



APR 07 2015

Ms. Melinda Hicks
Kern Oil and Refining Company
7724 E Panama Ln
Bakersfield, CA 93307

**Re: Proposed Authority to Construct/Certificate of Conformity (Minor Mod)
District Facility # C-37
Project # C-1144274**

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 would add a third delivery truck loading/unloading lane to the existing LPG transfer rack.

After addressing all comments made during the 45-day EPA comment period, the District intends to issue the Authority to Construct with a Certificate of Conformity. 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. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Thank you for your cooperation in this matter.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Enclosures

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

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Modify existing LPG Transfer Rack

Facility Name:	Kern Oil & Refining Company	Date:	March 17, 2015
Mailing Address:	7724 E. Panama Ln Bakersfield, CA 93307	Engineer:	G. Heinen
Contact Person:	Melinda Hicks	Lead Engineer:	Brian Clements
Telephone:	(661) 845-0761		
Application #:	S-37-107-3		
Project #:	S-1144274		
Deemed Complete:	December 29, 2014		

I. Proposal

Kern Oil & Refining Company (KORC) has submitted an ATC application to modify the existing LPG Transfer Rack (S-37-107-2) to allow for a new, third delivery truck loading/unloading lane. The new lane would add a transfer pump and related components.

Kern received their initial Title V Permit on January 31, 2003. This modification can be classified as a Title V minor 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. KORC must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC issued with this project. The following conditions will be included on the permit to ensure compliance:

- 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 2520] Y
- 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] Y

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101	Visible Emissions (02/17/05)
Rule 4102	Nuisance (12/17/92)
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 Section 25, Township 30S, Range 28W, (7433 E 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

The Kern Oil Refining Company brings LPG, Natural Gasoline, & Mixed Light Hydrocarbons from outside sources via tanker trucks. The tanker trucks are off loaded at facility using the two existing loading/unloading lanes. The received LPG, Natural Gasoline, & Mixed Light Hydrocarbons are stored in two existing 5,000-barrel pressure vessels (S-37-108 and -109) before being blended with gasoline as an additive. The loading/unloading rack currently includes three 10 hp loading/unloading pumps (consisting of connectors, hoses, & couplings) and its associated valves, flanges, & threaded connections leading up to pressure vessels. The pressure vessels consist of inlets & outlets, PV vents, gauge hatches, shell manholes, and its associated valves, flanges, & threaded connections leading up to blending manifold.

A plot plan is included in Appendix B.

V. Equipment Listing

Pre-Project Equipment Description:

S-37-107-2: LPG, NATURAL GASOLINE, & MIXED LIGHT HYDROCARBON
LOADING/UNLOADING RACK WITH VAPOR COLLECTION SYSTEM
SERVING TANKS S-37-108 & -109

Proposed Modification:

S-37-107-3: MODIFICATION OF LPG, NATURAL GASOLINE, & MIXED LIGHT
HYDROCARBON LOADING/UNLOADING RACK WITH VAPOR
COLLECTION SYSTEM SERVING TANKS S-37-108 & -109: ADD
ADDITIONAL LOADING/UNLOADING LANE WITH A NEW TRANSFER
PUMP AND RELATED COMPONENTS

Post Project Equipment Description:

S-37-107-3: LPG, NATURAL GASOLINE, & MIXED LIGHT HYDROCARBON
LOADING/UNLOADING RACK WITH VAPOR COLLECTION SYSTEM
SERVING TANKS S-37-108 & -109

VI. Emission Control Technology Evaluation

VOC emissions are the only criteria pollutant expected from the liquid transfer operation. The operation is used to unload LPG, natural gasoline, and mixed light hydrocarbons.

The liquids unloaded are sent to tanks which are either under vapor control or are pressure vessels. Vapor transfer lines are used to vent displaced storage tank vapors back to the delivery tanks. Liquid spills may occur during loading and unloading operations as the connection to the delivery tank is made or broken. VOC emissions from organic liquid spills from disconnections are minimized to be less than 10 ml per disconnection.

Fugitive Emissions Control

VOC emissions from fugitive component leaks are reduced by a leak detection and repair program, as required by Rule 4624.

VII. General Calculations

A. Assumptions

- Facility operates 24 hr/day, 365 day/yr. (Per applicant)
- Loading rack emits only VOCs.
- Loading rack VOC emissions consist of fugitive emissions from piping components and disconnect emissions.
- Daily pre-project disconnects will not exceed 56 disconnects/day. (Current PTO limit)
- Daily post-project disconnects will not exceed 56 disconnects/day. (Per applicant)
- Volume of spills from disconnects, 10 ml. (Current PTO limit)
- BAE disconnects: 4.5/day; PAE disconnects 26 lb/day (please see Section VII SB 288/Federal Major Modification) (per applicant)
- VOC content of spilled liquids is 100% and all spilled VOCs evaporate.
- Density of spilled liquids is 0.915 g/ml at 60° F. (from original evaluation)

B. Emission Factors

Pre-project emission factors will be calculated based on the current PTO limits.

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 Marketing Terminals, Table IV-2b, February 1999.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

a. Emissions from disconnecting the transfer hose:

$$\begin{aligned} \text{Daily emissions} &= \text{EF} \times \text{g/ml} \times \text{lb/g} \times \text{disconnects/day} \\ &= (10 \text{ ml/disconnect}) \times (0.915 \text{ g/mL}) \times (\text{lb}/453.6 \text{ g}) \times (56 \\ &\quad \text{disconnects/day}) \\ &= 1.1 \text{ lb-VOC/day} \end{aligned}$$

$$\begin{aligned} \text{Annual emissions} &= \text{EF} \times \text{g/ML} \times \text{lb/g} \times \text{disconnects/day} \times 365 \text{ days/year} \\ &= (10 \text{ ml/leak}) \times (0.915 \text{ g/mL}) \times (\text{lb}/453.6 \text{ g}) \times (56 \text{ disconnects/day}) \times \\ &\quad (365 \text{ days/yr}) \\ &= 412 \text{ lb-VOC/yr} \end{aligned}$$

b. Fugitive emissions from leaking equipment connections

$$\text{Daily emissions} = 23.4 \text{ lb-VOC/day (Current PTO condition)}$$

$$\begin{aligned} \text{Annual emissions} &= \text{daily emissions} \times 365 \text{ days/year} \\ &= 23.4 \text{ lb/day} \times (365 \text{ days/year}) \\ &= 8,541 \text{ lb/year} \end{aligned}$$

Total loading rack pre-project potential to emit (PE1) = Disconnect + Fugitive Emissions

Total Pre-Project Potential to Emit (PE1)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	1.1 + 23.4 = 24.5	412 + 8,541 = 8,953

2. Post Project Potential to Emit (PE2)

a. Emissions from disconnecting the transfer hose:

There is no proposed change in the maximum number of disconnects or emission factors, so the post-project disconnect emissions are calculated as follows.

$$\begin{aligned} \text{Daily emissions} &= \text{EF} \times \text{g/ml} \times \text{lb/g} \times \text{disconnects/day} \\ &= (10 \text{ ml/disconnect}) \times (0.915 \text{ g/mL}) \times (\text{lb}/453.6 \text{ g}) \times (56 \\ &\quad \text{disconnects/day}) \\ &= 1.1 \text{ lb/day} \end{aligned}$$

$$\text{Annual emissions} = \text{EF} \times \text{g/ML} \times \text{lb/g} \times \text{disconnects/day} \times 365 \text{ days/year}$$

$$= (10 \text{ ml/leak}) \times (0.915 \text{ g/mL}) \times (\text{lb}/454 \text{ g}) \times (56 \text{ disconnects/day}) \times (365 \text{ days/year})$$

$$= 412 \text{ lb/day}$$

b. Fugitive emissions from leaking equipment connections

The post-project fugitive emissions will be calculated as the total of the existing fugitive emissions plus the fugitive emissions generated by the new components. The number of new components was provided by the applicant.

Daily emissions = # of new components x E.F x 2.2 lb/kg x 24 hr/day

Annual emissions = # of new components x E.F x 2.2 lb/kg x 24 hr/day x 365 days/year

Post-project fugitive emissions from new components					
Component Type	Service Type	New Components	EF (kg/hr/source)	Total (lb/day)	Total (lb/year)
Valves	Light liquid	22	0.000015	0.017	6
Pump seals	Light liquid	2	0.00024	0.025	9
Others (compressors and others)	Light liquid	3	0.000024	0.004	1
Fittings (connectors and flanges)	Light liquid	51	0.0000072	0.019	7
Increased fugitive emissions for this project				0.1¹	23²

¹ Pursuant to District Policy APR 1130, 0.1 lb/day < 0.5 lb/day so it will be rounded to 0.0 lb/day for the purpose of determining if New Source Review requirements are triggered.

² Pursuant to District Policy APR 1130, where the total project average annual emissions increase is less than or equal to 0.5 lb/day, that increase is rounded to 0.0 lb/day for the purpose of determining if New Source Review requirements are triggered

The post-project daily emissions equal the disconnect emissions plus the pre-project fugitive emissions plus the increased fugitive emissions calculated above.

The post-project annual emissions equal the pre-project annual emissions plus the increased fugitive emissions calculated above.

Post-Project Potential to Emit (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	1.1 + 23.4 + 0.1 = 24.6	8,953 + 23 = 8,976

Emissions profiles are included in Appendix C.

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

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

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

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

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

Facility emissions are already above the Offset and Major Source Thresholds for VOC emissions; therefore, SSPE2 calculations are not necessary.

5. Major Source Determination

Pursuant to Section 3.24 of District Rule 2201, a Major Source is a stationary source with post-project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.24.2 states, "for the purposes of determining major source status, the SSPE2 shall not include 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."

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

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.

Clean Emissions Unit, Located at a Major Source

Pursuant to Rule 2201, Section 3.12, a Clean Emissions Unit is defined as an emissions unit that is "equipped with an emissions control technology with a minimum control efficiency of at least 95% or is equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

The current Achieved-in-Practice requirement of BACT Guideline 7.1.14 (Appendix D) applicable for Light Crude Unloading Rack is

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 components subject to Rule 4409 and 4455 as applicable.

The facility does not use dry-break connectors for the LPG loading/unloading racks but the existing permit limit restricting liquid losses to less than 10 milliliters of liquid per disconnect is considered as equivalent to dry beak couplers. Further, the fugitive components are subject to the leak detection and repair program requirements of Rule 4624, which has more stringent requirements for leaks than Rule 4409. Therefore the Achieved-in-Practice requirements of BACT Guideline 7.1.14 are satisfied and the LPG loading/unloading rack is consider to be a clean emissions unit and Baseline Emissions (BE) is equal to the Pre-Project Potential to Emit (PE1); BE = PE1.

7. SB 288 Modification

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.*"

As discussed in Section VII.C.5 above, the facility is an existing Major Source for VOC; however, the project by itself would need to be a significant increase in order to trigger a Major Modification.

For this project, the

SB 288 Major Modification Thresholds (Existing Major Source)			
Pollutant	Project PE (lb/year)	Threshold (lb/year)	Major Modification?
NO _x	0	50,000	No
SO _x	0	80,000	No
PM ₁₀	0	30,000	No
VOC	0 ¹	50,000	No

¹ Pursuant to District Policy APR 1130, where the total project average annual emissions increase is less than or equal to 0.5 lb/day, that increase is rounded to 0.0 lb/day for the purpose of determining if New Source Review requirements are triggered

The emissions units within this project do not have a total potential to emit which is greater than Major Modification thresholds. Therefore, the project cannot be a significant increase and the project does not constitute a SB 288 Major Modification.

8. Federal Major Modification

District Rule 2201, Section 3.17 defines Federal Major Modification the same as “Major Modification” as defined by 40 CFR 51.165 and part D of Title I of the CAA. Section 3.17 also states that a SB 288 Major Modification is not a Federal Major Modification if the emissions increase for the project or the net emissions increase for the facility (calculated pursuant to 40 CFR 51.165 (a) (2) (ii) (B) through (D) and (F)) does not result in a significant increase as defined by Rule 2201 Table 3-1 or the modification does not cause facility wide emissions to exceed previously established plant wide applicability limit (PAL).

For determination whether a project has a significant increase the project emissions increase is first calculated. The project emissions increase for each pollutant is the projected actual emissions (PAE) and the baseline actual emissions (BAE).

Where there is no increase in design capacity or potential to emit, the PAE are equal to the annual emissions rate at which the unit is projected to emit in any one year selected within 5 years after the unit resumes normal operation (10 years for existing units with an increase in design capacity or potential to emit). If there is no increase in design capacity PAE cannot exceed PE1.

Applicant has proposed up to a new transfer pump and additional organic liquid transfer hoses. Therefore an increase in design capacity is assumed. The baseline disconnect emissions information provided by the applicant for the 2 year period prior to this application (November 2012 – November 2014) was 3,285 disconnects.

BAE Calculation

$$\begin{aligned} \text{Baseline actual disconnects} &= 3,285 \text{ disconnects}/730 \text{ days} \\ &= 4.5 \text{ disconnects/day} \end{aligned}$$

$$\begin{aligned} \text{BAE} &= \text{EF} \times \text{g/ML} \times \text{lb/g} \times \text{disconnects/day} \\ &= (10 \text{ ml/leak}) \times (0.915 \text{ g/mL}) \times (\text{lb}/453.6 \text{ g}) \times (4.5/\text{day}) \\ &= 0.1 \text{ lb/year} \end{aligned}$$

Fugitive BAE = 23.4 lb/day (permit limit)

Total BAE = 0.1 + 23.4 = 23.5 lb/day

PAE Calculation

Applicant has projected to increase the actual disconnects to 26 disconnects/day and will continue to limit disconnect volumes to 10 ml. PAE is assumed to equal disconnect emissions and fugitive emissions.

$$\begin{aligned} \text{PAE} &= \text{EF} \times \text{g/ML} \times \text{lb/g} \times \text{disconnects/day} \\ &= 26 \text{ disconnects/day} \times 10 \text{ mL/disconnect} \times 0.915 \text{ g/mL} \times \text{lb}/453.6 \text{ g} \\ &= 0.5 \text{ lb/day (disconnect emissions)} \end{aligned}$$

$$\begin{aligned} \text{Fugitive PAE} &= 23.4 \text{ lb/day (existing fugitives)} + 0.1 \text{ lb/day (new fugitives)} \\ &= 23.5 \text{ lb/day} \end{aligned}$$

Total PAE = 0.5 + 23.5 = 24.0 lb/day

$$\begin{aligned} \text{Emissions Increase} &= \text{PAE} - \text{BAE} \\ &= 24.0 - 23.5 \\ &= 0.5 \text{ lb/day}^1 \end{aligned}$$

¹ The draft District Policy on Implementation of Rule 2201 (as amended 12/18/08 and approved by EPA 6/10/10) states that for new emissions units an emissions increase not exceeding 0.5 lb/day for NOx or VOCs (if the source is a major source for these air contaminants), does not constitute a Federal Major Modification. The project emissions increase (0.5 lb/day) does not trigger a Federal Major Modification for VOCs.

9. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. The QNEC for this project is listed in the table below

VOCs			
	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
S-37-107-3	8,976	8,953	6

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 for the following:

- 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 a Major Modification.

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

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

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

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

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

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

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

Where,

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

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

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

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

Where,

PE1 = The emissions unit's Potential to Emit 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

For this project EF2 = EF1, therefore:

$$\text{AIPE} = \text{PE2} - \text{PE1}$$

VOC:

$$\begin{aligned}\text{AIPE} &= 24.6 - 24.5 \\ &= 0.1 \text{ lb/day}\end{aligned}$$

As demonstrated above, the AIPE is not greater than 2.0 lb/day for VOC emissions; therefore BACT is not triggered for modification purposes.

d. SB 288/ Federal Major Modification

As discussed in Section VII.C.7 above, this project is not a SB 288 or Federal Major Modification; therefore BACT is not triggered for SB288/Federal Major Modification purposes.

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 of Rule 2201.

Pursuant to Policy APR 1130, offsets will not be required for this project since the increase in permitted emissions is less than or equal to 0.5 lb/day and is therefore rounded to zero for the purposes of triggering NSR requirements.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. Any new Major Source, which is a new facility that is also a Major Source,
- b. Major Modifications,
- c. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- d. Any project which results in the offset thresholds being surpassed, and/or
- e. Any project with an SSPE of greater than 20,000 lb/year for any pollutant.

a. New Major Source

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.

b. SB 288/ Federal Major Modification

As demonstrated in VII.C.7, this project is not a SB288 or Federal Major Modification; therefore, public noticing for Major Modification purposes is not required.

c. 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. There are no new emissions units associated with this project; therefore public noticing is not required for this project for Potential to Emit purposes.

d. Offset Threshold

The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project. Since the project only involves VOC emissions, that is the only offset threshold of concern. As indicated in Project S-1103680, the facility already exceeds the offset thresholds for VOC pollutants. Exact quantities were not calculated in that project, but it was acknowledged that the total VOC emissions were in excess of 20,000 lb/year.

Offset Threshold				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
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 since the facility already exceeds the offset thresholds for all pollutants; therefore public noticing is not required for offset purposes.

e. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. $SSIPE = SSPE2 - SSPE1$. The values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. Since the project only involves VOC emissions, that is the only offset threshold of concern. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
VOC	>20,000 lb/year	>20,000 lb/year	23 ¹	20,000 lb/year	No

¹ Although the total SSPE were not calculated, there is only one unit affected in this project so the SSIPE can be calculated as PE2 – PE1 = (8,976 – 8,953) lb/year = 23 lb/year.

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

2. Public Notice Action

As discussed above, public noticing is not required for this project.

D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, 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.

For this petroleum loading operation, the DELs are stated in the form of fugitive component counts and maximum daily disconnects.

Proposed Rule 2201 (DEL) Conditions:

- During hose disconnects, the maximum liquid spillage for liquids shall not exceed 10 milliliters/disconnect, based on an average from 3 consecutive disconnects. [District Rules 2201]
- Fugitive VOC emissions from components in the piping from loading/unloading rack to pressure tanks (S-37-108 & -109) shall not exceed 23.4 lb/day. [District Rule 2201] Y
- Valves, flanges, and threaded connections shall be operated and maintained in leak free condition. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 100 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rules 2201 and 4624] Y

- Pump and compressor seals shall be operated and maintained in leak free condition. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 500 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rules 2201 and 4624] Y
- All truck unloading lines and hoses and vapor return line and hoses shall be operated and maintained in leak-free condition. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 100 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rules 2201 and 4624] Y
- Loading and vapor collection and control equipment shall be designed, installed, maintained and operated such that there are no leaks or excess organic liquid drainage at disconnects. A liquid leak shall be defined as the dripping of organic compounds at a rate of more than three drops per minute. Excess liquid drainage shall be defined as exceeding 10 mL per disconnect. [District Rules 2201 and 4624] Y
- A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rules 2201 and 4624] Y
- The total number of disconnects shall not exceed 56 per day. [District Rule 2201] Y
- All liquids remaining in loading/unloading arms shall be drained back into tank before disconnect. [District Rules 2201 and 4624] Y
- Only LPG, natural gasoline, and mixed light hydrocarbons shall be loaded and unloaded. [District Rules 2201 and 4624] Y
- Vapor return lines shall be used whenever tank trucks are loading or unloading to return vapors to tank vapor space. [District Rule 2201] Y

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, since the daily emissions from the permit unit are less than 30 lb/day, source testing is not required to demonstrate compliance with Rule 2201.

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

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

- Permittee shall maintain with the permit, accurate fugitive component counts (from loading/unloading rack to pressure tanks) and resulting emissions calculated using U.S. EPA publication EPA-453/R-95-017. [District Rules 1070 and 2201]
- Permittee shall maintain records of the throughputs of materials transferred and the results of any required leak inspections. [District Rule 4624]
- Permittee shall maintain records of disconnects occurred in any one day on daily basis and shall make such records available for District inspection upon request. [District Rules 1070 and 2201]
- {3465} Records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 2201]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit pursuant to Section 3.20 of this rule:

In accordance with Rule 2520, 3.20, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:

- a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
 - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
 6. Do not seek to consolidate overlapping applicable requirements.

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment/minor modification application.

The following federally enforceable conditions will be placed on the permit to ensure compliance with this rule:

- 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 2520] Y
- Prior to operating with the modifications authorized by this Authority to Construct, the facility shall submit an application for an administrative amendment to its Title V permit, in accordance with District Rule 2520, Section 11.4.2. [District Rule 2520] Y

Therefore, compliance with this rule is expected.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60.

- Subpart J/Ja - Standards of Performance for Petroleum Refineries – These sections are not applicable, because the loading rack is not a FCC catalyst regenerator, fuel gas combustion device, or Claus sulfur recovery plant, which are covered by these subparts.
- Subpart GGG - Standards of Performance for Equipment Leaks of VOC at Petroleum Refineries (and by reference Subpart VV Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry) Based on recent inspections, the facility is currently in compliance with Subpart GGG and VV standards. The project is not expected to change the compliance status and therefore continued compliance is expected.

Therefore, compliance with this rule 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 facilities at oil refineries.

Rule 4101 Visible Emissions

Visible emissions in excess of 20% opacity or Ringelmann 1 are not expected from the organic liquid loading operation.

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. The following condition will be placed on the permit to ensure compliance with this rule:

California Health & Safety Code 41700 (Health Risk Assessment)

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

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (Appendix E), the total facility prioritization score including this project was greater than one. Therefore, a health risk assessment 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-37-107-3	0.107 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 4624 Organic Liquid Loading

Kern Oil operates a Class 1 organic liquid transfer facility as defined in the rule (Section 3.8), since it transfers 20,000 gallons or more on any day of organic liquids with a TVP of 1.5 PSIA or greater from or to tank trucks, trailers, or railroad tank cars.

The requirements for Class 1 transfer facilities are set forth in Section 5.1 and require the transfer operation not to exceed 0.08 lb of VOC per 1000 gallon transferred and the use of either a vapor collection and control system (Section 5.1.2.1); the use of a fixed roof or floating roof container that meets the requirements of Rule 4623 (Sections 5.1.2.2 and 5.1.2.3); a pressure vessel with an APCO-approved vapor control system meeting the requirement specified in Rule 4623; or a closed VOC emissions control system. The following conditions are included on the ATC:

- For this 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. [District Rule 4624]
- The VOC from the transfer operation shall be routed to a pressure vessel equipped with an APCO-approved vapor recovery system that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids). [District Rule 4624]

All materials unloaded go into tanks or pressure vessels that meet the requirements of Rule 4623. Compliance with the required emissions factor for Class I facilities (0.08 lbs per 1000 gallons) is demonstrated through compliance (Section 5.3) with the leak requirements set forth in the rule (Section 5.9) as stated in the following conditions:

- During the loading of organic liquids, Permittee shall perform and record the results of monthly leak inspections of the loading and vapor collection equipment at each loading arm. Leak inspections shall be conducted using sight, sound, smell and instrument methods to detect leaks. Instrument detection shall be conducted using EPA Method 21 and shall be measured at a distance of one centimeter from the potential source. The instrument shall be calibrated before use each day of its 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 100 ppmv (or 500 ppmv for pump and compressor seal leak inspection) methane or n-hexane. [District Rule 2520] Y
- All equipment that is 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] Y
- Permittee may apply for a written approval from the APCO to change the inspection frequency from quarterly to annually, provided no leaks were found during five consecutive quarterly inspections. Upon identification of any leak during an annual inspection the frequency shall revert back to quarterly and Permittee shall contact the APCO in writing within 14 days. [District Rule 4624] Y

- Corrective steps shall be taken at any time Permittee observes excess drainage at disconnect. In addition, Permittee shall perform and record the results of monthly drainage inspections at disconnect for each loading arm. [District Rule 4624] Y
- Permittee may apply for a written approval from the APCO to change the inspection frequency from monthly to quarterly, provided no excess drainage conditions are found during five consecutive monthly inspections. Upon identification of excess drainage condition during a quarterly inspection, the frequency shall revert back to monthly and Permittee shall contact the APCO in writing within 14 days. [District Rule 4624] Y

KORC will be required to keep records of the throughputs of materials unloaded (Section 6.1.3) as stated in the following condition:

- Permittee shall maintain records of the throughputs of materials transferred and the results of any required leak inspections. [District Rules 1070 and 4624]

Compliance testing requirements of Section 6.2 for Class 1 Organic Liquid Transfer Facilities (applicable to unloading only) are not required if unloaded liquids/gases are sent to vapor controlled equipment as stated in the following ATC condition:

- The VOC from the transfer operation shall be routed to a pressure vessel equipped with an APCO-approved vapor recovery system that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids). [District Rule 4624]

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)

The California Environmental Quality Act (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 San Joaquin Valley Unified Air Pollution Control District (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.
- 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.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission units are exempt from Best Available Control Technology (BACT) requirements. Furthermore, the District has determined that potential emission increases would have a less than significant health impact on sensitive receptors.

Issuance of permits for emissions units not subject to BACT requirements and with health impact less than significant is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or deliberation. Thus, the District concludes that this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue ATC S-37-107-3, subject to the permit conditions on the attached draft ATC in Appendix F.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-37-107-3	3020-06	Miscellaneous (Loading Rack)	\$105.00

Appendices

- A: Current PTO
- B: Plot Plan
- C: Emissions Profiles
- D: BACT Guideline 7.1.14
- E: Health Risk Assessment
- F: Draft ATC

Appendix A
Current PTO

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-37-107-2

EXPIRATION DATE: 08/31/2016

EQUIPMENT DESCRIPTION:

LPG, NATURAL GASOLINE, & MIXED LIGHT HYDROCARBON LOADING/UNLOADING RACK WITH VAPOR COLLECTION SYSTEM SERVING TANKS S-37-108 & -109

PERMIT UNIT REQUIREMENTS

1. Valves, flanges, and threaded connections shall be operated and maintained in leak free condition. A gas leak shall be defined as a reading of methane, in excess of 100 ppmv above the background when measured at distance of one (1) centimeter from potential source. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Pump and compressor seals shall be operated and maintained in leak free condition. A gas leak shall be defined as a reading of methane, in excess of 500 ppmv above the background when measured at distance of one (1) centimeter from potential source. [District NSR Rule] Federally Enforceable Through Title V Permit
3. All truck unloading lines and hoses and vapor return line and hoses shall be operated and maintained in leak-free condition. A leak shall be defined as a reading of methane, in excess of 100 ppmv above the background when measured at distance of one (1) centimeter from potential source. [District NSR Rule] Federally Enforceable Through Title V Permit
4. All liquids remaining in loading/unloading arms shall be drained back into tank before disconnect. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Only LPG, natural gasoline, and mixed light hydrocarbons shall be loaded and unloaded. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Truck contents shall only be unloaded into pressure storage tanks operating with valid SJVUAPCD Permit to Operate. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Fugitive VOC emissions from components in the piping from loading/unloading rack to pressure tanks (S-37-108 & -109) shall not exceed 23.42 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Liquid drippage on disconnects shall not exceed 10 milliliters (mL)/disconnect. [District NSR Rule] Federally Enforceable Through Title V Permit
9. No more than 56 disconnects shall be allowed in any day without prior District approval. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Vapor return lines shall be used whenever tank trucks are loading or unloading to return vapors to tank vapor space. [District NSR Rule] Federally Enforceable Through Title V Permit
11. 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. Compliance with the leak standards on this permit will serve to demonstrate compliance with this limit. [District Rule 4624]
12. The VOC from the transfer operation shall be routed to a pressure vessel equipped with an APCO-approved vapor recovery system that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids). [District Rule 4624]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

13. All delivery tanks which previously contained organic liquids 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 loading facilities using bottom loading equipment with a vapor collection and control system operating such that VOC emissions do not exceed 0.08 lb/1000 gallons loaded; or Class 2 loading facilities equipped with a system to control at least 95% of VOC displaced. [District Rule 4624] Federally Enforceable Through Title V Permit
14. 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
15. Loading and vapor collection and control equipment shall be designed, installed, maintained and operated such that there are no leaks or excess organic liquid drainage at disconnections. A liquid leak shall be defined as the dripping of organic compounds at a rate of more than three drops per minute. Excess liquid drainage shall be defined as exceeding 10 mL per disconnect. [District Rules 2201 and 4624]
16. During the loading of organic liquids, the operator shall perform and record the results of monthly leak inspections of the loading and vapor collection equipment at each loading arm. Leak inspections shall be conducted using sight, sound, smell and instrument methods to detect leaks. Instrument detection shall be conducted using EPA Method 21 and shall be measured at a distance of one centimeter from the potential source. The instrument shall be calibrated before use each day of its 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 100 ppmv (or 500 ppmv for pump and compressor seal leak inspection) methane or n-hexane. [District Rule 2520] Federally Enforceable Through Title V Permit
17. 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. [District Rule 4624]
18. Corrective steps shall be taken at any time the operator observes excess drainage at disconnect. In addition, the operator shall perform and record the results of monthly drainage inspections at disconnect for each loading arm. If no excess drainage conditions are found during five consecutive monthly inspections, the drainage inspection frequency may be changed from monthly to quarterly. However, if one or more excess drainage condition is found during a quarterly inspection, the inspection frequency shall return to monthly. [District Rule 2520, 9.1, 9.3.2, 9.4.2] Federally Enforceable Through Title V Permit
19. 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, 6.1.3]
20. Permittee shall maintain with the permit, accurate fugitive component counts (from loading/unloading rack to pressure tanks) and resulting emissions calculated using U.S. EPA publication EPA-453/R-95-017. [District NSR Rule] Federally Enforceable Through Title V Permit
21. Permittee shall maintain records of disconnects occurred in any one day on daily basis and shall make such records available for District inspection upon request. [District Rule 1070]

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

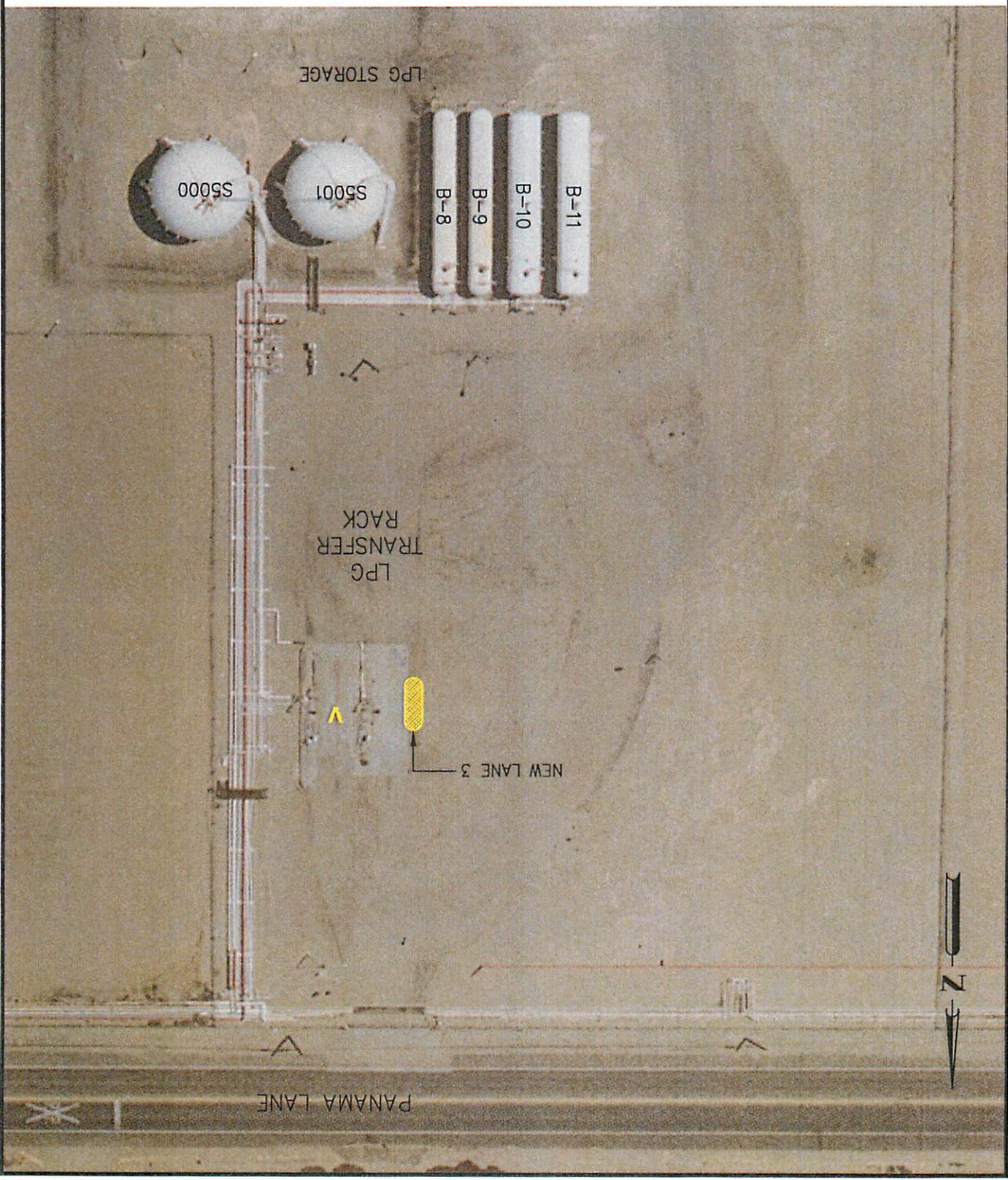
Appendix B
Plot Plan



KERN OIL & REFINING CO.

DATE: 10/14/14 BY: HRP SCALE: NTS

TRANSFER RACK 'V' PLOT PLAN



Appendix C
Emissions Profiles

Permit #: S-37-107-3	Last Updated
Facility: KERN OIL & REFINING CO.	03/04/2015 HEINENG

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	8975.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	24.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	6.0
Q2:	0.0	0.0	0.0	0.0	6.0
Q3:	0.0	0.0	0.0	0.0	6.0
Q4:	0.0	0.0	0.0	0.0	6.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Appendix D
BACT Guideline 7.1.14

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 7.1.14*

Last Update 9/21/2006

Light Crude Oil Unloading Rack

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	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 components subject to Rules 4409 or 4455 as applicable	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 components subject to Rules 4409 or 4455 as applicable	

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**

Appendix E
Health Risk Assessment

San Joaquin Valley Air Pollution Control District Risk Management Review

To: George Heinen – Permit Services
 From: Kyle Melching – Technical Services
 Date: March 2, 2015
 Facility Name: Kern Oil & Refining Company
 Location: Sect 25/T30S/R28E
 Application #(s): S-37-107-3
 Project #: S-1144274

A. RMR SUMMARY

RMR Summary			
Categories	Loading Rack (Units 107-3)	Project Totals	Facility Totals
Prioritization Score	0.00	0.00	>1.0
Acute Hazard Index	0.00	0.00	0.75
Chronic Hazard Index	0.00	0.00	0.1
Maximum Individual Cancer Risk	1.07E-09	1.07E-09	7.02E-06
T-BACT Required?	No		
Special Permit Conditions?	No		

B. RMR REPORT

I. Project Description

Technical Services received a request on February 26, 2015, to perform a Risk Management Review to allow a third delivery truck loading/unloading lane. The new lane would add a transfer pump and related components.

II. Analysis

Toxic emissions for the project were calculated using District approved emission factors for toxic fugitive emissions from oilfield equipment, along with VOC emission rates supplied by the processing engineer. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905-1, March 2, 2001), risks were prioritized using the procedures in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEART's database. The facility's total cumulative prioritization score was greater than 1.0; therefore, a refined health risk assessment was required and performed. AERMOD was used, with area source parameters outlined below, and meteorological data from Arvin to determine maximum dispersion factors at the nearest residential and business receptors. These dispersion factors were input into the HARP model to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters			
Source Type	Area	Receptor Distance (m)	487
Release Height (m)	0.91	Receptor Type	Residence
Total Area of Source (m²)	43.4	Project Location	Rural
VOC Emissions (lb/hr)	0.004	VOC Emissions (lb/yr)	23

III. Conclusions

The acute and chronic indices are below 1.0; and the maximum individual cancer risk associated with the project is **1.07E-09**, which is less than the 1 in a million threshold. In accordance with the District's Risk Management Policy, the project is approved **without** Toxic Best Available Control Technology (T-BACT).

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

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. HARP Risk Report
- E. Facility Summary

Appendix F
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-37-107-3

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:
MODIFICATION OF LPG, NATURAL GASOLINE, & MIXED LIGHT HYDROCARBON LOADING/UNLOADING RACK WITH VAPOR COLLECTION SYSTEM SERVING TANKS S-37-108 & -109: ADD ADDITIONAL LOADING/UNLOADING LANE WITH A NEW TRANSFER PUMP AND RELATED COMPONENTS

CONDITIONS

1. 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 2520] Federally Enforceable Through Title V Permit
2. 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] Federally Enforceable Through Title V Permit
3. Only LPG, natural gasoline, and mixed light hydrocarbons shall be loaded and unloaded. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Valves, flanges, and threaded connections shall be operated and maintained in leak free condition. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 100 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rules 2201 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.

Seyed Sadredin, Executive Director, APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

S-37-107-3 : Mar 4 2015 5:18PM - HEINENG : Joint Inspection NOT Required

5. Pump and compressor seals shall be operated and maintained in leak free condition. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 500 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
6. All truck unloading lines and hoses and vapor return line and hoses shall be operated and maintained in leak-free condition. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 100 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated to methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate more than 3 drops per minute. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
7. Loading and vapor collection and control equipment shall be designed, installed, maintained and operated such that there are no leaks or excess organic liquid drainage at disconnects. A liquid leak shall be defined as the dripping of organic compounds at a rate of more than three drops per minute. Excess liquid drainage shall be defined as exceeding 10 mL per disconnect. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
8. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
9. Fugitive VOC emissions from components in the piping from loading/unloading rack to pressure tanks (S-37-108 & -109) shall not exceed 23.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. All liquids remaining in loading/unloading arms shall be drained back into tank before disconnect. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
11. The total number of disconnects shall not exceed 56 per day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. 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] Federally Enforceable Through Title V Permit
13. Truck contents shall only be unloaded into pressure storage tanks operating with valid SJVUAPCD Permit to Operate. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Vapor return lines shall be used whenever tank trucks are loading or unloading to return vapors to tank vapor space. [District Rule 2201] Federally Enforceable Through Title V Permit
15. 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. Compliance with the leak standards on this permit will serve to demonstrate compliance with this limit. [District Rule 4624] Federally Enforceable Through Title V Permit
16. The VOC from the transfer operation shall be routed to a pressure vessel equipped with an APCO-approved vapor recovery system that meets the control requirements specified in Rule 4623 (Storage of Organic Liquids). [District Rule 4624]
17. All delivery tanks which previously contained organic liquids 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 loading facilities using bottom loading equipment with a vapor collection and control system operating such that VOC emissions do not exceed 0.08 lb/1000 gallons loaded; or Class 2 loading facilities equipped with a system to control at least 95% of VOC displaced. [District Rule 4624] Federally Enforceable Through Title V Permit
18. 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

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CONDITIONS CONTINUE ON NEXT PAGE

19. During the loading of organic liquids, Permittee shall perform and record the results of monthly leak inspections of the loading and vapor collection equipment at each loading arm. Leak inspections shall be conducted using sight, sound, smell and instrument methods to detect leaks. Instrument detection shall be conducted using EPA Method 21 and shall be measured at a distance of one centimeter from the potential source. The instrument shall be calibrated before use each day of its 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 100 ppmv (or 500 ppmv for pump and compressor seal leak inspection) methane or n-hexane. [District Rule 2520] Federally Enforceable Through Title V Permit
20. All equipment that is 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
21. Permittee may apply for a written approval from the APCO to change the inspection frequency from quarterly to annually, provided no leaks were found during five consecutive quarterly inspections. Upon identification of any leak during an annual inspection, the frequency shall revert back to quarterly and Permittee shall contact the APCO in writing within 14 days. [District Rule 4624] Federally Enforceable Through Title V Permit
22. Corrective steps shall be taken at any time Permittee observes excess drainage at disconnect. In addition, Permittee shall perform and record the results of monthly drainage inspections at disconnect for each loading arm. [District Rule 4624] Federally Enforceable Through Title V Permit
23. Permittee may apply for a written approval from the APCO to change the inspection frequency from monthly to quarterly, provided no excess drainage conditions are found during five consecutive monthly inspections. Upon identification of excess drainage condition during a quarterly inspection, the frequency shall revert back to monthly and Permittee shall contact the APCO in writing within 14 days. [District Rule 4624]
24. 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 Rules 1070 and 4624] Federally Enforceable Through Title V Permit
25. Permittee shall maintain with the permit, accurate fugitive component counts (from loading/unloading rack to pressure tanks) and resulting emissions calculated using U.S. EPA publication EPA-453/R-95-017. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
26. Permittee shall maintain records of disconnects occurred in any one day on daily basis and shall make such records available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
27. Permittee shall maintain records of the throughputs of materials transferred and the results of any required leak inspections. [District Rules 1070 and 4624] Federally Enforceable Through Title V Permit
28. Records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

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