



OCT 09 2012

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

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-37
Project # S-1121674**

Dear Ms. Hicks:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. The applicant is requesting that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project authorizes an increase in Reid Vapor Pressure and daily throughput for an internal floating roof tank.

After addressing any EPA comments made during the 45-day comment period, the Authority to Construct will be issued to the facility 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. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,



David Warner
Director of Permit Services

DW: RE/cm

Enclosures



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



OCT 09 2012

Gerardo C. Rios, Chief
Permits Office
Air Division
U.S. EPA - Region IX
75 Hawthorne St.
San Francisco, CA 94105

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-37
Project # S-1121674**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for Kern Oil & Refining Company 7724 E Panama Lane, Bakersfield, CA, which has been issued a Title V permit. Kern Oil & Refining Company is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The project authorizes an increase in Reid Vapor Pressure and daily throughput for an internal floating roof tank.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authority to Construct # S-37-111-6 with a Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW: RE/cm

Enclosures

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585



OCT 09 2012

Mike Tollstrup, Chief
Project Assessment Branch
Air Resources Board
P O Box 2815
Sacramento, CA 95812-2815

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-37
Project # S-1121674**

Dear Mr. Tollstrup:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. The applicant is requesting that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project authorizes an increase in Reid Vapor Pressure and daily throughput for an internal floating roof tank.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authority to Construct # S-37-111-6 with a Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 30-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,



David Warner
Director of Permit Services

DW: RE/cm

Enclosures

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed modification of Kern Oil & Refining Company's operations at 7724 E Panama Lane, Bakersfield, CA, California. The project authorizes an increase in Reid Vapor Pressure and daily throughput for an internal floating roof tank.

The District's analysis of the legal and factual basis for this proposed action, project #1121674, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested by the public, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E. GETTYSBURG AVE, FRESNO, CA 93726-0244.

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Modification of crude oil tank

Facility Name: Kern Oil & Refining Co Date: September 18, 2012
Mailing Address: 7724 E Panama Lane Engineer: Richard Edgehill
Bakersfield, CA 93307 Lead Engineer: Steve Leonard
Contact Person: Melinda Hicks and Juan Campos
Telephone: (661) 845-0761
Fax: (661) 845-3561
E-Mail: mhicks@kernoi.com
Application #(s): S-37-111-6
Project #: S-1121674
Deemed Complete: July 9, 2012

I. Proposal

Kern Oil & Refining Co (Kern Oil) is requesting an Authority to Construct (ATC) to increase the Reid Vapor Pressure (RVP) limit and daily throughput of a 55,000 bbl crude oil internal floating roof tank S-37-111 from 5 psia to 11 psia and from 8,564 bbl/day to 30,000 bbl/day, respectively. No change in annual throughput is proposed.

The project results in an increase in VOC emissions and is a Federal Major Modification. BACT, offsets, and public notice are required.

Current PTO S-37-111-4 is included in **Attachment I**.

Kern Oil is a major stationary source with a Title V permit. 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. Kern Oil must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project prior to startup under the forthcoming ATC.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99) Subpart Kb
Rule 4102	Nuisance (12/17/92)
Rule 4623	Storage of Organic Liquids (05/19/05)
CH&SC 41700	Health Risk Assessment

CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA
Guidelines

III. Project Location

The tank S-37-111 is located in 7724 East Panama Lane, Bakersfield. The tank is not located within 1,000 feet of a K-12 school.

IV. Process Description

Kern Oil operates a petroleum refining operation engaging in the production of petroleum distillates.

Organic liquid storage S-37-111 is equipped with an internal floating roof for VOC emissions control. The tank is authorized to store organic liquids such as crude oil, diesel, heavy distillate, virgin gas oil (VGO).

Proposed Modifications

Applicant has requested that the true vapor pressure and throughput limits be increased to 11.0 psia and 30,000 bbl/day, respectively. No other changes are proposed.

V. Equipment Listing

Pre-Project Equipment Description:

PTO S-37-111-4: 55,000 BBL ORGANIC LIQUID INTERNAL FLOATING ROOF TANK (#55000), WELDED CONSTRUCTION WITH MECHANICAL SHOE PRIMARY SEAL AND RIM-MOUNTED SECONDARY SEAL

Proposed Modification:

PTO S-37-111-6: MODIFICATION OF 55,000 BBL ORGANIC LIQUID INTERNAL FLOATING ROOF TANK (#55000), WELDED CONSTRUCTION WITH MECHANICAL SHOE PRIMARY SEAL AND RIM-MOUNTED SECONDARY SEAL: INCREASE THROUGHPUT LIMIT TO 30,000 BBL/DAY AND INCREASE RVP LIMIT TO 11.0 PSIA

Post Project Equipment Description:

PTO S-37-111-6: 55,000 BBL ORGANIC LIQUID INTERNAL FLOATING ROOF TANK (#55000), WELDED CONSTRUCTION WITH MECHANICAL SHOE PRIMARY SEAL AND RIM-MOUNTED SECONDARY SEAL

VI. Emission Control Technology Evaluation

An internal floating roof tank has both a permanent fixed roof and a floating deck inside. The terms "deck" and "floating roof" can be used interchangeably in reference to the structure floating on the liquid inside the tank. There are two basic types of internal floating roof tanks; tanks in which the fixed roof is supported by vertical columns within the tank, and tanks with a self-supporting fixed roof and no internal support columns. The deck in internal floating roof tanks rises and falls with the liquid level and either floats directly on the liquid surface (contact deck) or rests on pontoons several inches above the liquid surface (non-contact deck).

Evaporation losses from decks may come from deck fittings, non-welded deck seams, and the annular space between the deck and tank wall. In addition, these tanks are freely vented by circulation vents at the top of the fixed roof. The vents minimize the possibility of organic vapor accumulation in concentrations approaching the flammable range.

VII. General Calculations

A. Assumptions

- The tank operates 24 hours per day, 7 days per week, and 52 weeks per year.
- Emissions consist of VOC only

Federal Major Modification Calculation

The following information was submitted by the applicant (**Attachment II**).

	Throughput	RVP
(Baseline Actual Emissions) BAE	2010, 2,209,071 gal/yr	2010, 0.5 psia
	2011, 3,877,624 gal/yr	2011, 1.5 psia
(Projected Actual Emissions) PAE (PE2)	8,564 bbl/day (permit limit) x 365 days/yr x 42 gal/bbl = 131,286,120 gal/yr	5.0 psia (permit limit)

No PAE data was submitted and therefore PAE was assumed to be equal to PE2.
Unused baseline capacity is assumed to be PE1 (legal operating limit) - BAE

B. Emission Factors

Tank emissions were calculated using EPA Tanks 4.0 (**Attachment II**).

C. Calculations

1. Pre-Project Potential to Emit (PE1)

PTO S-37-111-4

Pre-Project Potential to Emit (PE1)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
VOC	5.8	2,122

2. Post Project Potential to Emit (PE2)

ATC S-37-111-6

Post Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
VOC	11.5	4,212

Greenhouse Gas (GHG) Emissions

The project results in 2,090 lb/yr increase in annual VOC emissions. Assuming this is 100% methane (CH₄), which has a GWP for methane of 23 lb CO_{2e}/lb CH₄, the increase is 48,070 lb CO_{2e}/yr (24 tons CO_{2e}/yr) which is much less than the threshold of 230 mtons CO_{2e}/yr.

The 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.

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 3.23 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 3.23.2 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 tank achieves 95% control (primary metal show seal with secondary wiper seal) meeting the requirements for achieved-in-practice BACT. Therefore, Baseline Emissions (BE) are equal to the Pre-Project Potential to Emit (PE1).

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	4,212	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, Section 3.17 states that Federal Major Modifications are the same as "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA. For determination of whether the project is a Federal Major Modification the project increase in emissions is calculated and compared with the Federal Major Modification thresholds in the table below.

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

$$\text{Emission Increase} = \text{PAE} - \text{BAE} - \text{UBC}$$

where: PAE = Projected Actual Emissions, and
BAE = Baseline Actual Emissions
UBC = Unused baseline capacity

BAE is calculated using tvp and throughput for any 24 month period within the previous 10 year period. UBC is the portion of PAE that the tank could have accommodated during the baseline period unrelated to the current project.

A summary of the input parameters and results of spreadsheet calculations (**Attachment II**) used in the calculation are listed in the table below.

	lb/yr
PAE (PE2)	4,212
BAE	(169 + 52)/2 = 111 lb/yr*
UBC**	2,122 – 111 = 2,011

*average of 2010 and 2011-see **Attachment II** calculations

**PE1 - BAE

$$\begin{aligned} \text{Emission Increase} &= \text{PAE} - \text{BAE} - \text{UBC} \\ &= 4,212 - 111 - 2,011 \\ &= 2090 \text{ lb/yr} \end{aligned}$$

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*	2,011	0	Yes

Since the Federal Major Modification Threshold for VOCs have been surpassed the project is a Federal Major Modification.

9. Quarterly Net Emissions Change (QNEC)

VOCs			
	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
S-1326-333	4,212	2,122	523

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

- Any new emissions unit with a potential to emit exceeding two pounds per day,
- The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- Any new or modified emissions unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification, as defined by the rule.

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

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

As 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

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

$$\text{EF2} = \text{EF1}$$

$$\begin{aligned} \text{AIPE} &= 11.5 - (5.8 * (1.0)) \\ &= 5.7 \text{ lb/day} \end{aligned}$$

As demonstrated above, the AIPE is greater than 2.0 lb/day for VOC emissions; therefore BACT is triggered for modification purposes.

d. SB 288/Federal Major Modification

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

2. BACT Guideline

BACT Guideline 7.3.3 applies to the floating roof organic liquid storage or processing tank. (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:

S-37-111

VOC: 95% control (primary metal shoe seal with secondary wiper seal, or equal) –
Achieved in Practice

B. Offsets

1. Offset Applicability

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

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

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

2. Quantity of Offsets Required

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

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

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

Where,

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

BE = Baseline Emissions, (lb/year)

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

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = Pre-project Potential to Emit for:

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

otherwise,

BE = Historic Actual Emissions (HAE)

The facility is proposing to install eight new emissions units; 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) = 4,212 lb/year

BE (VOCs) = 2,122 lb/year

ICCE = 0 lb/year

Offsets Required (lb/year) = $4,212 - 2,122$
= 2,090

The quarterly ERC required is as follows:

DOR = 1.0

<u>Pollutant</u>	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
VOC	523	523	523	523

The applicant has stated that the facility plans to use ERC certificate S-3866-1 to offset the increase in VOC emissions associated with this project. The offset ratio is 1.5:1 as the project is a Federal Major Modification. The following quantities have been reserved for the project:

DOR = 1.5

<u>Pollutant</u>	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
VOC	784	784	784	784

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: 784 lb VOC/quarter. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). [District Rule 2201] Y

ERC Certificate Number S-3866-1 (or certificate split from this certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Y

C. Public Notification

1. Applicability

Public noticing is required for:

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

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

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

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

b. PE > 100 lb/day

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

c. Offset Threshold

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

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

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

d. SSIPE > 20,000 lb/year

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

Stationary Source Increase in Permitted Emissions (SSIPE)			
Pollutant	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)
VOC	> 20,000	>20,000	2,122

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

2. Public Notice Action

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

D. Daily Emission Limits (DELs)

Daily Emission Limits, DELs, are required by Rule 2201 Section 5.7.2.

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

Daily tank throughput shall not exceed 30,000 bbl/day of fluid. [District Rule 2201] Y

Reid vapor pressure of the stored liquid shall not exceed 11 psia. [District Rules 2201 & 4623] Y

E. Compliance Assurance

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

1. Source Testing

Source testing is not required.

2. Monitoring

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

The operator shall visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years. [40 CFR 60.113b(a)(4)] Y

Operator shall notify the APCO in writing 30 days prior to the filing or refilling of the vessel. If the inspection is not planned and the operator could not have known about the inspection 30 days in advance of refilling the tank, the operator shall make notification 7 days prior to refilling the tank. [40 CFR 60.113b(a)(5)] Y

3. Record Keeping

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

Records of each inspection shall be maintained. Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment. If any defects are detected during an inspection, operator shall provide the APCO with a report within 30 days of the inspection. The report shall identify the storage vessel, the nature of the defects, and the date the vessel was emptied or the nature of and date the repair was made. [40 CFR 60.115b(a)(2), (3) and (4)] Y

Operator shall maintain, for the life of the source, a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [40 CFR 60.116b(a) and (b)] Y

All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 1070] Y

4. Reporting

The following NSPS reporting condition is included on the ATC:

Operator shall notify the APCO in writing 30 days prior to the filing or refilling of the vessel. If the inspection is not planned and the operator could not have known about the inspection 30 days in advance of refilling the tank, the operator shall make notification 7 days prior to refilling the tank. [40 CFR 60.113b(a)(5)] Y

F. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Major Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed above, the project is a Federal Major Modification, therefore this requirement is applicable. Included in **Attachment VI** is Kern Oil's Title V Compliance Certification form and Statewide Compliance Certification document.

G. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to reauthorize a tank. Since the project is at the current facility location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2520 Federally Mandated Operating Permits

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

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

Rule 4001 New Source Performance Standards (NSPS)

40 CFR Part 60 Subpart A – General Provisions

Because this project is subject to NSPS Subpart Kb (see discussion below), it is also subject to NSPS Subpart A, which defines the record keeping, reporting, and notification responsibilities associated with NSPS compliance. The facility will continue to comply with the provisions of NSPS Subpart A.

40 CFR Part 60, Subpart Kb: Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

Pursuant to 40 CFR Part 60 Section 60.110b(a), *Applicability And Designation Of Affected Facility*, except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic

meters (m³) (equivalent to 19,813 gal) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

Pursuant to 40 CFR Part 60 Section 60.110b(b), this subpart does not apply to:
(a) storage vessels with a capacity greater than or equal to 151 m³ (equivalent to 39,890 gal) storing a liquid with a maximum True Vapor Pressure (TVP) less than 3.5 kilopascals (kPa) (equivalent to 0.5 psi)

Because the tank has a capacity greater than 39,890 gallons and will contain VOL with TVP > 3.5 kPa, it is subject to the control requirements of NSPS Subpart Kb. The existing set of primary and secondary seals meet these control requirements. Rule 4623 conditions specifying seal gap and fittings requirements and inspection procedures are included on the ATC.

Rule 4101 Visible Emissions

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

Continued compliance is expected.

Rule 4102 Nuisance

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

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

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-37-111	0.072 per million	No

The project is approvable without TBACT.

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

Section 5 specifies an inspection schedule, repair requirements, and operating practices to monitor and control fugitive emissions due to leaks from fugitive components at petroleum refineries and chemical plants. The facility has a leak detection and repair program in place that meets the requirements of Rule 4455; therefore continued compliance with this rule is expected.

Rule 4623 Storage of Organic Liquids

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

The subject tank is equipped with an internal floating roof with metallic shoe primary seal and wiper secondary seal and operates in compliance with the applicable requirements specified in Section 5.3.2.1. Deck fittings are expected to comply with Section 5.5.

Conditions have been added to the ATCs to ensure compliance with the Inspection and Record-keeping requirements of Section 6 of the rule.

Compliance is expected.

Rule 4801 Sulfur Compounds

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

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

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

Greenhouse Gas (GHG) Significance Determination

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

District CEQA Findings

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

IX. Recommendation

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

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-37-111	3020-05-G	2,310,000 gallons	\$382.00

Attachments

- I: *Current PTO S-37-111-4*
- II: Tank Emissions Calculations
- III: Emissions Profile
- IV: BACT Guideline
- V: BACT Analysis
- VI: Statewide Compliance Statement
- VII: Title v Compliance Certification Form
- VIII: HRA Summary
- IX: Draft ATC

ATTACHMENT I
PTO S-37-111-4

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-37-111-4

EXPIRATION DATE: 08/31/2016

SECTION: 25 TOWNSHIP: 30E RANGE: 28E

EQUIPMENT DESCRIPTION:

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

PERMIT UNIT REQUIREMENTS

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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

14. All roof openings used for sampling and gauging, except pressure vacuum valves, shall be closed at all times, with no visible gaps and be leak free (as defined in Rule 4623), except when the roof opening is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Any roof drain shall be provided with a slotted membrane fabric cover, or equivalent, that covers at least 90% of the area of the opening. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The permittee shall keep accurate records of Reid vapor pressure, storage temperature, daily tank throughput, and types of liquids stored, for a period of five years, and shall make such records available for District inspection upon request. [District Rules 2201 & 4623] Federally Enforceable Through Title V Permit
17. Daily tank throughput shall not exceed 8,564 bbl/day of fluid. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Reid vapor pressure of the stored liquid shall not exceed 5 psia. [District Rules 2201 & 4623] Federally Enforceable Through Title V Permit
19. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal roof shall be floating on the liquid surface except during initial fill and when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. [40 CFR 60.112b(a)(1)(i)] Federally Enforceable Through Title V Permit
20. Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents is to provide a projection below the liquid surface. [40 CFR 60.112b(a)(1)(iii)] Federally Enforceable Through Title V Permit
21. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use. [40 CFR 60.112b(a)(1)(iv)] Federally Enforceable Through Title V Permit
22. Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [40 CFR 60.112b(a)(1)(v)] Federally Enforceable Through Title V Permit
23. Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [40 CFR 60.112b(a)(1)(vi)] Federally Enforceable Through Title V Permit
24. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening. [40 CFR 60.112b(a)(1)(vii)] Federally Enforceable Through Title V Permit
25. Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. [40 CFR 60.112b(a)(1)(viii)] Federally Enforceable Through Title V Permit
26. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix)] Federally Enforceable Through Title V Permit
27. This tank must have two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous. [40 CFR 60.112b(a)(1)(ii)(B)] Federally Enforceable Through Title V Permit
28. The operator shall visually inspect the internal floating roof, the primary seal and, the secondary seal prior to filling the storage vessel. If holes, tears, or other openings are found, they shall be repaired prior to filling the storage vessel. [40 CFR 60.113b(a)(1)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

29. The operator shall visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years. [40 CFR 60.113b(a)(4)] Federally Enforceable Through Title V Permit
30. Operator shall notify the APCO in writing 30 days prior to the filing or refilling of the vessel. If the inspection is not planned and the operator could not have known about the inspection 30 days in advance of refilling the tank, the operator shall make notification 7 days prior to refilling the tank. [40 CFR 60.113b(a)(5)] Federally Enforceable Through Title V Permit
31. Records of each inspection shall be maintained. Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment. If any defects are detected during an inspection, operator shall provide the APCO with a report within 30 days of the inspection. The report shall identify the storage vessel, the nature of the defects, and the date the vessel was emptied or the nature of and date the repair was made. [40 CFR 60.115b(a)(2), (3) and (4)] Federally Enforceable Through Title V Permit
32. Operator shall maintain, for the life of the source, a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [40 CFR 60.116b(a) and (b)] Federally Enforceable Through Title V Permit
33. The operator shall keep readily available accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The operator shall also keep a record of the liquid stored, the period of storage, and the maximum true vapor pressure of the liquid during the respective storage period. [40 CFR 60.116b(b) and (c)] Federally Enforceable Through Title V Permit
34. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually inspect the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4326, Table 5]
35. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 5]
36. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 5]
37. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 5]
38. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 5 shall constitute a violation of this rule. [District Rule 4623, Table 5]
39. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 5]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

40. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 5]
41. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

ATTACHMENT II Tank Calculations

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification
 User Identification:
 City:
 State:
 Company:
 Type of Tank:
 Description:

Tank 55000
 Bakersfield
 California
 Kern Oil & Refining Co.
 Internal Floating Roof Tank
 55,000-bbl Internal Floating Roof Tank

Tank Dimensions
 Diameter (ft):
 Volume (gallons):
 Turnovers:
 Self Supp. Roof? (y/n):
 No. of Columns:
 Eff. Col. Diam. (ft):

100.00
 2,350,075.00
 1.65
 N
 6.00
 1.00

Paint Characteristics
 Internal Shell Condition:
 Shell Color/Shade:
 Shell Condition:
 Roof Color/Shade:
 Roof Condition:

Light Rust
 White/White
 Good
 White/White
 Good

Rim-Seal System
 Primary Seal:
 Secondary Seal

Mechanical Shoe
 Rim-mounted

Deck Characteristics
 Deck Fitting Category:
 Deck Type:
 Construction:
 Deck Seam:
 Deck Seam Len. (ft):

Detail
 Bolted
 Sheet
 Sheet: 5 Ft Wide
 1,570.80

Deck Fitting/Status

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Roof Leg or Hanger Well/Fixed	32
Sample Pipe or Well (24-in. Diam.)/Slotted Pipe-Sliding Cover, Gask.	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	6

Meteorological Data used in Emissions Calculations: Bakersfield, California (Avg Atmospheric Pressure = 14.47 psia)

BAE
 2011 = 1.5 g/hr
 RUP = 624 VOC
 2877
 169 yr

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Tank 55000 - Internal Floating Roof Tank
Bakersfield, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)		Liquid Bulk Temp (deg F)	Vapor Pressure (psia)		Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.		Max.	Min.					
Crude oil (RVP 1.5)	Jan	58.62	54.46	62.78	65.42	0.5324	N/A	N/A	50.0000	207.00	Option 4; RVP=1.5
Crude oil (RVP 1.5)	Feb	61.49	56.39	66.58	65.42	0.5720	N/A	N/A	50.0000	207.00	Option 4; RVP=1.5
Crude oil (RVP 1.5)	Mar	63.85	57.94	69.77	65.42	0.6066	N/A	N/A	50.0000	207.00	Option 4; RVP=1.5
Crude oil (RVP 1.5)	Apr	66.98	60.01	73.95	65.42	0.6550	N/A	N/A	50.0000	207.00	Option 4; RVP=1.5
Crude oil (RVP 1.5)	May	71.00	63.30	78.70	65.42	0.7219	N/A	N/A	50.0000	207.00	Option 4; RVP=1.5
Crude oil (RVP 1.5)	Jun	74.47	66.32	82.63	65.42	0.7844	N/A	N/A	50.0000	207.00	Option 4; RVP=1.5
Crude oil (RVP 1.5)	Jul	77.01	68.80	85.22	65.42	0.8329	N/A	N/A	50.0000	207.00	Option 4; RVP=1.5
Crude oil (RVP 1.5)	Aug	76.03	68.25	83.81	65.42	0.8198	N/A	N/A	50.0000	207.00	Option 4; RVP=1.5
Crude oil (RVP 1.5)	Sep	72.96	65.93	79.98	65.42	0.7566	N/A	N/A	50.0000	207.00	Option 4; RVP=1.5
Crude oil (RVP 1.5)	Oct	68.33	62.00	74.66	65.42	0.6788	N/A	N/A	50.0000	207.00	Option 4; RVP=1.5
Crude oil (RVP 1.5)	Nov	62.38	57.33	67.44	65.42	0.5949	N/A	N/A	50.0000	207.00	Option 4; RVP=1.5
Crude oil (RVP 1.5)	Dec	58.39	54.32	62.46	65.42	0.5293	N/A	N/A	50.0000	207.00	Option 4; RVP=1.5

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Tank 55000 - Internal Floating Roof Tank
Bakersfield, California

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):	0.9371	1.0083	1.0705	1.1579	1.2793	1.3932	1.4818	1.4470	1.3424	1.1975	1.0315	0.9314
Seal Factor A (lb-mole/ft-yr):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Seal Factor B (lb-mole/ft-yr (mph ² /n)):	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000
Value of Vapor Pressure Function:	0.0094	0.0101	0.0107	0.0116	0.0128	0.0139	0.0148	0.0145	0.0134	0.0120	0.0103	0.0093
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.5324	0.5720	0.6056	0.6550	0.7219	0.7844	0.8329	0.8138	0.7566	0.6768	0.5849	0.5293
Tank Diameter (ft):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000
Product Factor:	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000
Withdrawal Losses (lb):	3.2690	3.2690	3.2690	3.2690	3.2690	3.2690	3.2690	3.2690	3.2690	3.2690	3.2690	3.2690
Number of Columns:	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000
Effective Column Diameter (ft):	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Net Throughput (gal/mo):	322,430.5000	322,430.5000	322,430.5000	322,430.5000	322,430.5000	322,430.5000	322,430.5000	322,430.5000	322,430.5000	322,430.5000	322,430.5000	322,430.5000
Shell Coefficient (ft ² /m ²):	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060
Average Organic Liquid Density (lb/gal):	7.1000	7.1000	7.1000	7.1000	7.1000	7.1000	7.1000	7.1000	7.1000	7.1000	7.1000	7.1000
Tank Diameter (ft):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Deck Fitting Losses (lb):	3.1799	3.4214	3.6325	3.9290	4.3411	4.7275	5.0283	4.9100	4.5552	4.0634	3.5002	3.1607
Value of Vapor Pressure Function:	0.0094	0.0101	0.0107	0.0116	0.0128	0.0139	0.0148	0.0145	0.0134	0.0120	0.0103	0.0093
Vapor Molecular Weight (lb/lb-mole):	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000
Product Factor:	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000
Tot. Roof Fitting Loss Fact. (lb-mole/yr):	203.6000	203.6000	203.6000	203.6000	203.6000	203.6000	203.6000	203.6000	203.6000	203.6000	203.6000	203.6000
Deck Seam Losses (lb):	4.3732	4.7052	4.9956	5.4034	5.9701	6.5015	6.9152	6.7525	6.2645	5.5981	4.8137	4.3467
Deck Seam Length (ft):	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400
Deck Seam Length Factor (ft/sqft):	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
Tank Diameter (ft):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000
Product Factor:	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000
Total Losses (lb):	11.7591	12.4039	12.9577	13.7593	14.8594	15.8913	16.6944	16.3785	15.4311	14.1179	12.6144	11.7079

Roof Fitting/Status	Quantity	KFa (lb-mole/yr)	Roof Fitting Loss Factors KFB (lb-mole/(yr mph ² n))	m	Losses (lb)
Access Hatch (24-in. Diam./Bolted Cover, Gasketed	1	1.60	0.00	0.00	0.3811
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	0.6669
Roof Leg or Hanger Well/Fixed	32	0.00	0.00	0.00	0.0000
Sample Pipe or Well (24-in. Diam./Slotted Pipe-Sliding Cover, Gask.	1	43.00	0.00	0.00	10.2413
Vacuum Breaker (10-in. Diam./Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	1.4767
Column Well (24-in. Diam./Pipe Coll-Sliding Cover, Gask.	6	25.00	0.00	0.00	35.7256

**TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals**

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

**Tank 55000 - Internal Floating Roof Tank
Bakersfield, California**

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	
Crude oil (RVP 1.5)	14.28	39.23	48.45	66.63	168.58

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification: Tank 55000
 City: Bakersfield
 State: California
 Company: Kern Oil & Refining Co.
 Type of Tank: Internal Floating Roof Tank
 Description: 55,000-bbl Internal Floating Roof Tank

Tank Dimensions

Diameter (ft): 100.00
 Volume (gallons): 2,350,075.00
 Turnovers: 0.94
 Self Supp. Roof? (y/n): N
 No. of Columns: 6.00
 Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Internal Shell Condition: Light Rust
 Shell Color/Shade: White/White
 Shell Condition: Good
 Roof Color/Shade: White/White
 Roof Condition: Good

Rim-Seal System

Primary Seal: Mechanical Shoe
 Secondary Seal: Rim-mounted

Deck Characteristics

Deck Fitting Category: Detail
 Deck Type: Bolted
 Construction: Sheet
 Deck Seam: Sheet: 5 Ft Wide
 Deck Seam Len. (ft): 1,570.80

BAE
 2010
 RVP = .5
 2,209,071 gal/yr
 52 lb/yr

Deck Fitting/Status

Quantity

Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Roof Leg or Hanger Well/Fixed	32
Sample Pipe or Well (24-in. Diam.)/Slotted Pipe-Sliding Cover, Gask.	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	6

Meteorological Data used in Emissions Calculations: Bakersfield, California (Avg Atmospheric Pressure = 14.47 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Tank 55000 - Internal Floating Roof Tank
Bakersfield, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Crude oil (RVP 0.5)	Jan	58.62	54.46	62.78	65.42	0.1170	N/A	N/A	50.0000				
Crude oil (RVP 0.5)	Feb	61.49	56.39	66.58	65.42	0.1275	N/A	N/A	50.0000		207.00		Option 4: RVP=5
Crude oil (RVP 0.5)	Mar	63.85	57.94	69.77	65.42	0.1368	N/A	N/A	50.0000		207.00		Option 4: RVP=5
Crude oil (RVP 0.5)	Apr	66.98	60.01	73.95	65.42	0.1500	N/A	N/A	50.0000		207.00		Option 4: RVP=5
Crude oil (RVP 0.5)	May	71.00	63.30	78.70	65.42	0.1685	N/A	N/A	50.0000		207.00		Option 4: RVP=5
Crude oil (RVP 0.5)	Jun	74.47	66.32	82.63	65.42	0.1861	N/A	N/A	50.0000		207.00		Option 4: RVP=5
Crude oil (RVP 0.5)	Jul	77.01	68.80	85.22	65.42	0.2000	N/A	N/A	50.0000		207.00		Option 4: RVP=5
Crude oil (RVP 0.5)	Aug	78.03	68.25	83.81	65.42	0.1945	N/A	N/A	50.0000		207.00		Option 4: RVP=5
Crude oil (RVP 0.5)	Sep	72.96	65.93	79.99	65.42	0.1783	N/A	N/A	50.0000		207.00		Option 4: RVP=5
Crude oil (RVP 0.5)	Oct	68.33	62.00	74.66	65.42	0.1560	N/A	N/A	50.0000		207.00		Option 4: RVP=5
Crude oil (RVP 0.5)	Nov	62.38	57.33	67.44	65.42	0.1310	N/A	N/A	50.0000		207.00		Option 4: RVP=5
Crude oil (RVP 0.5)	Dec	58.39	54.32	62.46	65.42	0.1162	N/A	N/A	50.0000		207.00		Option 4: RVP=5

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Tank 55000 - Internal Floating Roof Tank
Bakersfield, California

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):	0.2030	0.2213	0.2375	0.2605	0.2928	0.3237	0.3479	0.3383	0.3099	0.2710	0.2273	0.2018
Seal Factor A (lb-mole/lb-yr):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Seal Factor B (lb-mole/lb-yr (mph^n)):	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000
Value of Vapor Pressure Function:	0.0020	0.0022	0.0024	0.0028	0.0029	0.0032	0.0035	0.0034	0.0031	0.0027	0.0023	0.0020
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.1170	0.1275	0.1368	0.1500	0.1685	0.1861	0.2000	0.1945	0.1783	0.1560	0.1310	0.1162
Tank Diameter (ft):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000
Product Factor:	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000
Withdrawal Losses (lb):	1.8610	1.8610	1.8610	1.8610	1.8610	1.8610	1.8610	1.8610	1.8610	1.8610	1.8610	1.8610
Number of Columns:	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000
Effective Column Diameter (ft):	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Net Throughput (gal/mo.):	183,557.5000	183,557.5000	183,557.5000	183,557.5000	183,557.5000	183,557.5000	183,557.5000	183,557.5000	183,557.5000	183,557.5000	183,557.5000	183,557.5000
Shell Clingage Factor (bb/1000 sqft):	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060
Average Organic Liquid Density (lb/gal):	7.1000	7.1000	7.1000	7.1000	7.1000	7.1000	7.1000	7.1000	7.1000	7.1000	7.1000	7.1000
Tank Diameter (ft):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Deck Fitting Losses (lb):	0.6889	0.7510	0.8059	0.8938	0.9937	1.0983	1.1806	1.1481	1.0515	0.9195	0.7714	0.6940
Value of Vapor Pressure Function:	0.0020	0.0022	0.0024	0.0028	0.0029	0.0032	0.0035	0.0034	0.0031	0.0027	0.0023	0.0020
Vapor Molecular Weight (lb/lb-mole):	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000
Product Factor:	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	203.6000	203.6000	203.6000	203.6000	203.6000	203.6000	203.6000	203.6000	203.6000	203.6000	203.6000	203.6000
Deck Seam Losses (lb):	0.9474	1.0328	1.1083	1.2155	1.3668	1.5104	1.6238	1.5789	1.4461	1.2645	1.0609	0.9406
Deck Seam Length (ft):	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000	1,570.8000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400
Deck Seam Length Factor(ft/sqft):	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
Tank Diameter (ft):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000
Product Factor:	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000
Total Losses (lb):	3.7003	3.8661	4.0127	4.2208	4.5142	4.7934	5.0131	4.9264	4.6604	4.3159	3.9207	3.6872

Roof Fitting/Status	Quantity	KFa(lb-mole/yr)	Roof Fitting Loss Factors Kfb(lb-mole/yr mph^n)	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	0.0663
Automatic Gauge Fical Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	0.1511
Roof Leg or Hanger Well/Fixed	32	0.00	0.00	0.00	0.0000
Sample Pipe or Well (24-in. Diam.)/Weighted Mech. Actuation, Gask.	1	43.00	0.00	0.00	2.3206
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.84	0.3346
Column Well (24-in. Diam.)/Pipe Col.-Sisring Cover, Gask.	6	25.00	0.00	0.00	8.0952

**TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals**

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

**Tank 55000 - Internal Floating Roof Tank
Bakersfield, California**

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	
Crude oil (RVP 0.5)	3.23	22.33	10.98	15.10	51.64

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification
 User Identification: Tank 65000
 City: Bakersfield
 State: California
 Company: Kern Oil & Refining Co.
 Type of Tank: Internal Floating Roof Tank
 Description: 55,000-bbl Internal Floating Roof Tank

Tank Dimensions
 Diameter (ft): 100.00
 Volume (gallons): 2,350,075.00
 Turnovers: 55.87
 Self Supp. Roof? (y/n): N
 No. of Columns: 6.00
 Eff. Col. Diam. (ft): 1.00

Paint Characteristics
 Internal Shell Condition: Light Rust
 Shell Color/Shade: White/White
 Shell Condition: Good
 Roof Color/Shade: White/White
 Roof Condition: Good

Rim-Seal System
 Primary Seal: Mechanical Shoe
 Secondary Seal: Rim-mounted

Deck Characteristics
 Deck Fitting Category: Detail
 Deck Type: Bolted
 Construction: Sheet
 Deck Seam: Sheet: 5 Ft Wide
 Deck Seam Len. (ft): 1,570.80

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Roof Leg or Hanger Well/Fixed	32
Sample Pipe or Well (24-in. Diam.)/Slotted Pipe-Sliding Cover, Gask.	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	6

Meteorological Data used in Emissions Calculations: Bakersfield, California (Avg Atmospheric Pressure = 14.47 psia)

PE2
 8564 bbl/yr
 x 365 day/yr
 RVP = 11
 4212 ¹³/_{yr}
 VOC

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Tank 65000 - Internal Floating Roof Tank
Bakersfield, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Crude oil (RVP 11)	All	67.63	61.25	74.00	65.42	9.5859	N/A	N/A	50.0000			207.00	Option 4: RVP=11

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Tank 55000 - Internal Floating Roof Tank
Bakersfield, California

Annual Emission Calculations

Rim Seal Losses (lb):	318.0129
Seal Factor A (lb-mole/l-yr):	0.6000
Seal Factor B (lb-mole/l-yr (mph) ² n):	0.4000
Value of Vapor Pressure Function:	0.2650
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	8.5859
Tank Diameter (ft):	100.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	1,331.0883
Number of Columns:	6.0000
Effective Column Diameter (ft):	1.0000
Annual Nat Throughput (gal/yr.):	131,289,000.0000
Shell Circumference Factor (ft ² /1000 gal):	0.0660
Average Organic Liquid Density (lb/gal):	7.1000
Tank Diameter (ft):	100.0000
Deck Filling Losses (lb):	1,078.1233
Value of Vapor Pressure Function:	0.2650
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Tot. Roof Filling Loss Fact.(lb-mole/yr):	203.6000
Deck Seam Losses (lb):	1,484.0651
Deck Seam Length (ft):	1,670.8600
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.1400
Deck Seam Length Factor(ft/eq):	0.2000
Tank Diameter (ft):	100.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Total Losses (lb):	4,212.2882

Roof Filling/Status	Quantity	KFa(lb-mole/yr)	Roof Filling Loss Factors KFa(lb-mole/(yr mph ²))	m	Losses(lb)
Access Hatch (24-in. Diam.) Bolted Cover, Gasketed	1	1.00	0.00	0.00	8.4803
Automatic Gauge Float Well Bolted Cover, Gasketed	1	2.00	0.00	0.00	14.9606
Roof Lug or Hanger Well Fixed	32	0.00	0.00	0.00	0.0000
Sample Pipe or Well (24-in. Diam.) Stuffed Pipe Sliding Cover, Gask.	1	43.00	0.00	0.00	227.9093
Vacuum Breaker (10-in. Diam.) Weighted Mech. Actuation, Gask.	1	8.20	1.20	0.04	32.8613
Column Well (24-in. Diam.) Pipe Cap Sliding Cover, Gask.	6	25.00	0.00	0.00	795.0323

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 55000 - Internal Floating Roof Tank
Bakersfield, California

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawl Loss	Deck Filling Loss	Deck Seam Loss	
Crude oil (RVP 11)	318.01	1,331.09	1,078.12	1,484.07	4,212.29

ATTACHMENT III Emissions Profiles

Permit #: S-37-111-6	Last Updated
Facility: KERN OIL & REFINING CO.	09/18/2012 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	4212.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	11.5
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	522.0
Q2:	0.0	0.0	0.0	0.0	522.0
Q3:	0.0	0.0	0.0	0.0	523.0
Q4:	0.0	0.0	0.0	0.0	523.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					784.0
Q2:					784.0
Q3:					784.0
Q4:					784.0

**ATTACHMENT IV
BACT Guideline**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 7.3.3*

Last Update 10/1/2002

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

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

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

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

ATTACHMENT V BACT Analysis

I. BACT Analysis for VOC Emissions:

a. Step 1 - Identify All Possible Control Technologies

The SJVUAPCD BACT Clearinghouse Guideline 7.3.3 identifies technologically feasible BACT as:

- 95% control (primary metal shoe seal with secondary wiper seal, or equal) (Achieved-In-Practice)
- 95% control (Dual wiper seal with drip curtain or primary metal shoe seal with secondary wiper seal, or equal) (Technologically Feasible)

b. Step 2 - Eliminate Technologically Infeasible Options

All above controls are technologically feasible.

c. Step 3 - Rank Remaining Control Technologies by Control Effectiveness

- 95% control (primary metal shoe seal with secondary wiper seal, or equal) (Achieved-In-Practice)
- 95% control (Dual wiper seal with drip curtain or primary metal shoe seal with secondary wiper seal, or equal) (Technologically Feasible)

d. Step 4 - Cost Effectiveness Analysis

All of the control technologies have the same control efficiency. Since the tank is equipped with the most efficient control technology, a cost effectiveness analysis is not required.

e. Step 5 - Select BACT

- 95% control (primary metal shoe seal with secondary wiper seal, or equal) (Achieved-In-Practice)

ATTACHMENT VI
Statewide Compliance Statement



Kern Oil & Refining Co.

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

September 18, 2012

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

**Subject: Kern Oil & Refining Co. – Compliance Certification
Project S-1121674**

Dear Mr. Scandura:

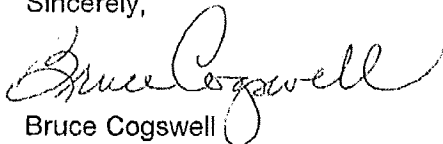
District Rule 2201, Section 4.15.2, requires that an owner or operator proposing a Federal Major Modification certify that all major stationary sources owned or operated by such person (or by any entity controlling, controlled by, or under common control with such person) in California are either in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

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

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

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

Sincerely,


Bruce Cogswell
VP Manufacturing

cc: Melinda Hicks

ATTACHMENT VII
Title V Compliance Certification Form

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

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

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

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

Bruce Cogswell
Signature of Responsible Official

5/18/12
Date

Bruce Cogswell
Name of Responsible Official (please print)

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

**ATTACHMENT VIII
HRA**

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Richard Edgehill – Permit Services
 From: Ester Davila – Technical Services
 Date: October 1, 2012
 Facility Name: Kern Oil & Refining Company
 Location: 7724 E. Panama Lane, Bakersfield
 Application #(s): S-37-111-6
 Project #: S-1121674

A. RMR SUMMARY

RMR Summary			
Categories	Crude Oil Storage Tank (Unit 111-6)	Project Totals	Facility Totals
Prioritization Score	0.36	0.36	>1.0
Acute Hazard Index	0.00	0.00	0.82
Chronic Hazard Index	0.00	0.00	0.26
Maximum Individual Cancer Risk	7.20E-08	7.20E-08	9.82E-06*
T-BACT Required?	No		
Special Permit Conditions?	No		

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

Proposed Permit Conditions

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

Unit # 111-6

1. No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on September 18, 2012, to perform a Risk Management Review on an existing 55,000 bbl crude oil internal floating roof tank, S-37-111 to all the facility to increase the Reid Vapor Pressure (RVP) limit and daily throughput from 5 psia to 11 psia and from 8,564 bbl/day to 30,000 bbl/day respectively. Public Notice was also triggered for VOC; however there are no State or Federal Ambient Air Quality Standards for VOC, consequently an AAQA was not required.

II. Analysis

Technical Services performed a prioritization using the District's HEARTs database. Since the facilitywide total prioritization scores were greater than one, a refined health risk assessment was required and performed. Toxic emissions were calculated using toxic fugitive emission factors from oilfield equipment. AERMOD was used, with area source parameters outlined below, and the 5-year concatenated meteorological data from Bakersfield to determine maximum dispersion factors at the nearest residential and business receptors. These dispersion factors were input into the HARP model to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters* Unit 111-6			
Source Type	Area	Closest Receptor (m)	229
Release Height (m)	12.13	Closest Receptor Type	Business
Size of "x" Width (m)	15.24	Project Location Type	Rural
Size of "y" Width (m)	12.13		

*Parameters were taken from project# 1001372, unit 111.

III. Conclusion

The acute and chronic indices are below 1.0; and the maximum individual cancer risk associated with the project is **7.20E-08**, 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.

ATTACHMENT IX
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-37-111-6

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

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

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

EQUIPMENT DESCRIPTION:

MODIFICATION OF 55,000 BBL ORGANIC LIQUID INTERNAL FLOATING ROOF TANK (#55000), WELDED CONSTRUCTION WITH MECHANICAL SHOE PRIMARY SEAL AND RIM-MOUNTED SECONDARY SEAL: INCREASE THROUGHPUT LIMIT TO 30,000 BBL/DAY AND INCREASE RVP LIMIT TO 11.0 PSIA

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. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623, 5.4.1, 5.3.2.1.1] Federally Enforceable Through Title V Permit
5. The cumulative length of all primary seal gaps greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623, 5.4.1, 5.3.2.1.1] Federally Enforceable Through Title V Permit
6. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623, 5.4.1, 5.3.2.1.1] Federally Enforceable Through Title V Permit

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.

Sayed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

S-37-111-6, Oct 2 2012 8:56AM -- EDGEHILR : Joint Inspection Required with EDGEHILR

7. No continuous gap greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623, 5.4.1, 5.3.2.1.1] Federally Enforceable Through Title V Permit
8. No gap between the tank shell and the secondary seal shall exceed 1/2 inch. [District Rule 4623, 5.4.1, 5.3.2.1.2] Federally Enforceable Through Title V Permit
9. The cumulative length of all secondary seal gaps greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623, 5.4.1, 5.3.2.1.2] Federally Enforceable Through Title V Permit
10. The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. [District Rule 4623, 5.4.1, 5.3.2.1.3] Federally Enforceable Through Title V Permit
11. The maximum gap between the shoe and the tank shell shall be no greater than double the gap allowed by the seal gap criteria for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623, 5.4.1, 5.3.2.1.4] Federally Enforceable Through Title V Permit
12. There shall be no tears, holes or openings in the secondary seal or in the primary seal envelope surrounding the annular vapor space enclosed by the roof edge, stored liquid surface, shoe, and seal fabric. [District Rule 4623, 5.4.1, 5.3.2.1.5] Federally Enforceable Through Title V Permit
13. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623, 5.4.1, 5.3.2.1.6] Federally Enforceable Through Title V Permit
14. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623, 5.4.1, 5.3.2.1.7] Federally Enforceable Through Title V Permit
15. Pressure-vacuum valves shall be set to within ten (10) percent of the maximum allowable working pressure of the roof. [District Rule 4623] Federally Enforceable Through Title V Permit
16. All roof openings used for sampling and gauging, except pressure vacuum valves, shall be closed at all times, with no visible gaps and be leak free (as defined in Rule 4623), except when the roof opening is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Any roof drain shall be provided with a slotted membrane fabric cover, or equivalent, that covers at least 90% of the area of the opening. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The permittee shall keep accurate records of Reid vapor pressure, storage temperature, daily tank throughput, and types of liquids stored, for a period of five years, and shall make such records available for District inspection upon request. [District Rules 2201 & 4623] Federally Enforceable Through Title V Permit
19. Daily tank throughput shall not exceed 30,000 bbl/day of fluid. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Reid vapor pressure of the stored liquid shall not exceed 11 psia. [District Rules 2201 & 4623] Federally Enforceable Through Title V Permit
21. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal roof shall be floating on the liquid surface except during initial fill and when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. [40 CFR 60.112b(a)(1)(i)] Federally Enforceable Through Title V Permit
22. Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents is to provide a projection below the liquid surface. [40 CFR 60.112b(a)(1)(iii)] Federally Enforceable Through Title V Permit
23. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use. [40 CFR 60.112b(a)(1)(iv)] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

24. Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [40 CFR 60.112b(a)(1)(v)] Federally Enforceable Through Title V Permit
25. Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [40 CFR 60.112b(a)(1)(vi)] Federally Enforceable Through Title V Permit
26. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening. [40 CFR 60.112b(a)(1)(vii)] Federally Enforceable Through Title V Permit
27. Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. [40 CFR 60.112b(a)(1)(viii)] Federally Enforceable Through Title V Permit
28. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix)] Federally Enforceable Through Title V Permit
29. This tank must have two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous. [40 CFR 60.112b(a)(1)(ii)(B)] Federally Enforceable Through Title V Permit
30. The operator shall visually inspect the internal floating roof, the primary seal and, the secondary seal prior to filling the storage vessel. If holes, tears, or other openings are found, they shall be repaired prior to filling the storage vessel. [40 CFR 60.113b(a)(1)] Federally Enforceable Through Title V Permit
31. The operator shall visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years. [40 CFR 60.113b(a)(4)] Federally Enforceable Through Title V Permit
32. Operator shall notify the APCO in writing 30 days prior to the filing or refilling of the vessel. If the inspection is not planned and the operator could not have known about the inspection 30 days in advance of refilling the tank, the operator shall make notification 7 days prior to refilling the tank. [40 CFR 60.113b(a)(5)] Federally Enforceable Through Title V Permit
33. Records of each inspection shall be maintained. Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment. If any defects are detected during an inspection, operator shall provide the APCO with a report within 30 days of the inspection. The report shall identify the storage vessel, the nature of the defects, and the date the vessel was emptied or the nature of and date the repair was made. [40 CFR 60.115b(a)(2), (3) and (4)] Federally Enforceable Through Title V Permit
34. Operator shall maintain, for the life of the source, a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [40 CFR 60.116b(a) and (b)] Federally Enforceable Through Title V Permit
35. The operator shall keep readily available accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The operator shall also keep a record of the liquid stored, the period of storage, and the maximum true vapor pressure of the liquid during the respective storage period. [40 CFR 60.116b(b) and (c)] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

36. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually inspect the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4326, Table 5]
37. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 5]
38. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 5]
39. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 5]
40. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 5 shall constitute a violation of this rule. [District Rule 4623, Table 5]
41. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 5]
42. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 5]
43. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
44. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: 784 lb VOC/quarter. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
45. ERC Certificate Number S-3866-1 (or certificate split from this certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

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