



AUG 12 2016

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

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-37
Project # 1161937**

Dear Mr. 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 authorizes an organic liquid transfer operation.

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

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

Thank you for your cooperation in this matter.

Sincerely,



Arnaud Marjollet
Director of Permit Services

Enclosures

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

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San Joaquin Valley Air Pollution Control District
Application Review
Organic Liquid Transfer Rack

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Application #(s): S-37-155-0
Project #: 1161937
Deemed Complete: May 24, 2016

Date: July 12, 2016
Engineer: Richard Edgehill
Lead Engineer: Dan Klevann

I. Proposal

Kern Oil & Refining Co (KOR) has requested an Authority to Construct (ATC) permit to authorize an organic liquid transfer operation (Rack R) which is currently exempt from permit pursuant to Section 6.7 of Rule 2020. The loading rack will process liquids not listed as exempt in Rule 2020 Section 6.7.

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

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

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (2/18/16)
Rule 2410	Prevention of Significant Deterioration (June 16, 2011)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)

Subpart J Standards of Performance for Petroleum Refineries – **not applicable** – Rack R does not include a FCC catalyst regenerator, fuel gas combustion device, or Claus sulfur recovery plant

Subpart GGG –Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after January 4, 1983, and on or Before November 7, 2006

Subpart GGGa –Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After November 7, 2006

Rule 4102 Nuisance (12/17/92)
Rule 4455 Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants (4/20/05) – **not applicable to components associated with Organic Liquid Loading Operation Rack R**
Rule 4624 Transfer of Organic Liquid (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.

A location map is included in **Attachment I**.

IV. Process Description

Kern Oil is a petroleum refining operation engaged in the production of petroleum distillates, primarily finished gasoline and diesel fuels. In general, the refinery uses transfer racks throughout the refinery to unload raw materials for processing and then to load finished fuels into tanker trucks for delivery of these products into the market. The facility is available for transfer operations 24 hours/day, 7 days/week.

Rack R has three (3) loading/unloading areas for receiving tanker trucks and is currently exempt from permit.

Proposed Modification

Kern Oil is proposing to use existing transfer equipment at Rack R to load and unload a range of organic liquids with True Vapor Pressures (TVP) ranging up to 10 PSI. Organic liquids with a high TVP (1.5 psia and greater) would only be unloaded from tanker trucks and stored in existing permitted tanks. Organic liquids with a low TVP (<1.5 PSI), would be both loaded to tanker trucks and unloaded at Rack R.

V. Equipment Listing

ATC S-37-155-0: ORGANIC LIQUID TRANSFER RACK R

VI. Emission Control Technology Evaluation

Rack R Loading Operation (to tanker trucks) Exempt from Rule 4624

Fugitive emissions are the only source of emissions associated with Rack R and these calculations are found below in Section VII. Kern intends to load organic liquids with a TVP < 1.5 PSI; therefore the loading operation is not subject to emission control requirements of Rule 4624.

Rack R Unloading Operation (from tanker trucks) Subject to Rule 4624

Kern Oil would use Rack R to unload organic liquids with a range of TVPs up to a maximum TVP of as high as 10 PSI. Organic liquids would be unloaded to tanks that meet Rule 4623 and transfer rack equipment in light liquid service would meet leak inspection requirements of Rule 4624. During the unloading process, there is low risk that Volatile Organic Carbons (VOCs) would be released to the atmosphere due to the vacuum created by the transfer pump.

Fugitive Emissions

New fugitive components will be installed with authorization of Rack R. VOCs from fugitive components will be minimized with an inspection, maintenance, and repair program consistent with Rule 4455 and 40 CFR 60 Subpart GGG (Subpart VV).

VII. General Calculations

A. Assumptions

- Facility operates 24 hr/day, 365 days/yr.
- The project results in VOC emissions only.
- All existing (previously handling exempt liquid and now handling nonexempt liquid) and new components at Rack R process organic liquid with an API Gravity greater than 30 deg (District Policy SSP-2015) are listed in the table below.
- The liquids loaded and unloaded are not Greenhouse Gases (GHGs)

Component Type	# of leakers (>10,000 ppmv)	# of non-leakers (<10,000 ppmv)	Service Type
Valves	1	7	Light Liquid
Pump seals	0	2	Light Liquid
Others	0	10	Light Liquid
Fittings (connectors & flanges)	3	20	Light Liquid

	TVP	Specific Gravity	# trucks/day	# disconnects/day
Loading to trucks	< 1.5 psia	0.915 g/mL	1.4	3
Unloading from trucks	≥ 1.5 psia	0.8 g/mL	36	72

B. Emission Factors

Fugitive component VOC emissions will be calculated using CAPCOA Screening Range Emissions factors for Marketing Terminals, from California Implementation Guidelines for Estimating Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2b, 1995 EPA Protocol Refinery Screening Value Range Emission Factors. The calculation spreadsheet is included in **Attachment II**.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

The permit unit is new and therefore PE1 = 0.

2. Post Project Potential to Emit (PE2)

Disconnects:

$$[(0.915 \text{ g/mL} \times 3 \text{ disconnects}) + (0.8 \text{ g/mL} \times 72 \text{ leaks})] (10 \text{ ml/disconnect})(\text{lb}/454 \text{ g})$$

$$= 1.3 \text{ lb VOC/day (485 lb/yr)}$$

Fugitive Emissions

$$2.2 \text{ lb/kg} \times 24 \text{ hr/day} \times [7 \times 0.000015 \text{ kg/hr valve} + 2 \times 0.00024 \text{ kg/hr pump seal} + 10 \times 0.000024 \text{ kg/hr others} + 20 \times 0.0000072 \text{ fitting} + 1 \times 0.023 \text{ kg/hr leaking valve} + 3 \times 0.0065 \text{ leaking fitting}]$$

$$= 2.3 \text{ lb/day (838 lb/yr)}$$

PE2		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	1.3 + 2.3 = 3.6	485 + 838 = 1,323

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

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

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

SSPE1 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE Calculator (PTOs only)	151,842	93,406	38,726	885,355	387,972
ATC '-121-3	0	0	0	0	171
ATC '-151-0	0	0	0	0	1,797
SSPE1	151,842	93,406	38,726	885,355	389,940

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

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

SSPE2 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	151,842	93,406	38,726	885,355	389,940
ATC '155-0	0	0	0	0	1,323
SSPE2	151,842	93,406	38,726	885,355	391,263

5. Major Source Determination

Rule 2201 Major Source Determination:

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

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

Rule 2201 Major Source Determination (lb/year)						
	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO	VOC
SSPE1	151,842	93,406	38,726	38,726	885,355	389,940
SSPE2	151,842	93,406	38,726	38,726	885,355	391,263
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

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

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is listed as one of the 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	76	195	47	443	19	19
PSD Major Source Thresholds	100	100	100	100	100	100
PSD Major Source ? (Y/N)	N	Y	N	Y	N	N

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.

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The permit unit is new and therefore BE = 0

7. SB 288 Major Modification

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

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

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO _x	0	50,000	No
SO _x	0	80,000	No
PM ₁₀	0	30,000	No
VOC	1,323	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.

Since this facility is not a Major Source for PM10 and SO_x, this project does not constitute a Federal Major Modification for PM10 and SO_x.

Step 1

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

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

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NO _x	0	0	No
VOC	1,323	20,000	Yes

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

Since there is an increase in VOC emissions, this project constitutes a Federal Major Modification.

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

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified non attainment. The pollutants which must be addressed in the PSD applicability determination for sources in the San Joaquin Valley

and which are emitted in this project are (See 40 CFR 52.21 (b)(23) definition of Significant):

- SO₂ (as a primary pollutant)
- Sulfuric acid mist
- Hydrogen sulfide (H₂S)
- Total reduced sulfur (including H₂S)
- Reduced sulfur compounds

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

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

I. Project Location Relative to Class 1 Area

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

II. Project Emission Increase – Significance Determination

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

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

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)					
	NO2	SO2	CO	PM	PM10
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 potential to emit from all new and modified emission units is below the PSD significant emission increase thresholds, this project is not subject to the requirements of Rule 2410 and no further analysis is required.

10. Quarterly Net Emissions Change (QNEC)

VOCs			
	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
S-37-155	1,323	0	330.75

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

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

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

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

As seen in Section VII.C.2 above, the applicant is proposing to permit a liquid transfer operation with a PE greater than 2 lb/day for VOC. BACT is triggered for VOCs.

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

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

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

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

d. SB 288/Federal Major Modification

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

2. BACT Guideline

BACT Guideline 7.1.14, "Light Crude Oil loading Rack", covers operations substantially similar to Unloading Rack S (S-37-147). As such BACT Guideline 7.1.4 will be used to establish BACT. Please see **Attachment IV**.

3. Top-Down BACT Analysis

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

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

VOC: Use of dry-break couplers or equivalent on unloading lines with an average disconnect loss of no greater than 8 ml liquid per disconnect and fugitive emissions components subject to Rule 4624– Technologically Feasible

B. Offsets

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 (SPE2) equals to or exceeds the offset threshold levels in Table 4-1 or Rule 2201.

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

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

2. Quantity of Offsets Required

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

Per Sections 4.7.1 and 4.7.3, the quantity of offsets in pounds per year for VOCs is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

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

Where,

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

BE = Baseline Emissions, (lb/year)

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

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = Pre-project Potential to Emit for:

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

otherwise,

BE = Historic Actual Emissions (HAE)

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

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

PE2 (VOCs) = 1,323 lb/year

BE (VOCs) = 0 lb/year

ICCE = 0 lb/year

DOR = 1.5 (Federal Major Modification)

$$\begin{aligned} \text{Offsets Required (lb/year)} &= 1323 \times 1.5 \\ &= 1,985 \end{aligned}$$

The quarterly offset requirement is

$$\begin{aligned} &= 1,985/4 \\ &= 496.25 \text{ lb/qtr} \end{aligned}$$

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

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

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

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

<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>	<u>Total Annual</u>
496	496	496	497	1,985

The applicant has stated that the facility plans to use ERC certificate S-3693-1 to offset the increases in VOC emissions associated with this project. The above certificate has available quarterly VOC credits as follows:

	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
ERC #S-3693-1	952	966	951	1099

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

Proposed Rule 2201 (offset) Conditions:

Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: 496 lb VOC/1st quarter,

496 lb VOC/2nd quarter, 496 lb VOC/3rd quarter, and 497 lb VOC/4th quarter. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). [District Rule 2201] Y

ERC Certificate Number S-3693-1 (or certificate split from this certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Y

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSPE of greater than 20,000 lb/year for any pollutant.
- e. Any project which results in a Title V significant permit modification

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

New Major Sources are new facilities, which are also Major Sources. As shown in Section VII.C.5 above, the SSPE2 is not greater than the Major Source threshold for any pollutant. Therefore, public noticing is not required for this project for new Major Source purposes.

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

As demonstrated in Sections VII.C.7 and VII.C.8, this project is an SB 288 or Federal Major Modification. Therefore, public noticing for SB 288 or Federal Major Modification purposes is required.

b. PE > 100 lb/day

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

c. Offset Threshold

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

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x			20,000 lb/year	No
SO _x			54,750 lb/year	No
PM ₁₀			29,200 lb/year	No
CO			200,000 lb/year	No
VOC	>20,000 lb/year	>20,000 lb/year	20,000 lb/year	No

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

d. SSIPE > 20,000 lb/year

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

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x				20,000 lb/year	No
SO _x				20,000 lb/year	No
PM ₁₀				20,000 lb/year	No
CO				20,000 lb/year	No
VOC	>20,000 lb/year	>20,000 lb/year	1,323	20,000 lb/year	No

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

e. Title V Significant Permit Modification

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

2. Public Notice Action

As discussed above, the project is a Federal Major Modification and as such public noticing is required. 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)

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

Proposed Rule 2201 (DEL) Conditions:

VOC emission rate from fugitive components associated with this emissions unit shall not exceed 2.3 lb/day. [District Rule 2201] Y

Permittee shall maintain accurate component count and emissions calculated using CAPCOA Average Emission Factors for Marketing Terminals, from California Implementation Guidelines for Estimating Emissions of Fugitive Hydrocarbon Leaks at Marketing Terminals, Table IV-2b, February 1999. [District Rule 2201] Y

E. Compliance Assurance

1. Source Testing

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

2. Monitoring

Fugitive emissions monitoring will be required to demonstrate compliance with Rules 2201, 4455 and NSPS Subpart VVa.

3. Recordkeeping

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

Copies of fugitive emissions monitoring results must be kept.

The operator shall maintain daily records of the TVP of all material loaded out from Rack R (to offsite).

The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Y

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

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

G. Compliance Certification

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

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to authorize an organic liquid transfer operation.

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

Rule 2410 Prevention of Significant Deterioration

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

Rule 2520 Federally Mandated Operating Permits

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

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

Rule 4001 New Source Performance Standards (NSPS)

The facility is currently in compliance with Subpart VV. The requirements are included on the facility- wide PTO. The project is not expected to change the compliance status and therefore continued compliance is expected.

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

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to organic liquid transfer operations at oil refineries.

Rule 4102 Nuisance

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

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

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-37-155-0	8.29E-08 per million	No

Discussion of T-BACT

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

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

This rule limits VOC emissions from leaking components at petroleum refineries, gas liquid process facilities and chemical plants, and is applicable to components that contain or contact VOC at such facilities. Rule requirements are included on the facility wide PTO S-37-0-0.

Compliance with this rule is expected.

Rule 4624 Transfer of Organic Liquid

The unloading operation (from offsite to facility) is subject to the rule. Permit unit S-37-155 is a Class 1 liquid transfer operation. The requirements for Class 1 transfer facilities are set forth in Section 5.1 as follows:

- 5.1 For a Class 1 organic liquid transfer facility, the emission of VOC from the transfer operation shall not exceed 0.08 pounds per 1,000 gallons of organic liquid transferred and use one of the following systems:
 - 5.1.1 An organic liquid loading operation shall be bottom loaded.
 - 5.1.2 The VOC from the transfer operation shall be routed to:
 - 5.1.2.1 A vapor collection and control system;
 - 5.1.2.2 A fixed roof container that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids);
 - 5.1.2.3 A floating roof container that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids); or
 - 5.1.2.4 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
 - 5.1.2.5 A closed VOC emission control system.

The following conditions will be included on the ATC:

5. 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
11. For this Class 1 organic liquid transfer operation, the emission of VOC from the transfer operation shall not exceed 0.08 pounds per 1,000 gallons of organic liquid transferred. [District Rule 4624]

Sections 5.3 through 5.5

- 5.3 A transfer operation utilizing a closed VOC emission control system or utilizing a container that meets the control requirements of Rule 4623 (Storage of Organic Liquids) to meet the emission control requirements of this rule shall demonstrate compliance with Sections 5.1 and 5.2 by complying with the leak inspection requirements of Section 5.9.
- 5.4 The vapor collection and control system shall operate such that the pressure in the delivery tank being loaded does not exceed 18 inches water column pressure and six (6) inches water column vacuum. This section shall not apply to the transfer of liquefied petroleum gas.
- 5.5 All delivery tanks which previously contained organic liquids with a TVP of 1.5 psia or greater at the storage container's maximum organic liquid storage temperature shall be filled only at transfer facilities satisfying Sections 5.1, 5.2, or 5.4, as applicable.
- 5.6 The transfer rack and vapor collection equipment shall be designed, installed, maintained and operated such that there are no leaks and no excess organic liquid drainage at disconnections.

The following condition will be included on the ATC:

4. Transfer rack shall be maintained and operated in accordance with the manufacturer's specifications, and operated such that there are no leaks or excess organic liquid drainage at disconnections as defined herein. [District Rule 4624] Y
- 5.7 The construction of any new top loading facility or the reconstruction, as defined in 40 CFR 60.15, or the expansion of any existing top loading facility with top loading equipment shall not be allowed.
- 5.8 Notwithstanding any other provision of this rule, organic liquid transfer facilities exclusively handling liquefied petroleum gas need not comply with the bottom loading provisions of Sections 5.1, 5.2 or 5.7, provided the operator complies with the emission limit of Section 5.1, 5.2 and the provisions of Section 5.6 – not applicable

5.9 Leak Inspection Requirements and (Leak Definition, 3.17)

- 3.17 Leak: the dripping of VOC-containing liquid at a rate of more than three (3) drops per minute; or
- 3.17.1 For organic liquids other than gasoline, the detection of any gaseous or vapor emissions with a concentration of VOC greater than 1,000 ppmv above a background as methane when measured in accordance with the test method in Section 6.3.7 shall constitute a leak
- 3.17.2 For gasoline, a concentration of VOC greater than 10,000 ppmv, as methane, above background when measured in accordance with the test method in Section 6.3.7 shall constitute a leak.

- 3.17.3 Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from equipment into a container is not considered a leak provided such activities are accomplished as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere.

The following condition will be included on the ATC:

12. A leak is defined as the dripping of VOC-containing liquid at a rate of more than three (3) drops per minute; or for organic liquids other than gasoline, the detection of any gaseous or vapor emissions with a concentration of VOC greater than 1,000 ppmv above a background as methane when measured in accordance with the test method in Section 6.3.8. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from equipment into a container is not considered a leak provided such activities are accomplished as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4624] Y
- 5.9.1 The operator of an organic liquid transfer facility shall inspect the vapor collection system, the vapor disposal system, and each transfer rack handling organic liquids for leaks during transfer at least once every calendar quarter using the test method prescribed in Section 6.3.8.
- 5.9.2 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 for the purposes of this section.
- 5.9.3. All equipment that are 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.
- 5.9.4 An operator may apply for a written approval from the APCO to change the inspection frequency from quarterly to annually provided no leaks were found during the inspections required under provisions of Sections 5.9.1 and 5.9.2 during five consecutive quarterly inspections. Upon identification of any leak during an annual inspection the frequency would revert back to quarterly and the operator shall contact the APCO in writing within 14 days.

The following conditions will be included on the ATC:

8. During hose disconnects the maximum liquid spillage for liquids shall not exceed 10 milliliters/disconnect based on an average from 3 consecutive disconnects. [District Rule 2201 and 4624] N
13. Permittee shall inspect the loading rack for leaks during transfer at least once every calendar quarter using the test method prescribed in Section 6.3.8 of Rule 4624 or alternative method approved in writing by the APCO and EPA. [District Rule 4624] Y
14. An operator may apply for a written approval from the APCO to change the inspection frequency from quarterly to annually provided no leaks were found during the inspections required under provisions of Sections 5.9.1 and 5.9.2 of Rule 4624 during five consecutive quarterly inspections. Upon identification of any leak during an annual inspection the frequency shall revert back to quarterly and the operator shall contact the APCO in writing within 14 days. [District Rule 4624] Y

15. 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 replaced equipment shall be reinspected the first time the equipment is in operation after the repair or replacement. [District Rule 4624] Y

6.1 Recordkeeping (non-exemption requirements)

- 6.1.3 An operator subject to any part of Section 5.0 shall keep records of daily liquid throughput and the results of any required leak inspections.

- 6.1.4 Records required under Sections 6.1.1, 6.1.2, 6.1.3 shall be retained for a minimum of five years and shall be made readily available to the APCO, ARB, or EPA during normal business hours and submitted upon request to the APCO, ARB, or EPA.

The following conditions will be included on the ATC:

16. All inspections shall be documented with an 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 equipment to be inspected upon commencing operation after repair or replacement and 6) inspector name and signature. [District Rule 4624] Y
17. Permittee shall keep records of daily unloading rack throughput and the results of any required leak inspections. [District Rule 4624] Y
18. Permittee shall keep records of daily number of truck unloading disconnects. [District Rules 1070 and 2201] Y
19. Records shall be retained for a minimum of five years and shall be made readily available to the APCO, ARB, or EPA during normal business hours and submitted upon request to the APCO, ARB, or EPA. [District Rules 1070 and 4624] Y

6.2 Compliance Testing

- 6.2.1 By July 20, 2009, the operator of any Class 1 or Class 2 organic liquid transfer facility shall perform an initial source test of the VOC emission control system in accordance with the method prescribed in Section 6.3.2 to determine compliance with Section 5.1 and 5.2, as applicable.

- 6.2.1.1 Facilities in existence prior to December 20, 2007 that have performed the test specified in Section 6.3.2 within the 60 month period preceding December 20, 2007 need not perform an initial source test.

- 6.2.1.2 The source testing requirements of Section 6.2.1 shall not apply to any Class 1 or Class 2 organic liquid transfer facility equipped with a closed VOC control system.

- 6.2.1.3 The source testing requirements of Section 6.2.1 shall not apply to any Class 1 or Class 2 organic liquid transfer facility controlling VOC by routing vapors to:

6.2.1.3.1 A fixed roof container that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids); or

6.2.1.3.2 A floating roof container that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids); or

6.2.1.3.3 A pressure vessel equipped with an APCO-approved vapor recovery system that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids).

Compliance testing is not required by inclusion the following condition on the ATC:

5. 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

Compliance with this rule is expected.

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Greenhouse Gas (GHG) Significance Determination

District is a Lead Agency and Project not Covered Under Cap-and-Trade

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

The District's engineering evaluation (this document) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

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

Indemnification Agreement/Letter of Credit Determination

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

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

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue ATC S-37-155-0 subject to the permit conditions on the attached draft ATC in **Attachment VIII**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-37-155-0	3020-01-A	30 hp	\$ 92.00

Attachments

- I: Location Map
- II: Fugitive Emissions
- III: Emissions Profiles
- IV: BACT Guidelines
- V: BACT Analysis
- VI: Statewide Compliance Statement' Title V Compliance Certification form
- VII: HRA
- VIII: Draft ATC

**ATTACHMENT I:
Location Map**



Figure 3. Approximate distance from Rack R to closest receptors Business (925') and Residence (1,030').



Figure 1. Kern Oil & Refining Co. Location Map.



Figure 2. Rack R: Organic liquid loading and unloading rack.

ATTACHMENT II Fugitive Emissions

TABLE IV-2b: 1995 EPA PROTOCOL MARKETING TERMINAL
SCREENING VALUE RANGE EMISSION FACTORS^a

Component Type	Service Type	< 10,000 ppmv THC Emission Factor (kg/hr/source) ^b	≥ 10,000 ppmv THC Emission Factor (kg/hr/source) ^b
Valves	Gas	1.3E-05	NA
	Light liquid	1.5E-05	2.3E-02
Pump seals	Light liquid	2.4E-04	7.7E-02
Others (compressors and others) ^c	Gas	1.2E-04	NA
	Light liquid	2.4E-05	3.4E-02
Fittings (connectors and flanges) ^d	Gas	5.9E-06	3.4E-02
	Light liquid	7.2E-06	6.5E-03

^aSource: *1995 EPA Protocol for Equipment Leak Emission Estimates* (EPA-453/R-95-017, November 1995). NOTE: These factors have not been corrected to reflect the technical corrections and adjustments discussed in Section III of the implementation guidelines.

^bThese factors are for total organic compound emission rates (including non-VOC's such as methane and ethane). "NA" indicates that not enough data were available to develop the indicated emission factor.

^cThe "Others" component type should be applied for any component type other than fittings, pump seals, or valves.

^d"Fittings" were not identified as flanges or non-flanged connectors; therefore, the fitting emissions were estimated by averaging the estimates from the connector and the flange correlation equations.

Fugitive Losses							
CAPCOA Guideline, Table IV-2b, Emission Factors							
Component Type	<10,000 ppmv		>10,000ppmv		Subtotal (kg/hr)	Emissions (lb/day)	Emissions (lb/year)
	Component Count	Emission Factor	Component Count	Emission Factor			
Valves	7	0.000015	1	0.023	0.023105	1.22	445.28
Pump seals	2	0.00024	0	0.077	0.00048	0.03	9.25
Others	10	0.000024	0	0.034	0.00024	0.01	4.63
Fittings (connectors & flanges)	20	0.0000072	3	0.0065	0.019644	1.04	378.58
Total					0.043469	2.30	837.73

$$PE_2 = PE_1 + \text{Fugitive Losses} + \text{Disconnect Losses} \quad PE_2 = 0 + 2.3 \text{ lb/day} + 1.32 \text{ lb/day} = 3.62 \text{ lb/day}$$

Pursuant Rule 2201 Section 4.8.1, Offset Calculation Ratio = 1.5

Therefore, The Calculated Offset = 3.62 lbs/day x 1.5 = 5.43 lbs/day, or 1,321 lbs/year x 1.5 = 1,981 lb/year

ATTACHMENT III Emissions Profiles

Permit #: S-37-155-0	Last Updated
Facility: KERN OIL & REFINING CO.	07/25/2016 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	1323.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	3.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	330.0
Q2:	0.0	0.0	0.0	0.0	331.0
Q3:	0.0	0.0	0.0	0.0	331.0
Q4:	0.0	0.0	0.0	0.0	331.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					496.0
Q2:					496.0
Q3:					496.0
Q4:					497.0

ATTACHMENT IV
BACT Guidelines

ATTACHMENT V BACT Analyses

BACT is triggered for VOC. BACT Clearinghouse Guideline 7.1.14 is applicable.

Step 1 – Identify All Possible Control Technologies

Use of dry-break couplers or equivalent on unloading lines with an average disconnect loss of no greater than 10 ml liquid per disconnect and fugitive emissions components subject to Rule 4624– Achieved-in-Practice

Use of dry-break couplers or equivalent on unloading lines with an average disconnect loss of no greater than 8 ml liquid per disconnect and fugitive emissions components subject to Rule 4624– Technologically Feasible

Step 2 – Eliminate Technologically Infeasible Options

There are no technologically infeasible options.

While not technologically infeasible, the use of dry-break couplers poses logistical infeasibilities in that the dry-break couplers must be installed on the stationary unloading hoses at Kern's unloading rack, as well as on the delivery trucks bringing loads of organic liquid into Kern's facility. Kern does not own the fleet of delivery trucks and therefore is not in control of the specific unloading fittings such trucks are equipped with. These fleets deliver to multiple customer locations and must be equipped with universal equipment to unload at any or all sites rather than being equipped with a technology specific to just one facility.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

1. Use of dry-break couplers or equivalent on unloading lines with an average disconnect loss of no greater than 10 ml liquid per disconnect and fugitive emissions components subject to Rule 4624– Achieved-in-Practice
2. Use of dry-break couplers or equivalent on unloading lines with an average disconnect loss of no greater than 8 ml liquid per disconnect and fugitive emissions components subject to Rule 4624– Technologically Feasible

Step 4 – Cost Effectiveness Analysis

Kern is proposing to use camlock fittings to connect the unloading hose to the delivery vehicle. The configuration of the unloading facility is such that the unloading hose will drain completely, given the downward slope of the hose and the positioning of the unloading pump at a slightly lower elevation than the camlock connection on the delivery truck. Therefore, even after the shutoff valve on the truck has been closed, the hose will continue to drain to the pump suction. Once the hose has been evacuated completely, the pump is shut down and valve closed. This combination of camlock fittings, rack configuration and unloading procedure achieves equivalent results to the use of dry-break couplers for minimal leakage upon disconnect.

As the facility has proposed the most stringent technology identified in Step 1, a cost-effectiveness analysis is not required.

Step 5 – Select BACT

The use of camlock fittings with an average disconnect loss of no greater than 8 ml liquid per disconnect as described in Step 4 is considered BACT for the control of VOC.

ATTACHMENT VI
Statewide Compliance Statement
Title V Compliance Certification



Kern Oil & Refining Co.

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

RECEIVED

MAY 10 2016

SJVAPCD
Southern Region

May 9, 2016

Mr. Leonard Scandura
Permit Services Manager
San Joaquin Valley Unified
Air Pollution Control District
34946 Flyover Ct.
Bakersfield, CA 93308

**Subject: Federal Major Modification Statewide Compliance Certification
S-37 ATC Application – existing unpermitted organic liquid transfer rack**

Dear Mr. Scandura:

I hereby certify that all major Stationary Sources owned or operated by such person (or by any entity controlling, controlled by, or under common control with such person) in California, which are subject to emission limitations, are in compliance or on a schedule for compliance with all applicable emission limitations and standards.

Bruce W. Cogswell
Senior Vice President/Chief Operating Officer

San Joaquin Valley Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

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

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

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

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

Bruce Cogswell
Signature of Responsible Official

5/9/16
Date

Bruce Cogswell
Name of Responsible Official (please print)

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

ATTACHMENT VII
HRA

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Richard Edgehill – Permit Services
 From: Marissa Williams – Technical Services
 Date: June 23, 2016
 Facility Name: Kern Oil & Refining Company
 Location: 7724 E. Panama Lane, Bakersfield, CA
 Application #(s): S-37-155-0
 Project #: S-1161937

A. RMR SUMMARY

RMR Summary			
Categories	Organic Liquid Transfer Operation (Unit 155-0)	Project Totals	Facility Totals
Prioritization Score	0.04	0.04	>1.0
Acute Hazard Index	0.00	0.00	0.77
Chronic Hazard Index	0.00	0.00	0.10
Maximum Individual Cancer Risk	8.29E-08	8.29E-08	1.41E-05
T-BACT Required?	No		
Special Permit Requirements?	No		

B. RMR REPORT

I. Project Description

Technical Services received a request on June 17, 2016 to perform an Ambient Air Quality Analysis (AAQA) and a Risk Management Review (RMR) for the proposed installation of an organic liquid loading operation located at the existing organic liquid transfer rack R.

II. Analysis

Toxic emissions from Oilfield Fugitives were calculated using emission factors derived from 1991 source tests of central valley sites along with VOC emission rates supplied by the processing engineer. 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 for Permitting New and Modified Sources (APR 1905, May 28, 2015), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines. The prioritization score for the facility is 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 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:

Analysis Parameters (Unit 155-0)			
Source Type	Area	Receptor Distance (m)	282
Release Height (m)	1.22	Receptor Type	Residence
Total Area of Source (m²)	4.0	Project Location	Rural
VOC Emissions (lb/hr)	0.15	VOC Emissions (lb/yr)	1322

An AAQA was requested by the processing engineer; however, AAQA's only look at criteria pollutants NO_x, SO_x, CO, and PM. This project results in an increase in VOCs. Currently there are no AAQA standards for VOCs; therefore, an AAQA is not required.

III. Conclusions

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

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

IV. Attachments

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

ATTACHMENT VIII
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-37-155-0

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

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

EQUIPMENT DESCRIPTION:
ORGANIC LIQUID TRANSFER RACK R

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 496 lb, 2nd quarter - 496 lb, 3rd quarter - 496 lb, and fourth quarter - 497 lb. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201. [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number S-3693-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

Arnaud Marjolle, Director of Permit Services
S-37-155-0 : Aug 2 2016 11:10AM - EDGEHILL : Joint Inspection NOT Required

6. Transfer rack (unloading from trucks) shall be maintained and operated in accordance with the manufacturer's specifications, and operated such that there are no leaks or excess organic liquid drainage at disconnections as defined herein. [District Rule 4624] Federally Enforceable Through Title V Permit
7. This permit allows for leaks from components associated with the loadout operation (from facility to trucks) which is not subject to Rule 4624. [District Rules 2201 and 4724] Federally Enforceable Through Title V Permit
8. A leak is defined as the dripping of VOC-containing liquid at a rate of more than three (3) drops per minute; or for organic liquids other than gasoline, the detection of any gaseous or vapor emissions with a concentration of VOC greater than 1,000 ppmv above a background as methane when measured in accordance with the test method in Section 6.3.8; or for gasoline the detection of any gaseous or vapor emissions with a concentration of VOCs greater than 10,000 ppmv, as methane, above background when measured in accordance with the test method in Section 6.3.8. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from equipment into a container is not considered a leak provided such activities are accomplished as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
9. Components associated with the loadout operation (from facility to trucks) shall be inspected quarterly and repaired within prescribed time frames under Rule 4624. [District Rules 2201 and 4624]
10. Excess Organic Liquid Drainage: more than (8) milliliters liquid drainage. Such liquid drainage for disconnect operations shall be determined by computing the average drainage from three consecutive disconnects at any one permit unit. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
11. All liquids from the transfer operation (unloading from trucks) 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
12. 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
13. For this Class 1 organic liquid transfer operation (unloading from trucks), the emission of VOC from the transfer operation shall not exceed 0.08 pounds per 1,000 gallons of organic liquid transferred. [District Rule 4624] Federally Enforceable Through Title V Permit
14. TVP of liquids loaded out from Rack R (from facility to trucks) shall be less than 1.5 psia. [District Rule 4624] Federally Enforceable Through Title V Permit
15. Total number of disconnects shall not exceed 72 per day for unloading operations (from trucks to facility) and 3 per day for loading operation (from facility to trucks). [District Rule 2201] Federally Enforceable Through Title V Permit
16. VOC fugitive emissions from light liquid components shall not exceed 2.3 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Permittee shall maintain accurate component count and emissions calculated using CAPCOA Average Emission Factors for Marketing Terminals, from California Implementation Guidelines for Estimating Emissions of Fugitive Hydrocarbon Leaks at Marketing Terminals, Table IV-2b, February 1999. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Permittee shall inspect the loading rack for leaks, during transfer at least once every calendar quarter using the test method prescribed in Section 6.3.8 of Rule 4624 or alternative method approved in writing by the APCO and EPA. [District Rule 4624] Federally Enforceable Through Title V Permit
19. An operator may apply for a written approval from the APCO to change the inspection frequency from quarterly to annually provided no leaks were found during the inspections required under provisions of Sections 5.9.1 and 5.9.2 of Rule 4624 during five consecutive quarterly inspections. Upon identification of any leak during an annual inspection the frequency shall revert back to quarterly and the operator shall contact the APCO in writing within 14 days. [District Rule 4624] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. 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 replaced 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
21. All inspections shall be documented with an 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 equipment to be inspected upon commencing operation after repair or replacement and 6) inspector name and signature. [District Rule 4624] Federally Enforceable Through Title V Permit
22. Permittee shall keep records of daily unloading rack (from trucks to facility) throughput and the results of any required leak inspections. [District Rule 4624] Federally Enforceable Through Title V Permit
23. Permittee shall keep records of daily number of truck loading and unloading (trucks to and from facility) disconnects. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
24. The operator shall maintain daily records of the TVP of all material loaded out from Rack R (from facility to trucks). [District Rules 1070 and 4624] Federally Enforceable Through Title V Permit
25. Records shall be retained for a minimum of five years and shall be made readily available to the APCO, ARB, or EPA during normal business hours and submitted upon request to the APCO, ARB, or EPA. [District Rules 1070 and 4624] Federally Enforceable Through Title V Permit

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