ATCS

*San Joaquin Valley
Air Pollution Control District*

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-37-8-36

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

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

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

EQUIPMENT DESCRIPTION:

MODIFICATION OF ORGANIC LIQUID LOADING AREAS AND REFINERY VAPOR RECOVERY SYSTEM SERVING TANK S-37-150 AND INCLUDING COMPRESSOR(S), LOADING RACKS (RACKS A, F, K, L, N) WITH 10 PRODUCT LINES AND 9 VAPOR RETURN LINES: CONNECT TANKS '-44 AND '-171 THRU '-173 TO VAPOR CONTROL SYSTEM

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. 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

CONDITIONS CONTINUE ON NEXT PAGE

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

Samir Sheikh, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

S-37-8-36 : May 7 2020 11:26AM -- SCANDURL : Joint Inspection NOT Required

5. 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
6. 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
7. 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
8. 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
9. 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
10. 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
11. 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
12. 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 the surface of the component interface 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
13. 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 the surface of the component interface from the potential source in accordance with EPA Method 21. [District Rule 4624] Federally Enforceable Through Title V Permit
14. Equipment under vapor control shall not vent to atmosphere. [District Rules 4621 and 4624.] Federally Enforceable Through Title V Permit
15. 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
16. 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
17. 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
18. 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

CONDITIONS CONTINUE ON NEXT PAGE

19. 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
20. 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
21. 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
22. 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
23. 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
24. 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 the surface of the component interface 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. This unit is subject to Rule 4455 Leak Detection and Repair Conditions on the facility wide permit S-37-0. [District Rule 4455] Federally Enforceable Through Title V Permit

DRAFT

*San Joaquin Valley
Air Pollution Control District*

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-37-44-5

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

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

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

EQUIPMENT DESCRIPTION:

MODIFICATION OF 126,000 GALLON ORGANIC LIQUID STORAGE TANK (#3019): CONNECT TO SHARED VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT 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. ATC shall be implemented concurrently with or subsequent to ATC S-37-8-36. [District Rule 2201]
4. 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
5. A leak free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Samir Sheikh, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

S-37-44-5 : May 7 2020 11:26AM -- SCANDURL : Joint Inspection NOT Required

6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. VOC fugitive emissions from the components affixed to the tank and on piping from tank to vapor control system trunk line shall not exceed 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. 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-3a (Feb 1999), Correlation Equations Method. [District Rules 2201] Federally Enforceable Through Title V Permit
9. Operator shall maintain records to demonstrate compliance with fugitive VOC emissions limit of this permit annually. Compliance shall be demonstrated by calculation, using the correlation equations, zero default and 10,000 ppmv pegged factors set forth in the CAPCOA California implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-3a, February 1999, and the average emission concentrations of total organic compounds measured for each component during all inspections conducted during the prior 365 day period. [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. This unit commenced construction, modification, or reconstruction before June 11, 1973. Therefore, the requirements of 40 CFR 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

DRAFT

*San Joaquin Valley
Air Pollution Control District*

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-37-171-0

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

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

EQUIPMENT DESCRIPTION:
126,000 GALLON ORGANIC LIQUID STORAGE TANK (#3016) WITH A SHARED VAPOR RECOVERY SYSTEM
(LISTED ON PERMIT UNIT 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. ATC shall be implemented concurrently with or subsequent to ATCs S-37-8-36 and '-44-5. [District Rule 2201]
4. 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
5. A leak free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. 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.

Samir Sheikh, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

S-37-171-0 : May 7 2020 11:26AM -- SCANDURL : Joint Inspection NOT Required

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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 0.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. 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-3a (Feb 1999), Correlation Equations Method . [District Rules 2201] Federally Enforceable Through Title V Permit
9. Operator shall maintain records to demonstrate compliance with fugitive VOC emissions limit of this permit annually. Compliance shall be demonstrated by calculation, using the correlation equations, zero default and 10,000 ppmv pegged factors set forth in the CAPCOA California implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-3a, February 1999, and the average emission concentrations of total organic compounds measured for each component during all inspections conducted during the prior 365 day period. [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. This unit commenced construction, modification, or reconstruction before June 11, 1973. Therefore, the requirements of 40 CFR 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

DRAFT

*San Joaquin Valley
Air Pollution Control District*

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-37-172-0

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

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

EQUIPMENT DESCRIPTION:
126,000 GALLON ORGANIC LIQUID STORAGE TANK (#3017) WITH A SHARED VAPOR RECOVERY SYSTEM
(LISTED ON PERMIT UNIT 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. ATC shall be implemented concurrently with or subsequent to ATCs S-37-8-36 and '-44-5. [District Rule 2201]
4. 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
5. A leak free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. 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.

Samir Sheikh, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

S-37-172-0 : May 7 2020 11:26AM -- SCANDURL : Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

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. 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-3a (Feb 1999), Correlation Equations Method . [District Rules 2201] Federally Enforceable Through Title V Permit
9. Operator shall maintain records to demonstrate compliance with fugitive VOC emissions limit of this permit annually. Compliance shall be demonstrated by calculation, using the correlation equations, zero default and 10,000 ppmv pegged factors set forth in the CAPCOA California implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-3a, February 1999, and the average emission concentrations of total organic compounds measured for each component during all inspections conducted during the prior 365 day period. [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. This unit commenced construction, modification, or reconstruction before June 11, 1973. Therefore, the requirements of 40 CFR 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

DRAFT

*San Joaquin Valley
Air Pollution Control District*

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-37-173-0

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

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

EQUIPMENT DESCRIPTION:
126,000 GALLON ORGANIC LIQUID STORAGE TANK (#3018) WITH A SHARED VAPOR RECOVERY SYSTEM
(LISTED ON PERMIT UNIT 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. ATC shall be implemented concurrently with or subsequent to ATCs S-37-8-36 and '-44-5. [District Rule 2201]
4. 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
5. A leak free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. 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.

Samir Sheikh, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

S-37-173-0 : May 7 2020 11:26AM -- SCANDURL : Joint Inspection NOT Required

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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 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. 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-3a (Feb 1999), Correlation Equations Method . [District Rules 2201] Federally Enforceable Through Title V Permit
9. Operator shall maintain records to demonstrate compliance with fugitive VOC emissions limit of this permit annually. Compliance shall be demonstrated by calculation, using the correlation equations, zero default and 10,000 ppmv pegged factors set forth in the CAPCOA California implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-3a, February 1999, and the average emission concentrations of total organic compounds measured for each component during all inspections conducted during the prior 365 day period. [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. This unit commenced construction, modification, or reconstruction before June 11, 1973. Therefore, the requirements of 40 CFR 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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