San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

NOV 14 2011

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

Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # S-37
Project # 1114091

Dear Ms. Hicks:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Kern Oil and Refining Company at 7724 E. Panama Lane in Bakersfield, CA. Kern Oil and Refining Company has requested Authorities to Construct to install equipment needed to comply with the flare SO2 requirements of Rule 4311.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the Authorities to Construct will be issued to the facility with Certificates of Conformity. Prior to operating with modifications authorized by the Authorities to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

The public notice will be published approximately three days from the date of this letter. Please submit your written comments within the 30-day public comment period which begins on the date of publication of the public notice.

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: DT/cm

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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
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Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
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www.valleyair.org www.healthyairliving.com

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

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NOV 14 2011

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

Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # S-37
Project # 1114091

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Kern Oil and Refining Company at 7724 E. Panama Lane in Bakersfield, CA, which has been issued a Title V permit. Kern Oil and Refining Company is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. Kern Oil and Refining Company has requested Authorities to Construct to install equipment needed to comply with the flare SO2 requirements of Rule 4311.

Enclosed is the engineering evaluation of this application, along with the current Title V permit, and proposed Authorities to Construct # S-37-1-13 and '7-5 with Certificates 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: DT/cm

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AIR POLLUTION CONTROL DISTRICT

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NOV 14 2011

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

Re: **Notice of Preliminary Decision - ATC / Certificate of Conformity**
Facility # S-37
Project # 1114091

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Kern Oil and Refining Company at 7724 E. Panama Lane in Bakersfield, CA. Kern Oil and Refining Company has requested Authorities to Construct to install equipment needed to comply with the flare SO2 requirements of Rule 4311.

The public notice will be published approximately three days from the date of this letter. Please submit your written comments within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. 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: DT/cm

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Bakersfield Californian

**NOTICE OF PRELIMINARY DECISION
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT AND
THE PROPOSED MINOR 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 issuance of Authority To Construct to Kern Oil and Refining Company for its refinery at 7724 E. Panama Lane in Bakersfield, California. Kern Oil and Refining Company has requested Authorities to Construct to install equipment needed to comply with the flare SO2 requirements of Rule 4311.

The analysis of the regulatory basis for these proposed actions, Project #1114091, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. 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, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.**

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review

Facility Name:	Kern Oil and Refining Co.		
Mailing Address:	7724 E. Panama Lane Bakersfield, CA 93307	Engineer:	David Torii
		Lead Engineer:	Rich Karrs
Contact Person:	Melinda Hicks		RWK 11-2-11
Telephone:	661-845-0761		
Fax:	661-845-0330		
Application #(s):	S-37-1-13 and '7-5		
Project #:	1114091		
Deemed Complete:	10/5/11		

I. Proposal

Kern Oil and Refining Co. (KOR) has requested Authorities to Construct (ATCs) to install equipment needed to comply with the flare SO2 requirements of Rule 4311.

Currently the crude unit off-gas is routed to the flare gas collection header where it is collected by the flare gas recovery system and routed to the amine unit for removal of sulfur (H2S). Treated gas from the amine unit is combined with other gas streams to make up refinery fuel gas. The existing flare compressor capacity is not currently capable of compressing 100% of all the gas in the flare collection header and the excess gas is being burned in flare S-37-7 which results in SOx emissions in excess of the Rule 4311 limit specified in section 5.9.1.

Consequently, the applicant proposes to modify crude unit S-37-1 and flare '7 as follows:

Crude Unit S-37-1:

Add the following new equipment:

C-02 Compressor Skid, including:
- Ingersol rand ESH-1 gas recovery compressor, 150 hp motor
- Vessel V-31, knockout/suction bottle
- X-61 air cooler, 5 hp motor

C-03 Compressor Skid, including:
- Ingersol rand ESH-1 gas recovery compressor, 150 hp motor
- Vessel V-32, knockout/suction bottle
- X-62 air cooler, 5 hp motor

Remove the following existing equipment:

- One desalter drum
- Compressor C-01

Revise Equipment Description to indicate that there actually 35 existing heat exchangers within the crude unit.

The Depropanizer's name will be changed to "Light Naptha Stabilizer"

Flare S-37-7:

Add the following new equipment:

- V-19, flare gas suction K.O. pot
- pump P-07, 2 hp electric motor
- E-07 aftercooler
- C-03 Compressor Skid, Including:
- Gardner Denver MLG 8FD8 flare gas recovery compressor, 250 electric motor with VFD
- vessel V-22, flare gas recovery K.O. pot
- E-10 air cooler (fin fan)

Revise Equipment Description to include the following existing equipment associated with the flare:

- C-01 compressor skid including Ingersol Rand ES-1 flare gas recovery compressor, 100 hp electric motor with variable frequency drive
- V-02 flare gas knockout pot
- V-04 flare gas recovery knockout pot
- V-05 flare gas seal pot
- E-02 aftercooler
- flame detector
- flare pilot supplied by natural gas with pilot ignition system

Remove the following existing equipment:

- Aftercooler E-02

KOR received their Title V Permit on 10/31/03. This modification can be classified as a Title V minor modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. KOR must apply to administratively amend their Title V permit.

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 (April 14, 1999) 40 CFR Part 60 Subpart GGGa: Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After November 7, 2006 (and by reference Subpart VVa Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After November 7, 2006)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4451	Valves, Pressure Relief Valves, Flanges, Threaded Connections and Process Drains at Petroleum Refineries and Chemical Plants (April 20, 2005)
Rule 4452	Pump And Compressor Seals At Petroleum Refineries And Chemical Plants (Amended April 20, 2005)
Rule 4455	Components at Petroleum Refineries, Gas Liquid Processing Facilities, and Chemical Plants (4/20/05)
Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice

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

III. Project Location

The facility is located at 7724 E. Panama Lane in Bakersfield, CA. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

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

V. Equipment Listing

Pre-Project Equipment Description (see current PTOs in ix B):

S-37-1-11: 120 MMBTU/HR CRUDE UNIT INCLUDING 2 DESALTERS, 4 FRACTIONATION VESSELS, STRIPPER, 2 ACCUMULATORS, DEPROPANIZER, KNOCKOUT DRUM SCRUBBER, 60 MMBTU/HR TULSA HEATERS INC. PROCESS HEATER, 60 MMBTU/HR BORN HEATER AND 15 HEAT EXCHANGERS

S-37-7-3: 112,500 BTU/HR FLARE WITH STEAM ASSIST

Revised/Corrected Pre-Project Equipment Description:

S-37-1-11: 120 MMBTU/HR CRUDE UNIT INCLUDING 2 DESALTERS, 4 FRACTIONATION VESSELS, STRIPPER, 2 ACCUMULATORS, ~~DEPROPANIZER~~ LIGHT NAPHTHA STABILIZER, KNOCKOUT DRUM SCRUBBER, 60 MMBTU/HR TULSA HEATERS INC. PROCESS HEATER, 60 MMBTU/HR BORN HEATER AND ~~15~~ 35 HEAT EXCHANGERS

S-37-7-3: JOHN ZINK STF-S-8 STEAM ASSIST FLARE WITH CONTINUOUS FLAME PILOTS, INCLUDING THE FOLLOWING GAS RECOVERY EQUIPMENT: TWO ELECTRIC DRIVEN GAS COMPRESSORS (350 HP TOTAL), FOUR KNOCKOUT POTS, ONE SEAL POT, TWO HEAT EXCHANGERS, TWO STEAM DRIVEN LIQUID RECOVERY PUMPS, AND ONE ELECTRIC DRIVEN LIQUID RECOVERY PUMP (2 HP)

Proposed ATCs:

S-37-1-11: MODIFICATION OF 120 MMBTU/HR CRUDE UNIT INCLUDING 2 DESALTERS, 4 FRACTIONATION VESSELS, STRIPPER, 2 ACCUMULATORS, DEPROPANIZER, KNOCKOUT DRUM SCRUBBER, 60 MMBTU/HR TULSA HEATERS INC. PROCESS HEATER, 60 MMBTU/HR BORN HEATER AND 15 HEAT EXCHANGERS: ADD ONE 150 HP PRIMARY OVHD COMPRESSOR PACKAGE (SKID C-02, ONE 150 HP SECONDARY COMPRESSOR PACKAGE (SKID C-03, REMOVE COMPRESSOR C-01 AND ONE DESALTER DRUM, CORRECT NUMBER TO HEAT EXCHANGERS TO 35 AND CHANGE NAME OF "DEPROPANIZER" TO "LIGHT NAPHTHA STABILIZER"

S-37-7-3: MODIFICATION OF 112,500 BTU/HR FLARE WITH STEAM ASSIST: ADD KNOCKOUT POT V-19, PUMP P-07, AFTERCOOLER E-07, COMPRESSOR SKID C-03 INCLUDING COMPRESSOR, KNOCKOUT POT AND HEAT EXCHANGER; REMOVE AFTERCOOLER AND REVISE PRE-PROJECT EQUIPMENT DESCRIPTION TO INCLUDE JOHN ZINK STF-S-8 STEAM ASSIST FLARE WITH CONTINUOUS FLAME PILOTS, INCLUDING THE FOLLOWING GAS RECOVERY EQUIPMENT: ONE ELECTRIC DRIVEN GAS COMPRESSOR (100 HP), TWO KNOCKOUT POTS, ONE SEAL POT AND ONE HEAT EXCHANGER

Post Project Equipment Description:

S-37-1-15: 120 MMBTU/HR CRUDE UNIT INCLUDING ONE DESALTER, 4 FRACTIONATION VESSELS, STRIPPER, 2 ACCUMULATORS, LIGHT NAPHTHA STABILIZER, KNOCKOUT DRUM SCRUBBER, 60 MMBTU/HR TULSA HEATERS INC. PROCESS HEATER, 60 MMBTU/HR BORN HEATER AND 35 HEAT EXCHANGERS

S-37-7-5: JOHN ZINK STF-S-8 STEAM ASSIST FLARE WITH CONSTANT IGNITION PILOTS, INCLUDING THE FOLLOWING GAS RECOVERY EQUIPMENT: TWO ELECTRIC DRIVEN GAS COMPRESSORS (350 HP TOTAL), FOUR KNOCKOUT

POTS, ONE SEAL POT, TWO HEAT EXCHANGERS, TWO STEAM DRIVEN LIQUID RECOVERY PUMPS, AND ONE ELECTRIC DRIVEN LIQUID RECOVERY PUMP (2 HP)

VI. Emission Control Technology Evaluation

New fugitive components will be installed in conjunction with the process equipment. VOCs from fugitive components will be minimized with an inspection, maintenance, and repair program consistent with applicable District Rule 4455. The proposed compressors are also subject to Federal New Source Performance Standards for Refineries, 40CFR60 Subpart GGGa.

VII. General Calculations

A. Assumptions

Emission calculations are needed only for the equipment being added and removed.

Only fugitive VOCs are emitted for the equipment being added or removed in this project; therefore, calculations are only required for VOC emissions.

Emissions from S-37-7-3's aftercooler E-02 (to be removed) are zero.

B. Emission Factors

Fugitive component VOC emissions will be calculated using CAPCOA revised EPA correlation equations for refineries and marketing terminals, From "California Implementation Guidelines for Estimating Emissions of Fugitive Hydrocarbon Leaks an Petroleum Facilities", February 1999. Use of the correlation equations requires that Kern screen all fugitive components and record the leak level. The leak levels for each component will be entered into the correlation equations to calculate the emission rate.

B. Calculations

Pre and Post-Project calculations are included in Appendix C.

1. Pre-Project Potential to Emit (PE1)

Pre-Project Potential to Emit (PE1) S-37-1-11 Fugitive VOCs		
Equipment to be Removed	Daily Emissions (lb/day)	Annual Emissions (lb/year)
Desalter	9.4	3435
Compressor C-01	5.2	1915
Total	14.6	5350

The only equipment being removed from S-37-7 is aftercooler E-02 and its emissions are assumed to be zero; therefore, no PE1 calculations are required for S-37-7.

2. Post Project Potential to Emit (PE2)

Post-Project Potential to Emit (PE2) S-37-1-13 Fugitive VOCs		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
New Compressors	10.5	3831
Total	10.5	3831

Post-Project Potential to Emit (PE2) S-37-7-5 Fugitive VOCs		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
New Equipment	8.9	3231
Total	8.9	3231

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 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.

This project is for solely for compliance with Rule 4311 and pursuant to section 4.6.8 of Rule 2201 is exempt from offsets; therefore, BE calculations are not required.

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 VOC, 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?

VOC	7062	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.

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

Step 1

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

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)*	Thresholds (lb/yr)	Federal Major Modification?
VOC*	7062	0	Yes

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

9. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in Appendix A.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

a. Any new emissions unit with a potential to emit exceeding two pounds per day,
b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,

c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification, as defined by the rule.

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

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project does constitute a Federal Major Modification for VOC emissions; therefore BACT is triggered for VOC for all emissions units in the project for which there is an emission increase.

2. BACT Guideline

BACT Guideline 7.2.2, applies to the valves and connectors. [Petroleum Refining - Valves & Connectors] (See Appendix D)

BACT Guideline 7.2.3, applies to the pumps and compressor seals. [Petroleum Refining - Pump and Compressor Seals] (See Appendix D)

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 Appendix E), BACT has been satisfied with the following:

For valves and connectors:

Leak defined as a reading of methane, in excess of 100 ppmv above background and an Inspection and Maintenance Program pursuant to District Rule 4455.

For compressors and seals:

Leak defined as a reading of methane, in excess of 500 ppmv above background and an Inspection and Maintenance Program pursuant to District Rule 4455.

B. Offsets

1. Offset Applicability

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

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

Offset Determination (lb/year)	
	VOC
Post Project SSPE (SSPE2)	>20,000
Offset Threshold	20,000
Offsets triggered?	Yes

This project is solely for compliance with Rule 4311 and it does not result any of the emission increases described below in sections 4.6.8.1 through 4.6.8.4; therefore, offsets are not required.

4.6.8 For existing facilities, the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws, regulations, or orders, as approved by the APCO, shall be exempt from offset requirements for all air pollutants provided all of the following conditions are met:

4.6.8.1 There shall be no increase in the physical or operational design of the existing facility, except for those changes to the design needed for the installation or modification of the emission control technique itself;

4.6.8.2 There shall be no increase in the permitted rating or permitted operating schedule of the permitted unit;

4.6.8.3 There shall be no increase in emissions from the stationary source that will cause or contribute to any violation of a National Ambient Air Quality Standard, Prevention of Significant Deterioration increment, or Air Quality Related Value in Class I areas; and

4.6.8.4 The project shall not result in an increase in permitted emissions or potential to emit of more than 25 tons per year of NOx, or 25 tons per year of VOC, or 15 tons per year of SOx, or 15 tons per year of PM-10, or 50 tons per year of CO.

C. Public Notification

1. Applicability

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

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

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

As demonstrated in VII.C.7, this project is a Federal Major Modification; therefore, public noticing for 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 which has daily emissions greater than 100 lb/day for any pollutant, therefore public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

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

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

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

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. SSIPE = SSPE2 – SSPE1. The

values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice			
Pollutant	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
VOC	1712	20,000 lb/year	No

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

2. Public Notice Action

As discussed above, public noticing is required for this project for triggering 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 Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions:

S-37-1-13:

- VOC emission rate from fugitive components associated with compressor skids C-02 and C-03 shall not exceed 10.5 lb/day. [District Rule 2201] Y

- Permit holder shall maintain accurate component count and resultant emissions according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-3a (Feb 1999), Correlation Equations Method. Permit holder shall update such records when new components are approved and installed. Components shall be screened and leak rate shall be measured in accordance with the frequency of inspection specified in Rules 4451, 4452, and 4455 as applicable. [District Rule 2201] Y

S-37-7-5:

- VOC emission rate from fugitive components associated with compressor skid C-03, flare gas suction K.O. pot V-19, pump P-07 and aftercooler E-07 shall not exceed 8.9 lb/day. [District Rule 2201] Y

- Permit holder shall maintain accurate component count and resultant emissions according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-3a (Feb 1999), Correlation Equations Method. Permit holder shall update such records when new components are approved and installed. Components shall be screened and leak rate shall be measured in accordance with the frequency of inspection specified in Rules 4451, 4452, and 4455 as applicable. [District Rule 2201] Y

E. Compliance Assurance

1. Source Testing

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

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

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

S-37-1-13:

- Permit holder shall maintain accurate component count and resultant emissions according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-3a (Feb 1999), Correlation Equations Method. Permit holder shall update such records when new components are approved and installed. Components shall be screened and leak rate shall be measured in accordance with the frequency of inspection specified in Rules 4451, 4452, and 4455 as applicable. [District Rule 2201] Y

- Copies of all purchased fuel invoices, gas purchase contract, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. Operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel [District Rule 2520, 9.4.2 and 40 CFR 60.48c(g)] Y

- Operator shall maintain all records of the reason for alternative monitoring and required fuel gas H2S monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Y

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

- Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] N

S-37-7-5:

- Permit holder shall maintain accurate component count and resultant emissions according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-3a (Feb 1999), Correlation Equations Method. Permit holder shall update such records when new components are approved and installed. Components shall be screened and leak rate shall be measured in accordance with the frequency of inspection specified in Rules 4451, 4452, and 4455 as applicable. [District Rule 2201] Y

- All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] N

4. Reporting

S-37-7-5:

- The operator shall report periods of flare monitoring system inoperation greater than 24 continuous hours by the following working day, followed by notification of resumption of monitoring. Periods of inoperation of monitoring equipment shall not exceed 14 days per any 18-consecutive-month period. Periods of flare monitoring system inoperation do not include the periods when the system feeding the flare is not operating. [District Rule 4311, 6.9.1] Y

F. Ambient Air Quality Analysis

Section 4.14.1 of this Rule requires that an ambient air quality analysis (AAQA) be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. However, since this project involves only VOC and no ambient air quality standard exists for VOC, an AAQA is not required for this project.

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Title I Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Sections VIII-Rule 2201-C.1.a and VIII-Rule 2201-C.1.b, this facility does constitute a Title I modification, therefore this requirement is applicable. Included in Appendix G is KOR's compliance certification.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to install a various refinery equipment.

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

Rule 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."

Section 3.20.2 states that a minor permit modifications are not Title I modifications (Federal Major Modifications) as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act. This project is a Federal Major Modification; consequently, the proposed project constitutes a Significant Modification to the Title V Permit pursuant to Section 3.29.

Rule 4001 New Source Performance Standards (NSPS)

40 CFR 60 Subpart GGGa – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006

The provisions of this subpart apply to affected facilities in petroleum refineries for which construction, reconstruction, or modification commenced after November 7, 2006. Of the equipment proposed in this project only the compressors are affected facilities pursuant to this subpart..

To satisfy the standards of performance for equipment leaks of VOC at petroleum refineries, the operator shall comply with the requirements of §§60.482–3a (Subpart VVa) as soon as practicable, but no later than 180 days after initial startup.

The requirements set forth in §§60.482–3a will be listed as enforceable permit conditions. Test methods and procedures (§60.485), recordkeeping (§60.486) and reporting (§60.487) requirements will also be listed as enforceable permit conditions.

Compliance with Subpart GGG requirements is expected.

Rule 4101 Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). The project results in an increase in fugitive emissions only and therefore 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 or equal to one. According to the Technical Services Memo for this project (Appendix F), the total facility prioritization score including this project was less than or equal to one. Therefore, no future analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy is expected.

Rule 4311 - Flares

Rule 4311 limits the emissions of volatile organic compounds (VOCs) and oxides of nitrogen (NOx), and sulfur from the operation of flares.

Section 5.1 states flares permitted to operate only during an emergency are not subject to the requirements of Section 5.6 and 5.7. The flare in this project is not an emergency flare; therefore, Sections 5.6 and 5.7 are applicable.

Section 5.2 requires that the flame be present at all times when combustible gases are vented through the flare. The following condition will be listed on the ATCs to ensure compliance:

- A flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311]

Section 5.3 requires that the flare outlet be equipped with an automatic ignition system, or operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. The following condition will be listed on the ATCs to ensure compliance:

- The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3 and 40CFR 60.18(f)(2)]

Section 5.4 requires that except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an alternative equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. The following condition will be listed on the ATCs to ensure compliance:

- Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4 and 40CFR 60.18(f)(2)] Y

Section 5.5 requires flares that use flow-sensitive automatic ignition systems and which do not use a continuous pilot flame to use purge gas for purging. The following condition will be listed on the ATCs to ensure compliance:

- Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Y

Section 5.6 states that open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. The requirements of this section shall not apply to Coanda effect flares. Flare S-1548-424 is a Coanda effect flare. The following condition will be listed on the ATC to ensure compliance:

- Open flares in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6]

Section 5.7 states that ground-level enclosed flares meet the defined emission standards. The flares involved with this project are not ground-level enclosed flares; therefore, this section does not apply.

Section 5.8 states that Effective on and after July 1, 2011, flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Section 6.5, and all commitments listed in that plan have been met. Subsection 6.5.1 states that by July 1, 2010, the operator of a petroleum refinery flare or any flare that has a flaring capacity of greater than or equal to 5.0 MMBtu per hour shall submit a flare minimization plan (FMP) to the APCO for approval. The operator's flare minimization plans have been approved by the APCO.

Section 5.9.1 states that effective on and after January 1, 2011, the operator of a petroleum refinery shall minimize sulfur dioxide flare emissions to less than 1.50 tons per million barrels of crude processing capacity, calculated as an average over one calendar year. The following condition will be listed on the ATC to ensure compliance:

- The operator shall minimize flare sulfur dioxide emissions consistent with the requirements of section 5.9 of Rule 4311. [District Rule 4311, 5.9]

Section 5.10 states that Effective on and after July 1, 2011, the operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The following condition will be listed on the ATC to ensure compliance:

- The operator shall monitor the vent gas flow to the flare with a flow measuring device. [District Rule 4311, 5.10] Y

Section 5.11 states that the operator of a petroleum refinery or a flare with a flaring capacity equal to or greater than 50 MMBtu/hr shall monitor the flare pursuant to Sections 6.6, 6.7, 6.8, 6.9, and 6.10. The following conditions will be listed on the ATC to ensure compliance:

- The operator shall provide the APCO with access to the flare monitoring system to collect the vent gas samples. [District Rule 4311, 6.6.7] Y

- The operator shall monitor the volumetric flows of the flare's purge and pilot gases with flow measuring devices or other parameters as specified on the Permit to Operate so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored. [District Rule 4311, 6.7] Y

- The operator shall monitor and record the water level and pressure of the water seal that services the flare daily. [District Rule 4311, 6.8] Y

- The operator shall report periods of flare monitoring system inoperation greater than 24 continuous hours by the following working day, followed by notification of resumption of monitoring. Periods of inoperation of monitoring equipment shall not exceed 14 days per any 18-consecutive-month period. Periods of flare monitoring system inoperation do not include the periods when the system feeding the flare is not operating. [District Rule 4311, 6.9.1] Y

- The operator shall install and maintain equipment that records a real-time digital image of the flare and flame at a frame rate of no less than one frame per minute. The recorded image of the flare shall be of sufficient size, contrast, and resolution to be readily apparent in the overall image or frame. The image shall include an embedded date and time stamp. The equipment shall archive the images for each 24-hour period. In lieu of video monitoring the operator may use an alternative monitoring method that provides data to verify date, time, vent gas flow, and duration of flaring events. [District Rule 4311, 6.10] Y

Section 6.1 requires that the following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request:

6.1.1 Copy of the compliance determination conducted pursuant to Section 6.4.1.
6.1.2 Copy of the source testing result conducted pursuant to Section 6.4.2. 6.1.3 For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation.
6.1.4 Operators claiming an exemption pursuant to Section 4.3 shall record annual throughput, material usage, or other information necessary to demonstrate an exemption under that section.
6.1.5 Effective on and after July 1, 2011, a copy of the approved flare minimization plan pursuant to Section 6.5.
6.1.6 Effective on and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2.
6.1.7 Effective on and after July 1, 2011, where applicable, monitoring data collected pursuant to Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10.

The following condition will be listed on the ATC to ensure compliance:

- The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: (1) Copy of the compliance determination conducted pursuant to Section 6.4.1. (2) Copy of the source testing result conducted pursuant to Section 6.4.2. (3) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation. (4) Effective on and after July 1, 2011, a copy of the approved flare minimization plan. (5) Effective on and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2. (6) Effective on and after July 1, 2011, where applicable, vent gas monitoring data collected. [District Rule 4311, 6.1] N

Section 6.2.1 requires that the operator of a flare subject to flare minimization plans pursuant to Section 5.8 of this rule shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, which ever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. The following condition will be listed on the ATC to ensure compliance:

- The operator shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, which ever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1] N

Section 6.2.2 requires that effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following:

6.2.2.1 The results of an investigation to determine the primary cause and contributing factors of the flaring event;
6.2.2.2 Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented;
6.2.2.3 If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and
6.2.2.4 The date, time, and duration of the flaring event.

The following condition will be listed on the ATC to ensure compliance:

- Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events that occurred during the previous 12 month period. A Reportable Flaring Event is any flaring where more than 500,000 standard cubic feet of vent gas is flared per calendar day, or where sulfur oxide emissions are greater than 500 pounds per calendar day. A reportable flaring event ends when it can be demonstrated by monitoring required in Section 6.8 that the integrity of the water seal has been maintained sufficiently to prevent vent gas to the flare tip. The report of all Reportable Flaring Events shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: (1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; (2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; (3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and (4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] N

Section 6.2.3 states that effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following:

6.2.3.1 The total volumetric flow of vent gas in standard cubic feet for each day.
6.2.3.2 Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6.
6.2.3.3 If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month.
6.2.3.4 If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month.

6.2.3.5 For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow.
6.2.3.6 Flare monitoring system downtime periods, including dates and times.
6.2.3.7 For each day and for each month provide calculated sulfur dioxide emissions.
6.2.3.8 A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5.

The following condition will be listed on the ATC to ensure compliance:

- Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: (1) The total volumetric flow of vent gas in standard cubic feet for each day. (2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6. (3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month. (4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month. (5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow. (6) Flare monitoring system downtime periods, including dates and times. (7) For each day and for each month provide calculated sulfur dioxide emissions. (8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3] N

Section 6.4.1 states that upon request, the operator of flares that are subject to Section 5.6 shall make available, to the APCO, the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). The following condition will be listed on the ATC to ensure compliance:

- Upon request, the operator of flares that are subject to Section 5.6 shall make available, to the APCO, the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] N

Section 6.6 states that the operator of a petroleum refinery flare or any flare that has a flaring capacity equal to or greater than 50 MMBtu per hour shall monitor vent gas composition using one of the five methods pursuant to Section 6.6.1 through Section 6.6.5 as appropriate. The applicant has proposed to monitor vent gas composition using the method listedin section 6.6.5; therefore, the following condition will be listed on the ATC to ensure compliance:

- The operator shall monitor sulfur content of the vent gas to the flare using a colorimetric tube system on a daily basis, and monitor vent gas hydrocarbon on a weekly basis by collecting samples and having them tested. [District Rule 4311, 6.6.5] Y

Section 6.7 states that the operator of a petroleum refinery flare or any flare that has a flaring capacity equal to or greater than 50 MMBtu per hour shall monitor the volumetric flows of purge and pilot gases with flow measuring devices or other parameters as specified on the Permit to Operate so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored. The following condition will be listed on the ATC to ensure compliance:

- The operator shall monitor the volumetric flows of purge and pilot gases with flow measuring devices or other parameters as specified on the Permit to Operate so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored. [District Rule 4311, 6.7] N

Section 6.8 states that the operator of a petroleum refinery flare or any flare that has a flaring capacity equal to or greater than 50 MMBtu per hour with a water seal shall monitor and record the water level and pressure of the water seal that services each flare daily or as specified on the Permit to Operate. The following condition will be listed on the ATC to ensure compliance:

- The operator shall monitor and record the water level and pressure of the water seal that services the flare daily. [District Rule 4311, 6.8] Y

Section 6.8 states that the operator of a petroleum refinery flare or any flare that has a flaring capacity equal to or greater than 50 MMBtu per hour shall comply with the following, as applicable:

6.9.1 Periods of flare monitoring system inoperation greater than 24 continuous hours shall be reported by the following working day, followed by notification of resumption of monitoring. Periods of inoperation of monitoring equipment shall not exceed 14 days per any 18-consecutive-month period. Periods of flare monitoring system inoperation do not include the periods when the system feeding the flare is not operating.

6.9.2 During periods of inoperation of continuous analyzers or auto-samplers installed pursuant to Section 6.6, operators responsible for monitoring shall take one sample within 30 minutes of the commencement of flaring, from the flare header or from an alternate location at which samples are representative of vent gas composition and have samples analyzed pursuant to Section 6.3.4. During periods of inoperation of flow monitors required by Section 5.10, flow shall be calculated using good engineering practices.

6.9.3 Maintain and calibrate all required monitors and recording devices in accordance with the applicable manufacturer's specifications. In order to claim that a manufacturer's specification is not applicable, the person responsible for emissions must have, and follow, a written maintenance policy that was developed for the device in question. The written policy must explain and justify the difference between the written procedure and the manufacturer's procedure.

6.9.4 All in-line continuous analyzer and flow monitoring data must be continuously recorded by an electronic data acquisition system capable of one-minute averages. Flow monitoring data shall be recorded as one-minute averages.

The following condition will be listed on the ATC to ensure compliance:

- The operator shall comply with the following, as applicable: (1) Periods of flare monitoring system inoperation greater than 24 continuous hours shall be reported by the following working day, followed by notification of resumption of monitoring. Periods of inoperation of monitoring equipment shall not exceed 14 days per any 18-consecutive-month period. Periods of flare monitoring system inoperation do not include the periods when the system feeding the flare is not operating; (2) During periods of inoperation of continuous analyzers or auto-samplers installed pursuant to Section 6.6, operators responsible for monitoring shall take one sample within 30 minutes of the commencement of flaring, from the flare header or from an alternate location at which samples are representative of vent gas composition and have samples analyzed pursuant to Section 6.3.4. During periods of inoperation of flow monitors required by Section 5.10, flow shall be calculated using good engineering practices; (3) Maintain and calibrate all required monitors and recording devices in accordance with the applicable manufacturer's specifications. In order to claim that a manufacturer's specification is not applicable, the person responsible for emissions must have, and follow, a written maintenance policy that was developed for the device in question. The written policy must explain and justify the difference between the written procedure and the manufacturer's procedure; (4) All in-line continuous analyzer and flow monitoring data must be continuously recorded by an electronic data acquisition system capable of one-minute averages. Flow monitoring data shall be recorded as one-minute averages. [District Rule 4311, 6.9]

Section 6.10 states that the operator of a petroleum refinery flare shall install and maintain equipment that records a real-time digital image of the flare and flame at a frame rate of no less than one frame per minute. The recorded image of the flare shall be of sufficient size, contrast, and resolution to be readily apparent in the overall image or frame. The image shall include an embedded date and time stamp. The equipment shall archive the images for each 24-hour period. In lieu of video monitoring the operator may use an alternative monitoring method that provides data to verify date, time, vent gas flow, and duration of flaring events.

The following condition will be listed on the ATC to ensure compliance:

- The operator of a petroleum refinery flare shall install and maintain equipment that records a real-time digital image of the flare and flame at a frame rate of no less than one frame per minute. The recorded image of the flare shall be of sufficient size, contrast, and resolution to be readily apparent in the overall image or frame. The image shall include an embedded date and time stamp. The equipment shall archive the images for each 24-hour period. In lieu of video monitoring the operator may use an alternative monitoring method that provides data to verify date, time, vent gas flow, and duration of flaring events. [District Rule 4311, 6.10]

Compliance with the rule is expected.

Rule 4451 Valves, Pressure Relief Valves, Flanges, Threaded Connections and Process Drains at Petroleum Refineries and Chemical Plants

This rule was superseded by Rule 4455; therefore, this rule's conditions were replaced by conditions reflecting Rule 4455 provisions.

Rule 4452 Pump And Compressor Seals At Petroleum Refineries And Chemical Plants

This rule was superseded by Rule 4455; therefore, this rule's conditions were replaced by conditions reflecting Rule 4455 provisions

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

The purpose of this rule is to limit VOC emissions from leaking components at petroleum refineries, gas liquids processing facilities, and chemical plants.

For the components subject to the rule, the facility is required to comply with the operating, inspection and re-inspection, maintenance, process pressure relief device and component identification requirements set forth in Sections 5.1 through 5.5, respectively.

The operator is required to submit and have approved an operator's management plan conforming to the requirements set forth in Section 6.1. The plan shall contain a description of the requirements will use to comply with the requirements of the rule.

Conditions that reflect the requirements of the rule will be included on the ATCs. Compliance with this rule is expected.

Rule 4801 Sulfur Compounds

This rule contains a limit on sulfur compounds. The limit at the point of discharge is 0.2 percent by volume, 2000 ppmv, calculated as sulfur dioxide (SO_2), on a dry basis averaged over 15 consecutive minutes.

The flare is currently in compliance with this rule and this project is not expected to affect their SOx emissions; therefore, compliance with District Rule 4801 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;

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

Greenhouse Gas (GHG) Significance Determination

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

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

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing 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, EPA and CARB Noticing period, issue Authorities to Construct S-37-1-13 and '7-5 subject to the permit conditions on the attached draft Authority to Construct in Appendix H.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-37-1-13	3020-02-H	120 MMBtu/hr	$1030
S-37-7-5	3020-02-H	>15 MMBtu/hr	$1030

APPENDIX A
Quarterly Net Emissions Change (QNEC)

Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

QNEC = PE2 - PE1, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

S-37-1-13:

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year
= 3831 lb/year ÷ 4 qtr/year
= 958 lb VOC/qtr

$PE1_{quarterly}$ = $PE1_{annual}$ ÷ 4 quarters/year
= 5350 lb/year ÷ 4 qtr/year
= 1338 lb VOC/qtr

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
VOC	958	1338	-380

S-37-7-5:

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year
= 3231 lb/year ÷ 4 qtr/year
= 808 lb VOC/qtr

$PE1_{quarterly}$ = $PE1_{annual}$ ÷ 4 quarters/year
= 0 lb/year ÷ 4 qtr/year
= 0 lb VOC/qtr

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
VOC	808	0	808

Application Emissions

Permit #: S-37-1-13	Last Updated
Facility:. KERN OIL & REFINING COMPANY	10/19/2011 TORID

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	37814.0	17555.0	14746.0	189216.0	1182.0
Daily Emis. Limit (lb/Day)	103.6	48.0	40.4	518.4	3.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	-380.0
Q2:	0.0	0.0	0.0	0.0	-380.0
Q3:	0.0	0.0	0.0	0.0	-380.0
Q4:	0.0	0.0	0.0	0.0	-380.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-37-7-5	**Last Updated**
Facility: KERN OIL & REFINING COMPANY	10/19/2011 TORID

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	3231.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	8.9
Quarterly Net Emissions Change (lb/Qtr)					
Q1:					808.0
Q2:					808.0
Q3:					808.0
Q4:					808.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

APPENDIX B
Current PTOs

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-37-1-11 **EXPIRATION DATE:** 08/31/2007

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

EQUIPMENT DESCRIPTION:
120 MMBTU/HR CRUDE UNIT INCLUDING 2 DESALTERS, 4 FRACTIONATION VESSELS, STRIPPER, 2 ACCUMULATORS, DEPROPANIZER, KNOCKOUT DRUM SCRUBBER, 60 MMBTU/HR TULSA HEATERS INC. PROCESS HEATER, 60 MMBTU/HR BORN HEATER AND 15 HEAT EXCHANGERS

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grain/dscf. Emissions of combustion contaminants shall not exceed 0.1 grain per cubic foot of gas calculated to 12% CO2 at dry standard conditions. Emissions of combustion contaminants shall not exceed ten (10) pounds per hour. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
2. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
3. The duration of each startup and shutdown period of the 60 MMBtu/hr Born heater and 60 MMBtu Tulsa heater shall not exceed 9.7 hours and 6.4 hours respectfully. Emission limits of District Rules 4305 and 4306 shall be waived during periods of startup and shutdown. [District Rules 4305, Section 5.5.6, District Rule 4306 Section 5.3] Federally Enforceable Through Title V Permit
4. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rules 4305, 5.5.6.2, and 4306, 5.3.2] Federally Enforceable Through Title V Permit
5. Crude unit heaters shall be fired solely on treated refinery fuel gas or purchased natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Refinery fuel gas supply shall be equipped with continuous H2S monitor meeting the requirements of NSPS Subpart J. [District Rule 4001] Federally Enforceable Through Title V Permit
7. Sulfur content of refinery fuel gas burned in crude unit heaters shall not to exceed 100 ppmv (as H2S). [District NSR Rule] Federally Enforceable Through Title V Permit
8. Sulfur content of natural gas burned in crude unit heaters shall not exceed 1 gr S/100 scf (16.9 ppmv H2S). [District NSR Rule] Federally Enforceable Through Title V Permit
9. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. [District Rule 2520, 9.3.2; Kern County Rule 407, District Rule 4801] Federally Enforceable Through Title V Permit
10. Valves and flanges shall be operated free of leaks (as defined by Rule 4451), inspected, labeled and records kept as required by Rule 4451. [District Rule 4451] Federally Enforceable Through Title V Permit
11. Pump and compressor seals shall operated free of leaks (as defined by Rule 4452), inspected, labeled and records kept as required by Rule 4452. [District Rule 4452] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. 60 MM Btu/hr Tulsa Heaters Inc. process heater shall be equipped with eight Caldius LE-CSG-8W low NOx burners, each having a maximum heat release of 8.18 MM BTU/HR. Heater shall be fired exclusively on PUC or FERC regulated natural gas or refinery fuel gas. [District NSR Rule] Federally Enforceable Through Title V Permit

13. 60 MMBtu/hr Born heater shall be equipped with John Zink PSMR-19 low NOx burners and shall be fired exclusively on PUC or FERC regulated natural gas or refinery fuel gas. [District NSR Rule, District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

14. Tulsa Heaters Inc. process heater emission rates shall not exceed NOx: 30 ppmv @ 3% O2 or 0.036 lb/MMBtu, CO: 239 ppmvd @ 3% O2, VOC: 0.0026 lb/MMBtu, PM10: 0.014 lb/MMBtu, and SOx: 0.0167 lb SO2/MMBtu. [District Rule 2201, District Rule 4351 5.1, District Rule 4305, 5.1 and 5.3, District Rule 4306, District Rule 4301 and Kern County Rule 408] Federally Enforceable Through Title V Permit

15. Born process heater emission rates shall not exceed NOx (as NO2) 30 ppmv @ 3% O2 or .036 lb/MMBtu, CO: 239 ppmvd @ 3% O2, VOC: 0.0026 lb/MMBtu, PM10: 0.014 lb/MMBtu, and SOx: 0.0167 lb SO2/MMBtu . [District NSR Rule, District Rules 4351 5.1, 4305, 5.1 and 5.3, District Rule 4306, District Rule 4301 and Kern County Rule 408] Federally Enforceable Through Title V Permit

16. Heat input to Tulsa Heater Inc. process heater shall not exceed 60 MM Btu/hr (hhv), as measured on an annual average basis. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Permittee shall demonstrate compliance with the heat input limit of Tulsa Heaters Inc. process heater by maintaining records of hhv of fuel burned and of the cumulative annual fuel use (scf/yr). Records shall be kept for a period of five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

18. For each heater, stack concentrations of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. In-stack O2 monitors are acceptable for O2 measurement. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

19. If the NOx or CO concentrations, as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and return the NOx and CO concentrations to the allowable emissions rate as soon as possible but no longer than one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emissions rate after one hour, the permittee shall conduct an emissions test within 60 days, utilizing District approved test methods, to determine compliance with the applicable emissions limits. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

20. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within an acceptable range. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

22. Operator shall perform annual source testing for NOx (ppmv) according to EPA Method 7E (or ARB Method 100), stack gas oxygen by EPA Method 3 or 3A (or ARB Method 100), NOx emission rate (heat input basis) by EPA Method 19, CO by EPA method 10 or ARB method 100, stack gas velocities by EPA Method 2, and stack gas moisture content by EPA Method 4. [District Rule 4305, 6.2.2, 6.2.4-7 and 4351, 6.2.2 & 6.2.4-7, & 6.3, District Rule 4306] Federally Enforceable Through Title V Permit

23. Nitrogen oxide (NOx) emission concentrations in ppmv shall be referenced at dry stack gas conditions, and shall be calculated to 3.00 percent by volume stack gas oxygen and averaged over 60 minutes, and lb/MMBtu rates shall be calculated as lb NO2/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2, District Rule 4306, and/or 4351, 8.1] Federally Enforceable Through Title V Permit

24. During the source test, emissions for these units shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

25. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit
26. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
27. Source testing to measure NOx and CO emissions shall be conducted at least once every 12 months, except as provided below. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
28. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
29. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
30. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
31. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
32. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
33. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, and 4351, 6.3] Federally Enforceable Through Title V Permit
34. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306] Federally Enforceable Through Title V Permit
35. All units in a group for which representative units are source tested to demonstrate compliance for NOx limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.4.2, 4305, 6.3.2, and 4306] Federally Enforceable Through Title V Permit
36. All units in a group for which representative units are source tested to demonstrate compliance for NOx limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to refinery gas) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306] Federally Enforceable Through Title V Permit
37. The number of representative units source tested to demonstrate compliance for NOx limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

38. Copies of all purchased fuel invoices, gas purchase contract, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. Operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel [District Rule 2520, 9.4.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit

39. Draeger tubes shall be used as an alternative method for measuring fuel gas H2S during scheduled maintenance or unscheduled interruptions of CEMs. Draeger tube use shall be limited to no more than 96 continuous hours and fuel gas H2S shall be checked a minimum of every two hours during scheduled maintenance or unscheduled interruptions of CEMs. Alternate method of measuring fuel gas H2S shall occur no more than 192 hours in any calendar year. [40CFR60.13(i)] Federally Enforceable Through Title V Permit

40. Operator shall maintain all records of the reason for alternative monitoring and required fuel gas H2S monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

42. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]

43. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-37-7-3 **EXPIRATION DATE:** 08/31/2007

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

EQUIPMENT DESCRIPTION:
112,500 BTU/HR FLARE WITH STEAM ASSIST

PERMIT UNIT REQUIREMENTS

1. Visible emissions monitoring shall be conducted at least annually, using EPA Method 22. [40CFR 60.18(f)(1)] Federally Enforceable Through Title V Permit
2. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2 and 40CFR 60.18(c)(2)] Federally Enforceable Through Title V Permit
3. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3 and 40CFR 60.18(f)(2)] Federally Enforceable Through Title V Permit
4. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4 and 40CFR 60.18(f)(2)] Federally Enforceable Through Title V Permit
5. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
6. Open flares in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
7. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 40CFR 60.18(d)] Federally Enforceable Through Title V Permit
8. The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip. [40 CFR 60.18 (f)(4)] Federally Enforceable Through Title V Permit
9. Air-assisted or steam-assisted flares shall only be used when the net heating value of the gas being combusted is 300 Btu/scf or greater. Nonassisted flares shall only be used when the net heating value of the gas being combusted is 200 Btu/scf or greater. [40 CFR 60.18 (c)(3)(ii)] Federally Enforceable Through Title V Permit
10. Steam-assisted and nonassisted flares shall be operated with an exit velocity less than 60 ft/sec, except as provided in 40 CFR 60.18 (c)(4)(ii) and (iii). [40 CFR 60.18 (c)(4)(i)] Federally Enforceable Through Title V Permit
11. Steam-assisted and nonassisted flares may be operated with an exit velocity equal to or greater than 60 ft/sec, but less than 400 ft/sec, if the net heating value of the gas being combusted is greater than 1,000 Btu/scf. [40 CFR 60.18 (c)(4)(ii)] Federally Enforceable Through Title V Permit
12. Steam-assisted and nonassisted flares may be operated with an exit velocity less than the velocity Vmax, as determined by the methods specified in 40 CFR 60.18 (f)(5), and less than 400 ft/sec. [40 CFR 60.18 (c)(4)(iii)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

13. The net heating value of the gas being combusted the flare shall be calculated pursuant to 40 CFR 60.18(f)(3) or by using EPA Method 18, ASTM D1946, and ASTM D2382 if published values are not available or cannot be calculated. [40 CFR 60.18 (f)(3)] Federally Enforceable Through Title V Permit

14. Operators shall not depressurize any vessel containing VOCs unless the process unit turnaround is accomplished by employing one of the following operating procedures: The organic vapors shall either be recovered, added to the refinery fuel gas system and combusted; or controlled and piped to an appropriate firebox or incinerated for combustion; or flared, until the pressure within the process vessel is as close to atmospheric pressure as is possible. All process vessels shall be depressurized into the control facilities to less than 1020 mm Hg (5 psig) before venting/opening to atmosphere. All organic compounds which emerge from a refinery process vessel during the purging of said vessel and which otherwise would be emitted to the atmosphere shall be either directed to a flare or incinerator or shall be used for fuel until such disposition of emissions is not technically feasible or is less safe than atmospheric venting. [District Rule 4454, 4.0] Federally Enforceable Through Title V Permit

APPENDIX C
Emission Calculations

Fugitive Emissions Using Correlation Equations
New OVHD Compressors

California Implementation Guidelines for Estimating Mass Emissions
of Fugitive Hydrocarbon Leaks at Petroleum Facilities
Table IV-3a: Revised 1995 EPA Correlation Equations and Factors for Refineries and Marketing Terminals

Equipment Type	Service	Component Count	% Default Zeros	% Pegged (>10,000)	% in Correlation Range	Correlation Screening Value (ppm)	Default Zero Emissions (lb/day)	Pegged Emissions (Lb/day)	Correlation Emissions (lb/day)	VOC Emissions (lb/day)
Valves	All	60	50.0%	0.5%	49.5%	400	0.012	1.016	0.313	1.341
Pump Seals	All	0	50.0%	1.0%	49.0%	1000	0.000	0.000	0.000	0.000
Others (Compressor Seals)	All	2	50.0%	0.0%	50.0%	1000	0.000	0.000	0.021	0.021
Others (PSDs)	All	7	50.0%	0.0%	50.0%	200	0.001	0.000	0.022	0.023
Connectors	All	464	50.0%	0.5%	49.5%	400	0.092	3.682	2.423	6.196
Flanges	All	96	50.0%	0.5%	49.5%	400	0.001	2.412	0.501	2.914
Open-Ended Lines	All	0	100.0%	0.0%	0.0%	0	0.000	0.000	0.000	0.000
									lb/day	10.5
									lb/yr	3830.9

Reference

Equipment Type	Service	Default Zero Factor (kg/hr)	Pegged Factor (kg/hr)	Correlation Equation (kg/hr)
Valves	All	7.80E-06	6.40E-02	2.27E-06(SV)^0.747
Pump Seals	All	1.90E-05	8.90E-02	5.07E-5(SV)^0.622
Others (Compressor Seals)	All	4.00E-06	8.20E-02	8.69E-6(SV)^0.642
Others (PSDs)	All	4.00E-06	8.20E-02	8.69E-6(SV)^0.642
Connectors	All	7.50E-06	3.00E-02	1.53E-6(SV)^0.736
Flanges	All	3.10E-07	9.50E-02	4.53E-6(SV)^0.706
Open-Ended Lines	All	2.00E-06	3.30E-02	1.90E-6(SV)^0.724

Fugitive Emissions Using Correlation Equations
Remove 1 Desalter

Equipment Type	Service	Component Count	% Default Zeros	% Pegged (>10,000)	% in Correlation Range	Correlation Screening Value (ppm)	Default Zero Emissions (lb/day)	Pegged Emissions (Lb/day)	Correlation Emissions (lb/day)	VOC Emissions (lb/day)
Valves	All	78	50.0%	0.5%	49.5%	400	0.016	1.320	0.407	1.744
Pump Seals	All	0	50.0%	1.0%	49.0%	1000	0.000	0.000	0.000	0.000
Others (Compressor Seals)	All	0	50.0%	0.0%	50.0%	1000	0.000	0.000	0.000	0.000
Others (PSDs)	All	1	50.0%	0.0%	50.0%	200	0.000	0.000	0.003	0.003
Others	All	1	50.0%	0.0%	50.0%	200	0.000	0.000	0.003	0.003
Connectors	All	469	50.0%	0.5%	49.5%	400	0.093	3.721	2.449	6.263
Flanges	All	46	50.0%	0.5%	49.5%	400	0.000	1.156	0.240	1.396
Open-Ended Lines	All	0	100.0%	0.0%	0.0%	0	0.000	0.000	0.000	0.000
									lb/day	9.4
									lb/yr	3434.5

Reference

Equipment Type	Service	Default Zero Factor (kg/hr)	Pegged Factor (kg/hr)	Correlation Equation (kg/hr)
Valves	All	7.80E-06	6.40E-02	2.27E-06(SV)^0.747
Pump Seals	All	1.90E-05	8.90E-02	5.07E-5(SV)^0.622
Others (Compressor Seals)	All	4.00E-06	8.20E-02	8.69E-6(SV)^0.642
Others (PSDs)	All	4.00E-06	8.20E-02	8.69E-6(SV)^0.642
Connectors	All	7.50E-06	3.00E-02	1.53E-6(SV)^0.736
Flanges	All	3.10E-07	9.50E-02	4.53E-6(SV)^0.706
Open-Ended Lines	All	2.00E-06	3.30E-02	1.90E-6(SV)^0.724

Fugitive Emissions Using Correlation Equations
Remove Crude Compressor

Equipment Type	Service	Component Count	% Default Zeros	% Pegged (>10,000)	% in Correlation Range	Correlation Screening Value (ppm)	Default Zero Emissions (lb/day)	Pegged Emissions (Lb/day)	Correlation Emissions (lb/day)	VOC Emissions (lb/day)
Valves	All	30	50.0%	0.5%	49.5%	400	0.006	0.508	0.157	0.671
Pump Seals	All	0	50.0%	1.0%	49.0%	1000	0.000	0.000	0.000	0.000
Others (Compressor Seals)	All	1	50.0%	0.0%	50.0%	1000	0.000	0.000	0.010	0.011
Others (PSDs)	All	3	50.0%	0.0%	50.0%	200	0.000	0.000	0.009	0.010
Others	All	0	50.0%	0.0%	50.0%	200	0.000	0.000	0.000	0.000
Connectors	All	232	50.0%	0.5%	49.5%	400	0.046	1.841	1.211	3.098
Flanges	All	48	50.0%	0.5%	49.5%	400	0.000	1.206	0.251	1.457
Open-Ended Lines	All	0	100.0%	0.0%	0.0%	0	0.000	0.000	0.000	0.000
									lb/day	5.2
									lb/yr	1914.9

Reference

Equipment Type	Service	Default Zero Factor (kg/hr)	Pegged Factor (kg/hr)	Correlation Equation (kg/hr)
Valves	All	7.80E-06	6.40E-02	2.27E-06(SV)^0.747
Pump Seals	All	1.90E-05	8.90E-02	5.07E-5(SV)^0.622
Others (Compressor Seals)	All	4.00E-06	8.20E-02	8.69E-6(SV)^0.642
Others (PSDs)	All	4.00E-06	8.20E-02	8.69E-6(SV)^0.642
Connectors	All	7.50E-06	3.00E-02	1.53E-6(SV)^0.736
Flanges	All	3.10E-07	9.50E-02	4.53E-6(SV)^0.706
Open-Ended Lines	All	2.00E-06	3.30E-02	1.90E-6(SV)^0.724

APPENDIX D
BACT Guidelines 7.2.2 and 7.2.3

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Best Available Control Technology (BACT) Guideline 7.2.2
Last Update: 11/27/2006

Petroleum Refining - Valves & Connectors

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Leak defined as a reading of methane in excess of 100 ppmv above background when measure per EPA Method 21 and an Inspection and Maintenance Program pursuant to District Rule 4455		

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 s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is requried 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. For background information, see Permit Specific BACT Determinations on Details Page.

Back

Best Available Control Technology (BACT) Guideline 7.2.3
Last Update: 11/27/2006

Petroleum Refining - Pump and Compressor Seals

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Leak defined as a reading of methane in excess of 500 ppmv above background when measure per EPA Method 21 and an Inspection and Maintenance Program pursuant to District Rule 4455		

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 s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is requried 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. For background information, see Permit Specific BACT Determinations on Details Page.

APPENDIX E
Top Down BACT Analysis

Top Down BACT Analysis for VOC Emissions (Pump and Compressor Seals):

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 7.2.3, 11/27/2006, identifies achieved in practice BACT for these petroleum refining pump and compressor seals as:

1. Leak defined as a reading of methane in excess of 500 ppmv above background when measure per EPA Method 21 and an Inspection and Maintenance Program pursuant to District Rule 4455

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

No ranking needs to be done because the applicant has proposed the achieved in practice option.

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed the only control achieved in practice in the ranking list from Step 3. Therefore, per SJVUAPCD BACT policy, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

The applicant is proposing the only control technology alternative in the ranking list, a leak defined as a reading of methane in excess of 500 ppmv above background when measure per EPA Method 21 and an Inspection and Maintenance Program pursuant to District Rule 4455. Therefore, BACT for VOC emissions is satisfied for the pump and compressor seals.

Top Down BACT Analysis for VOC Emissions (Valves and Connectors):

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 7.2.2, 11/27/2006, identifies achieved in practice BACT for these petroleum refining valves and connectors as:

1. Leak defined as a reading of methane in excess of 100 ppmv above background when measure per EPA Method 21 and an Inspection and Maintenance Program pursuant to District Rule 4455

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

No ranking needs to be done because the applicant has proposed the achieved in practice option.

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed the only control achieved in practice in the ranking list from Step 3. Therefore, per SJVUAPCD BACT policy, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

The applicant is proposing the only control technology alternative in the ranking list, a leak defined as a reading of methane in excess of 100 ppmv above background when measure per EPA Method 21 and an Inspection and Maintenance Program pursuant to District Rule 4455. Therefore, BACT for VOC emissions is satisfied for the pump and compressor seals.

Kern Oil and Refining
S-37, 1114091

APPENDIX F
HRA

Kern Oil and Refining
S-37, 1114091

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	David Tori – Permit Services
From:	Leland Villalvazo– Technical Services
Date:	November 1, 2011
Facility Name:	Kern Oil
Location:	7724 E Panama Lane
Application #(s):	S-37-1-13, 7-5
Project #:	S-1114091

A. RMR SUMMARY

RMR Summary			
Categories	**Flare Fugitives 7-5 (reductions from 1-13 included)**	**Project Totals**	**Facility Totals**
Prioritization Score	NA	>1.0	>1.0
Acute Hazard Index	0.0	0.0	0.83
Chronic Hazard Index	0.0	0.0	0.26
Maximum Individual Cancer Risk (10^{-6})	0.1	0.1	9.52
T-BACT Required?	No		
Special Permit Conditions?	No		

[1]Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0.

Proposed Permit Conditions

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

Unit # 1-13, 7-5

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on October 7, 2011 , to perform a Risk Management Review for a proposed modification to Remove equipment from unit 1 and additional equipment to unit 7 to comply with District rule 4311.

II. Analysis

Technical Services performed a health risk assessment using the Toxic Fugitive Emissions from Oilfield Equipment spreadsheet. The cumulative prioritization scores were greater than 1.0, thus modeling was conducted using the AERMOD model, with the parameters outlined below and meteorological data for 2005-2009 from Bakersfield to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid.

Analysis Parameters Unit 7-5			
Source Type	Area	**Location Type**	Rural
X-Length (m)	12.57	**Closest Receptor (m)**	Various
Y-Length (m)	16.02	**Type of Receptor**	Residential
Release Height (m)	1.01	**Pollutant Type**	VOC

III. *Conclusion*

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

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

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

Since the emissions from the proposed equipment are for VOC only and no AAQA currently exist no AAQA analysis was conducted

IV. *Attachments*

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

APPENDIX G
Compliance Certification

Kern Oil & Refining Co.
7724 E. PANAMA LANE
BAKERSFIELD, CALIFORNIA 93307-9210
(661) 845-0761 FAX (661) 845-0330

October 05, 2011

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

Subject: Compliance Certification & Alternative Siting Review
Kern Oil & Refining Co. – Project Number 1114091

Dear Mr. Scandura:

District Rule 2201, Section 4.15.1, requires that an owner or operator subject to Section 173 of the Clean Air Act prepare an alternatives analysis. The above-referenced project proposes addition of compressors within existing units and systems at Kern Oil & Refining Co. (Kern), an existing stationary source. Alternative siting of these additional pieces of equipment is not a viable option for this project given the fixed nature of a petroleum refinery, and that the additions are within existing unit configurations. Alternative sites would involve the relocation and/or construction of various facilities and support structures on a much greater scale, and would therefore result in a much greater impact.

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.

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

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

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

Sincerely,

Bruce Cogswell
VP Manufacturing

cc: Melinda Hicks
Joe Selgrath, Envirotech

APPENDIX H
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-37-1-13 **ISSUANCE DATE:** DRAFT

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

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

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

EQUIPMENT DESCRIPTION:
MODIFICATION OF 120 MMBTU/HR CRUDE UNIT INCLUDING 2 DESALTERS, 4 FRACTIONATION VESSELS, STRIPPER, 2 ACCUMULATORS, DEPROPANIZER, KNOCKOUT DRUM SCRUBBER, 60 MMBTU/HR TULSA HEATERS INC. PROCESS HEATER, 60 MMBTU/HR BORN HEATER AND 15 HEAT EXCHANGERS: ADD ONE 150 HP PRIMARY OVHD COMPRESSOR PACKAGE (SKID C-02), ONE 150 HP SECONDARY COMPRESSOR PACKAGE (SKID C-03), REMOVE COMPRESSOR C-01 AND ONE DESALTER DRUM, CORRECT NUMBER TO HEAT EXCHANGERS TO 35 AND CHANGE NAME OF "DEPROPANIZER" TO "LIGHT NAPHTHA STABILIZER"

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. Particulate matter emissions shall not exceed 0.1 grain/dscf. Emissions of combustion contaminants shall not exceed 0.1 grain per cubic foot of gas calculated to 12% CO2 at dry standard conditions. Emissions of combustion contaminants shall not exceed ten (10) pounds per hour. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
4. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] 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.

Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
9-37-1-13 : Nov 8 2011 6:37AM -- TORID : Joint Inspection NOT Required

5. The duration of each startup and shutdown period of the 60 MMBtu/hr Born heater and 60 MMBtu Tulsa heater shall not exceed 9.7 hours and 6.4 hours respectfully. Emission limits of District Rules 4305 and 4306 shall be waived during periods of startup and shutdown. [District Rules 4305, Section 5.5.6, District Rule 4306 Section 5.3] Federally Enforceable Through Title V Permit
6. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rules 4305, 5.5.6.2, and 4306, 5.3.2] Federally Enforceable Through Title V Permit
7. Crude unit heaters shall be fired solely on treated refinery fuel gas or purchased natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Refinery fuel gas supply shall be equipped with continuous H2S monitor meeting the requirements of NSPS Subpart J. [District Rule 4001] Federally Enforceable Through Title V Permit
9. Sulfur content of refinery fuel gas burned in crude unit heaters shall not to exceed 100 ppmv (as H2S). [District NSR Rule] Federally Enforceable Through Title V Permit
10. Sulfur content of natural gas burned in crude unit heaters shall not exceed 1 gr S/100 scf (16.9 ppmv H2S). [District NSR Rule] Federally Enforceable Through Title V Permit
11. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. [District Rule 2520, 9.3.2; Kern County Rule 407, District Rule 4801] Federally Enforceable Through Title V Permit
12. Except for components subject to Rule 4623 (Storage of Organic Liquids) or for components included in the inspection and maintenance (I&M) program implemented pursuant to Section 5.7 of Rule 4623, the operator shall not use any component that leaks in excess of the allowable leak standards of Rule 4455, or is found to be in violation of the provisions specified in Section 5.1.3. A component identified as leaking in excess of an allowable leak standard may be used provided it has been identified with a tag for repair, has been repaired, or is awaiting re-inspection after repair, within the applicable time period specified within the rule. [District Rule 4455, 5.1.1] Federally Enforceable Through Title V Permit
13. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4455, 5.1.2] Federally Enforceable Through Title V Permit
14. The operator shall be in violation of Rule 4455 if any District inspection demonstrates that one or more of the conditions in Section 5.1.4 (Leak Standards) exist at the facility. [District Rule 4455, 5.1.3.1] Federally Enforceable Through Title V Permit
15. Except for annual operator inspection described in Section 5.1.3.2.3, any operator inspection that demonstrates that one or more of the conditions in Section 5.1.4 exist at the facility shall not constitute a violation of Rule 4455 if the leaking components are repaired as soon as practicable but not later than the time frame specified in Rule 4455. Such components shall not be counted towards determination of compliance with the provisions of Section 5.1.4. [District Rule 4455, 5.1.3.2.1] Federally Enforceable Through Title V Permit
16. Leaking components detected during operator inspection pursuant Section 5.1.3.2.1 that are not repaired, replaced, or removed from operation as soon as practicable but not later than the time frame specified in Rule 4455 shall be counted toward determination of compliance with the provisions of Section 5.1.4. [District Rule 4455, 5.1.3.2.2] Federally Enforceable Through Title V Permit
17. Any operator inspection conducted annually for a component type (including operator annual inspections pursuant to Section 5.2.5, 5.2.6, 5.2.7, or 5.2.8) that demonstrates one or more of the conditions in Section 5.1.4 exist at the facility shall constitute a violation of Rule 4455 regardless of whether or not the leaking components are repaired, replaced, or removed from operation within the allowable repair time frame specified in Rule 4455. [District Rule 4455, 5.1.3.2.3] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

18. A component shall be considered leaking if one or more of the conditions specified in Sections 5.1.4.1 through 5.1.4.4 of Rule 4455 exist at the facility. Readings shall be taken as methane using a portable hydrocarbon detection instrument and shall be made in accordance with the methods specified in Section 6.4.1 of Rule 4455. [District Rule 4455, 5.1.4] Federally Enforceable Through Title V Permit

19. The operator shall audio-visually inspect for leaks all accessible operating pumps, compressors and Pressure Relief Devices (PRDs) in service at least once every 24 hours, except when operators do not report to the facility for that given 24 hours. Any identified leak that cannot be immediately repaired shall be reinspected within 24 hours using a portable analyzer. If a leak is found, it shall be repaired as soon as practical but not later than the time frame specified in Table 3. [District Rule 4455, 5.2.1 & 5.2.2] Federally Enforceable Through Title V Permit

20. The operator shall inspect all components at least once every calendar quarter, except for inaccessible components, unsafe-to-monitor components and pipes. Inaccessible components, unsafe-to-monitor components and pipes shall be inspected in accordance with the requirements set forth in Sections 5.2.5, 5.2.6, and 5.2.7. New, replaced, or repaired fittings, flanges and threaded connections shall be inspected immediately after being placed into service. Components shall be inspected using EPA Method 21. [District Rule 4455, 5.2.3, 5.2.4, 5.2.5, 5.2.6 & 5.2.7] Federally Enforceable Through Title V Permit

21. The operator may apply for a written approval from the APCO to change the inspection frequency from quarterly to annually for a component type, provided the operator meets all the criteria specified in Sections 5.2.8.1 through 5.2.8.3. This approval shall apply to accessible component types, specifically designated by the APCO, except pumps, compressors, and PRDs which shall continue to be inspected on a quarterly basis. [District Rule 4455, 5.2.8] Federally Enforceable Through Title V Permit

22. An annual inspection frequency approved by the APCO shall revert to quarterly inspection frequency for a component type if either the operator inspection or District inspection demonstrates that a violation of the provisions of Sections 5.1, 5.2 and 5.3 of the rule exists for that component type, or the APCO issued a Notice of Violation for violating any of the provisions of Rule 4455 during the annual inspection period for that component type. When the inspection frequency changes from annual to quarterly inspections, the operator shall notify the APCO in writing within five (5) calendar days after changing the inspection frequency, giving the reason(s) and date of change to quarterly inspection frequency. [District Rule 4455, 5.2.9 & 5.2.10] Federally Enforceable Through Title V Permit

23. The operator shall initially inspect a process PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the time of the release. To insure that the process PRD is operating properly, and is leak-free, the operator shall re-inspect the process PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the date of the release using EPA Method 21. If the process PRD is found to be leaking at either inspection, the PRD leak shall be treated as if the leak was found during quarterly operator inspections. [District Rule 4455, 5.2.11] Federally Enforceable Through Title V Permit

24. Except for process PRD, a component shall be inspected within 15 calendar days after repairing the leak or replacing the component using EPA Method 21. [District Rule 4455, 5.2.12] Federally Enforceable Through Title V Permit

25. A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. Any attempt by an operator to count such District inspections as part of the mandatory operator's inspections is considered to be willful circumvention and is a violation of this rule. [District Rule 4455, 5.2.13] Federally Enforceable Through Title V Permit

26. Upon detection of a leaking component, the operator shall affix to that component a weatherproof readily visible tag that contains the information specified in Section 5.3.3. The tag shall remain affixed to the component until the leaking component has been repaired or replaced; has been re-inspected using EPA Method 21; and is found to be in compliance with the requirements of Rule 4455. [District Rule 4455, 5.3.1 5.3.2 and 5.3.3] Federally Enforceable Through Title V Permit

27. An operator shall minimize all component leaks immediately to the extent possible, but not later than one (1) hour after detection of leaks in order to stop or reduce leakage to the atmosphere. [District Rule 4455, 5.3.4] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

28. If the leak has been minimized but the leak still exceeds the applicable leak standards of Rule 4455, an operator shall repair or replace the leaking component, vent the leaking component to a closed vent system, or remove the leaking component from operation as soon as practicable but not later than the time period specified in Table 3. For each calendar quarter, the operator may be allowed to extend the repair period as specified in Table 3, for a total number of leaking components, not to exceed 0.05 percent of the number of components inspected, by type, rounded upward to the nearest integer where required. [District Rule 4455, 5.3.5] Federally Enforceable Through Title V Permit

29. If the leaking component is an essential component or a critical component and which cannot be immediately shut down for repairs, the operator shall minimize the leak within one hour after detection of the leak. If the leak has been minimized, but the leak still exceeds any of the applicable leak standards of Rule 4455, the essential component or critical component shall be repaired or replaced to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4455 5.3.6] Federally Enforceable Through Title V Permit

30. For any component that has incurred five repair actions for major gas leaks or major liquid leaks, or any combination of major gas leaks and major liquid leaks within a continuous 12-month period, the operator shall comply with at least one of the requirements specified in Sections 5.3.7.1, 5.3.7.2, 5.3.7.3, or 5.3.7.4 by the applicable deadlines specified in Sections 5.3.7.5 and 5.3.7.6. If the original leaking component is replaced with a new like-in-kind component before incurring five repair actions for major leaks within 12-consecutive months, the repair count shall start over for the new component. An entire compressor or pump need not be replaced provided the compressor part(s) or pump part(s) that have incurred five repair actions as described in Section 5.3.7 are brought into compliance with at least one of the requirements of Sections 5.3.7.1 through 5.3.7.6. [District Rule 4455, 5.3.7] Federally Enforceable Through Title V Permit

31. The operator shall monitor process PRD by using electronic process control instrumentation that allows for real time continuous parameter monitoring or by using telltale indicators for the process PRD where parameter monitoring is not feasible. [District Rule 4455, 5.4.1] Federally Enforceable Through Title V Permit

32. After a release from a process PRD in excess of 500 pounds of VOC in a continuous 24-hour period, the operator shall immediately conduct a failure analysis and implement corrective actions as soon as practicable but not later than 30 days to prevent the reoccurrence of similar release. For refineries processing greater than 20,000 barrels of crude oil per day, any subsequent release in excess of 500 pounds of VOC within a continuous 24-hour period shall be subject to the requirements of Section 5.4.5. [District Rule 4455, 5.4.3 & 5.4.4] Federally Enforceable Through Title V Permit

33. The operator of a refinery processing greater than 20,000 barrels of crude oil per day shall connect all process PRDs serving that process equipment to an APCO-approved closed vent system as defined in Section 3.0 if any of the conditions specified in Sections 5.4.5.1 and 5.4.5.2 occurs. Process PRDs subject to the provisions of Section 5.4.5 shall be connected to an APCO-approved closed-vent system as soon as practicable, but no later than the first turnaround after the requirement to connect becomes effective. [District Rule 4455, 5.4.5] Federally Enforceable Through Title V Permit

34. All major components and critical components shall be physically identified clearly and visibly for inspection, repair, and recordkeeping purposes. The physical identification shall consist of labels, tags, manufacturer's nameplate identifier, serial number, or model number, or other system approved by the APCO that enables an operator or District personnel to locate each individual component. The operator shall replace tags or labels that become missing or unreadable as soon as practicable but not later than 24 hours after discovery. The operator shall comply with the requirements of Sections 6.1.4 if there is any change in the description of major components or critical components. [District Rule 4455, 5.5.1 & 5.5.2] Federally Enforceable Through Title V Permit

35. The operator shall keep a copy of the operator management plan at the facility and make it available to the APCO, ARB and US EPA upon request. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved operator management plan. [District Rule 4455, 6.1.2 & 6.1.4] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

36. The operator shall maintain an inspection log containing, at a minimum, 1) total number of components inspected, and total number and percentage of leaking components found by component types, 2) location, type, name or description of each leaking component, and description of any unit where the leaking component is found, 3) date of leak detection and method of leak detection, 4) for gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak, 5) date of repair, replacement, or removal from operation of leaking components, 6) identification and location of essential component and critical components found leaking that cannot be repaired until the next process unit turnaround or not later one year after leak detection, whichever comes earlier, 7) methods used to minimize the leak from essential components and critical components that cannot be repaired until the next process unit turnaround or not later one year after leak detection, whichever comes earlier, 8) after the component is repaired or is replaced, the date of reinspection and the leak concentration in ppmv, 9) inspector's name, business mailing address, and business telephone number, and 10) the facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log. [District Rule 4455, 6.2.1] Federally Enforceable Through Title V Permit

37. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, analyzer reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. [District Rule 4455, 6.2.3] Federally Enforceable Through Title V Permit

38. The operator shall notify the APCO, by telephone or other methods approved by the APCO, of any process PRD release described in Sections 5.4.4 and 5.4.5, and any release in excess of the reportable quantity limits as stipulated in 40 CFR, Part 117, Part 302 and Part 355, including any release in excess of 100 pounds of VOC, within one hour of such occurrence or within one hour of the time said person knew or reasonably should have known of its occurrence. [District Rule 4455, 6.3.1] Federally Enforceable Through Title V Permit

39. The operator shall submit a written report to the APCO within thirty (30) calendar days following a PRD release subject to 6.3.1. The written report shall include 1) process PRD type, size, and location, 2) date, time and duration of the process PRD release, 3) types of VOC released and individual amounts, in pounds, including supporting calculations, 4) cause of the process PRD release, and 5) corrective actions taken to prevent a subsequent process PRD release. [District Rule 4455 6.3.2] Federally Enforceable Through Title V Permit

40. Copies of all records shall be retained for a minimum of five (5) years after the date of an entry. Such records shall be made available to the APCO, ARB, or US EPA upon request. [District Rule 4455, 6.2.2, 6.2.3 & 6.2.4] Federally Enforceable Through Title V Permit

41. Measurements of gaseous leak concentrations shall be conducted according to US EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in US EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. [District Rule 4455, 6.4.1] Federally Enforceable Through Title V Permit

42. The VOC content of exempt streams shall be determined using American Society of Testing and Materials (ASTM) D 1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 for liquids. [District Rule 4455, 6.4.2] Federally Enforceable Through Title V Permit

43. For exempt streams, the percent by volume liquid evaporated at 150 deg C shall be determined using ASTM D 86. [District Rule 4455, 6.4.3] Federally Enforceable Through Title V Permit

44. Equivalent test methods other than specified in Sections 6.4.1 through 6.4.5 may be used provided such test methods have received prior approval from the US EPA, ARB, and APCO. [District Rule 4455, 6.4] Federally Enforceable Through Title V Permit

45. Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of 40 CFR 60.482-3a for all equipment within 180 days of initial startup. [40 CFR 60.482-1a(a)]

46. Compliance with 40 CFR 60.482-3a shall be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 40 CFR 60.485a. [40 CFR 60.482-1a(b)]

47. An owner or operator may request a determination of equivalence of a means of emission limitation to the requirements of 40 CFR 60.482-3a as provided in 40 CFR 60.484a. [40 CFR 60.482-1a(c)(1)]

CONDITIONS CONTINUE ON NEXT PAGE

48. If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of 40 CFR 60.482-3a, an owner or operator shall comply with the requirements of that determination. [40 CFR 60.482-1a(c)(2)]

49. Equipment that is in vacuum service is excluded from the requirements of 40 CFR 60.482-3a if it is identified as required in 40 CFR 60.486a(e)(5). [40 CFR 60.482-1a(d)]

50. Unless exempt under 40 CFR 60.482-3a, each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in 40 CFR 60.482-3a(h) and (i). The barrier fluid system shall be in heavy liquid service or shall not be in VOC service. Each compressor shall be operated and equipped as specified in 40 CFR 60.482-3a(b)(1), (2), or (3). [40 CFR 60.482-3a(a), (b), and (c)]

51. Any compressor that is designated, as described in 40 CFR 60.486a(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, is exempt from the requirements of 40 CFR 60.482-3a(a) through (h) if the compressor meets the requirements specified in 40 CFR 60.482-3a(i)(1) and (2). [40 CFR 60.482-3a(i), and District Rule 2201]

52. Any existing reciprocating compressor in a process unit which becomes an affected facility under the provisions of 40 CFR 60.14 or 40 CFR 60.15 is exempt from 40 CFR 60.482a(a), (b), (c), (d), (e), and (h), provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of 40 CFR 60.482-3a(a), (b), (c), (d), (e), and (h). [40 CFR 60.593a(c)]

53. For valves and connectors associated with compressor skids C-02 and C-03 , a leak shall be defined as a reading of methane in excess of 100 ppmv above background when measured per EPA Method 21. For pump and compressor seals associated with compressor skids C-02 and C-03, a leak shall be defined as a reading of methane in excess of 500 ppmv above background when measure per EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit

54. VOC emission rate from fugitive components associated with compressor skids C-02 and C-03 shall not exceed 10.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

55. Permit holder shall maintain accurate component count for compressor skids C-02 and C-03 and resultant emissions according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-3a (Feb 1999), Correlation Equations Method. Permit holder shall update such records when new components are approved and installed. Components shall be screened and leak rate shall be measured in accordance with the frequency of inspection specified in Rule 4455. [District Rule 2201] Federally Enforceable Through Title V Permit

56. 60 MM Btu/hr Tulsa Heaters Inc. process heater shall be equipped with eight Caldius LE-CSG-8W low NOx burners, each having a maximum heat release of 8.18 MM BTU/HR. Heater shall be fired exclusively on PUC or FERC regulated natural gas or refinery fuel gas. [District NSR Rule] Federally Enforceable Through Title V Permit

57. 60 MMBtu/hr Born heater shall be equipped with John Zink PSMR-19 low NOx burners and shall be fired exclusively on PUC or FERC regulated natural gas or refinery fuel gas. [District NSR Rule, District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

58. Tulsa Heaters Inc. process heater emission rates shall not exceed NOx: 30 ppmv @ 3% O2 or 0.036 lb/MMBtu, CO: 239 ppmvd @ 3% O2, VOC: 0.0026 lb/MMBtu, PM10: 0.014 lb/MMBtu, and SOx: 0.0167 lb SO2/MMBtu. [District Rule 2201, District Rule 4351 5.1, District Rule 4305, 5.1 and 5.3, District Rule 4306, District Rule 4301 and Kern County Rule 408] Federally Enforceable Through Title V Permit

59. Born process heater emission rates shall not exceed NOx (as NO2) 30 ppmv @ 3% O2 or .036 lb/MMBtu, CO: 239 ppmvd @ 3% O2, VOC: 0.0026 lb/MMBtu, PM10: 0.014 lb/MMBtu, and SOx: 0.0167 lb SO2/MMBtu . [District NSR Rule, District Rules 4351 5.1, 4305, 5.1 and 5.3, District Rule 4306, District Rule 4301 and Kern County Rule 408] Federally Enforceable Through Title V Permit

60. Heat input to Tulsa Heater Inc. process heater shall not exceed 60 MM Btu/hr (hhv), as measured on an annual average basis. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

61. Permittee shall demonstrate compliance with the heat input limit of Tulsa Heaters Inc. process heater by maintaining records of hhv of fuel burned and of the cumulative annual fuel use (scf/yr). Records shall be kept for a period of five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

62. For each heater, stack concentrations of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. In-stack O2 monitors are acceptable for O2 measurement. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

63. If the NOx or CO concentrations, as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and return the NOx and CO concentrations to the allowable emissions rate as soon as possible but no longer than one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emissions rate after one hour, the permittee shall conduct an emissions test within 60 days, utilizing District approved test methods, to determine compliance with the applicable emissions limits. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

64. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

65. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records must also include a description of any corrective action taken to maintain the emissions within an acceptable range. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

66. Operator shall perform annual source testing for NOx (ppmv) according to EPA Method 7E (or ARB Method 100), stack gas oxygen by EPA Method 3 or 3A (or ARB Method 100), NOx emission rate (heat input basis) by EPA Method 19, CO by EPA method 10 or ARB method 100, stack gas velocities by EPA Method 2, and stack gas moisture content by EPA Method 4. [District Rule 4305, 6.2.2, 6.2.4-7 and 4351, 6.2.2 & 6.2.4-7, & 6.3, District Rule 4306] Federally Enforceable Through Title V Permit

67. Nitrogen oxide (NOx) emission concentrations in ppmv shall be referenced at dry stack gas conditions, and shall be calculated to 3.00 percent by volume stack gas oxygen and averaged over 60 minutes, and lb/MMBtu rates shall be calculated as lb NO2/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2, District Rule 4306, and/or 4351, 8.1] Federally Enforceable Through Title V Permit

68. During the source test, emissions for these units shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

69. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

70. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit

71. Source testing to measure NOx and CO emissions shall be conducted at least once every 12 months, except as provided below. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

72. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

73. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

74. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

75. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

76. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

77. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, and 4351, 6.3] Federally Enforceable Through Title V Permit

78. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306] Federally Enforceable Through Title V Permit

79. All units in a group for which representative units are source tested to demonstrate compliance for NOx limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.4.2, 4305, 6.3.2, and 4306] Federally Enforceable Through Title V Permit

80. All units in a group for which representative units are source tested to demonstrate compliance for NOx limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to refinery gas) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306] Federally Enforceable Through Title V Permit

81. The number of representative units source tested to demonstrate compliance for NOx limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

82. Copies of all purchased fuel invoices, gas purchase contract, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. Operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel [District Rule 2520, 9.4.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit

83. Draeger tubes shall be used as an alternative method for measuring fuel gas H2S during scheduled maintenance or unscheduled interruptions of CEMs. Draeger tube use shall be limited to no more than 96 continuous hours and fuel gas H2S shall be checked a minimum of every two hours during scheduled maintenance or unscheduled interruptions of CEMs. Alternate method of measuring fuel gas H2S shall occur no more than 192 hours in any calendar year. [40CFR60.13(i)] Federally Enforceable Through Title V Permit

84. Operator shall maintain all records of the reason for alternative monitoring and required fuel gas H2S monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

85. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

86. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

87. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-37-7-5 **ISSUANCE DATE:** DRAFT

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

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

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

EQUIPMENT DESCRIPTION:
MODIFICATION OF 112,500 BTU/HR FLARE WITH STEAM ASSIST: ADD KNOCKOUT POT V-19, PUMP P-07, AFTERCOOLER E-07, COMPRESSOR SKID C-03 INCLUDING COMPRESSOR, KNOCKOUT POT AND HEAT EXCHANGER; REMOVE AFTERCOOLER AND REVISE PRE-PROJECT EQUIPMENT DESCRIPTION TO INCLUDE JOHN ZINK STF-S-8 STEAM ASSIST FLARE WITH CONTINUOUS FLAME PILOTS, INCLUDING THE FOLLOWING GAS RECOVERY EQUIPMENT: ONE ELECTRIC DRIVEN GAS COMPRESSOR (100 HP), TWO KNOCKOUT POTS, ONE SEAL POT AND ONE HEAT EXCHANGER

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. Visible emissions monitoring shall be conducted at least annually, using EPA Method 22. [40CFR 60.18(f)(1)] Federally Enforceable Through Title V Permit
4. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3 and 40CFR 60.18(f)(2)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-37-7-5 : Nov 9 2011 5:46AM – TORID : Joint Inspection NOT Required

5. For valves and connectors associated with compressor skid C-03, flare gas suction K.O. pot V-19 and aftercooler E-07, a leak shall be defined as a reading of methane in excess of 100 ppmv above background when measured per EPA Method 21. For pump and compressor seals associated with compressor skid C-03 and pump P-07, a leak shall be defined as a reading of methane in excess of 500 ppmv above background when measure per EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC emission rate from fugitive components associated with compressor skid C-03, flare gas suction K.O. pot V-19, pump P-07 and aftercooler E-07 shall not exceed 8.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permit holder shall maintain accurate component count and resultant emissions according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-3a (Feb 1999), Correlation Equations Method. Permit holder shall update such records when new components are approved and installed. Components shall be screened and leak rate shall be measured in accordance with the frequency of inspection specified in Rule 4455. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.5 and 40CFR 60.18(f)(2)] Federally Enforceable Through Title V Permit
9. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2 and 40CFR 60.18(c)(2)] Federally Enforceable Through Title V Permit
10. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
11. Open flares in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
12. The operator shall minimize flare sulfur dioxide emissions consistent with the requirements of section 5.9 of Rule 4311. [District Rule 4311, 5.9] Federally Enforceable Through Title V Permit
13. The operator shall monitor the vent gas flow to the flare with a flow measuring device. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit
14. The operator shall provide the APCO with access to the flare monitoring system to collect the vent gas samples. [District Rule 4311, 6.6.7] Federally Enforceable Through Title V Permit
15. The operator shall monitor the volumetric flows of the flare's purge and pilot gases with flow measuring devices or other parameters as specified on the Permit to Operate so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored. [District Rule 4311, 6.7] Federally Enforceable Through Title V Permit
16. Upon request, the operator of flares that are subject to Section 5.6 shall make available, to the APCO, the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] Federally Enforceable Through Title V Permit
17. The operator shall monitor and record the water level and pressure of the water seal that services the flare daily. [District Rule 4311, 6.8] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

18. The operator shall comply with the following, as applicable: (1) Periods of flare monitoring system inoperation greater than 24 continuous hours shall be reported by the following working day, followed by notification of resumption of monitoring. Periods of inoperation of monitoring equipment shall not exceed 14 days per any 18-consecutive-month period. Periods of flare monitoring system inoperation do not include the periods when the system feeding the flare is not operating; (2) During periods of inoperation of continuous analyzers or auto-samplers installed pursuant to Section 6.6, operators responsible for monitoring shall take one sample within 30 minutes of the commencement of flaring, from the flare header or from an alternate location at which samples are representative of vent gas composition and have samples analyzed pursuant to Section 6.3.4. During periods of inoperation of flow monitors required by Section 5.10, flow shall be calculated using good engineering practices; (3) Maintain and calibrate all required monitors and recording devices in accordance with the applicable manufacturer's specifications. In order to claim that a manufacturer's specification is not applicable, the person responsible for emissions must have, and follow, a written maintenance policy that was developed for the device in question. The written policy must explain and justify the difference between the written procedure and the manufacturer's procedure; (4) All in-line continuous analyzer and flow monitoring data must be continuously recorded by an electronic data acquisition system capable of one-minute averages. Flow monitoring data shall be recorded as one-minute averages. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit

19. The operator of a petroleum refinery flare shall install and maintain equipment that records a real-time digital image of the flare and flame at a frame rate of no less than one frame per minute. The recorded image of the flare shall be of sufficient size, contrast, and resolution to be readily apparent in the overall image or frame. The image shall include an embedded date and time stamp. The equipment shall archive the images for each 24-hour period. In lieu of video monitoring the operator may use an alternative monitoring method that provides data to verify date, time, vent gas flow, and duration of flaring events. [District Rule 4311, 6.10] Federally Enforceable Through Title V Permit

20. The operator shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, which ever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1] Federally Enforceable Through Title V Permit

21. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events that occurred during the previous 12 month period. A Reportable Flaring Event is any flaring where more than 500,000 standard cubic feet of vent gas is flared per calendar day, or where sulfur oxide emissions are greater than 500 pounds per calendar day. A reportable flaring event ends when it can be demonstrated by monitoring required in Section 6.8 that the integrity of the water seal has been maintained sufficiently to prevent vent gas to the flare tip. The report of all Reportable Flaring Events shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: (1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; (2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; (3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and (4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

22. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: (1) The total volumetric flow of vent gas in standard cubic feet for each day. (2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6. (3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month. (4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month. (5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow. (6) Flare monitoring system downtime periods, including dates and times. (7) For each day and for each month provide calculated sulfur dioxide emissions. (8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit

23. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: (1) Copy of the compliance determination conducted pursuant to Section 6.4.1. (2) Copy of the source testing result conducted pursuant to Section 6.4.2. (3) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation. (4) Effective on and after July 1, 2011, a copy of the approved flare minimization plan. (5) Effective on and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2. (6) Effective on and after July 1, 2011, where applicable, vent gas monitoring data collected. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit

24. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3 and 40CFR 60.18(d)] Federally Enforceable Through Title V Permit

25. The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip. [40 CFR 60.18 (f)(4)] Federally Enforceable Through Title V Permit

26. Air-assisted or steam-assisted flares shall only be used when the net heating value of the gas being combusted is 300 Btu/scf or greater. Nonassisted flares shall only be used when the net heating value of the gas being combusted is 200 Btu/scf or greater. [40 CFR 60.18 (c)(3)(ii)] Federally Enforceable Through Title V Permit

27. Steam-assisted and nonassisted flares shall be operated with an exit velocity less than 60 ft/sec, except as provided in 40 CFR 60.18 (c)(4)(ii) and (iii). [40 CFR 60.18 (c)(4)(i)] Federally Enforceable Through Title V Permit

28. Steam-assisted and nonassisted flares may be operated with an exit velocity equal to or greater than 60 ft/sec, but less than 400 ft/sec, if the net heating value of the gas being combusted is greater than 1,000 Btu/scf. [40 CFR 60.18 (c)(4)(ii)] Federally Enforceable Through Title V Permit

29. Steam-assisted and nonassisted flares may be operated with an exit velocity less than the velocity Vmax, as determined by the methods specified in 40 CFR 60.18 (f)(5), and less than 400 ft/sec. [40 CFR 60.18 (c)(4)(iii)] Federally Enforceable Through Title V Permit

30. The net heating value of the gas being combusted in the flare shall be calculated pursuant to 40 CFR 60.18(f)(3) or by using EPA Method 18, ASTM D1945-96, ASTM D1946, and ASTM D2382 if published values are not available or cannot be calculated. [40 CFR 60.18 (f)(3)] Federally Enforceable Through Title V Permit

31. Operators shall not depressurize any vessel containing VOCs unless the process unit turnaround is accomplished by employing one of the following operating procedures: The organic vapors shall either be recovered, added to the refinery fuel gas system and combusted; or controlled and piped to an appropriate firebox or incinerated for combustion; or flared, until the pressure within the process vessel is as close to atmospheric pressure as is possible. All process vessels shall be depressurized into the control facilities to less than 1020 mm Hg (5 psig) before venting/opening to atmosphere. All organic compounds which emerge from a refinery process vessel during the purging of said vessel and which otherwise would be emitted to the atmosphere shall be either directed to a flare or incinerator or shall be used for fuel until such disposition of emissions is not technically feasible or is less safe than atmospheric venting. [District Rule 4454, 4.0] Federally Enforceable Through Title V Permit

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32. Except for complying with the applicable requirements of Sections 6.1 and 7.3, the requirements of this rule shall not apply to 1) components subject to Rule 4623 (adopted 5/19/05), 2) pressure relief devices, pumps, and compressors equipped with a closed vent system as defined in Section 3.0, 3) components buried below ground, 4) components exclusively handling liquid streams which have less than 10 percent by weight (<10 wt%) evaporation at 150 C, 5) components exclusively handling liquid streams with a VOC content less than ten percent by weight (<10 wt%), 6) components exclusively handling gas/vapor streams with a VOC content of less than one percent by weight (<1wt%), 7) components incorporated in lines exclusively in vacuum service, 8) components exclusively handling commercial natural gas, and 9) one-half inch nominal or less stainless steel tube fittings which have been demonstrated to the Air Pollution Control Officer (APCO) to be leak-free based on initial inspection. [District Rule 4455, 4.1 & 4.2] Federally Enforceable Through Title V Permit

33. Except for components subject to Rule 4623 (Storage of Organic Liquids) or for components included in the inspection and maintenance (I&M) program implemented pursuant to Section 5.7 of Rule 4623, the operator shall not use any component that leaks in excess of the allowable leak standards of Rule 4455, or is found to be in violation of the provisions specified in Section 5.1.3. A component identified as leaking in excess of an allowable leak standard may be used provided it has been identified with a tag for repair, has been repaired, or is awaiting re-inspection after repair, within the applicable time period specified within the rule. [District Rule 4455, 5.1.1] Federally Enforceable Through Title V Permit

34. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4455, 5.1.2] Federally Enforceable Through Title V Permit

35. The operator shall be in violation of Rule 4455 if any District inspection demonstrates that one or more of the conditions in Section 5.1.4 (Leak Standards) exist at the facility. [District Rule 4455, 5.1.3.1] Federally Enforceable Through Title V Permit

36. Except for annual operator inspection described in Section 5.1.3.2.3, any operator inspection that demonstrates that one or more of the conditions in Section 5.1.4 exist at the facility shall not constitute a violation of Rule 4455 if the leaking components are repaired as soon as practicable but not later than the time frame specified in Rule 4455. Such components shall not be counted towards determination of compliance with the provisions of Section 5.1.4. [District Rule 4455, 5.1.3.2.1] Federally Enforceable Through Title V Permit

37. Leaking components detected during operator inspection pursuant Section 5.1.3.2.1 that are not repaired, replaced, or removed from operation as soon as practicable but not later than the time frame specified in Rule 4455 shall be counted toward determination of compliance with the provisions of Section 5.1.4. [District Rule 4455, 5.1.3.2.2] Federally Enforceable Through Title V Permit

38. Any operator inspection conducted annually for a component type (including operator annual inspections pursuant to Section 5.2.5, 5.2.6, 5.2.7, or 5.2.8) that demonstrates one or more of the conditions in Section 5.1.4 exist at the facility shall constitute a violation of Rule 4455 regardless of whether or not the leaking components are repaired, replaced, or removed from operation within the allowable repair time frame specified in Rule 4455. [District Rule 4455, 5.1.3.2.3] Federally Enforceable Through Title V Permit

39. A component shall be considered leaking if one or more of the conditions specified in Sections 5.1.4.1 through 5.1.4.4 of Rule 4455 exist at the facility. Readings shall be taken as methane using a portable hydrocarbon detection instrument and shall be made in accordance with the methods specified in Section 6.4.1 of Rule 4455. [District Rule 4455, 5.1.4] Federally Enforceable Through Title V Permit

40. The operator shall audio-visually inspect for leaks all accessible operating pumps, compressors and Pressure Relief Devices (PRDs) in service at least once every 24 hours, except when operators do not report to the facility for that given 24 hours. Any identified leak that cannot be immediately repaired shall be reinspected within 24 hours using a portable analyzer. If a leak is found, it shall be repaired as soon as practical but not later than the time frame specified in Table 3. [District Rule 4455, 5.2.1 & 5.2.2] Federally Enforceable Through Title V Permit

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41. The operator shall inspect all components at least once every calendar quarter, except for inaccessible components, unsafe-to-monitor components and pipes. Inaccessible components, unsafe-to-monitor components and pipes shall be inspected in accordance with the requirements set forth in Sections 5.2.5, 5.2.6, and 5.2.7. New, replaced, or repaired fittings, flanges and threaded connections shall be inspected immediately after being placed into service. Components shall be inspected using EPA Method 21. [District Rule 4455, 5.2.3, 5.2.4, 5.2.5, 5.2.6 & 5.2.7] Federally Enforceable Through Title V Permit

42. The operator may apply for a written approval from the APCO to change the inspection frequency from quarterly to annually for a component type, provided the operator meets all the criteria specified in Sections 5.2.8.1 through 5.2.8.3. This approval shall apply to accessible component types, specifically designated by the APCO, except pumps, compressors, and PRDs which shall continue to be inspected on a quarterly basis. [District Rule 4455, 5.2.8] Federally Enforceable Through Title V Permit

43. An annual inspection frequency approved by the APCO shall revert to quarterly inspection frequency for a component type if either the operator inspection or District inspection demonstrates that a violation of the provisions of Sections 5.1, 5.2 and 5.3 of the rule exists for that component type, or the APCO issued a Notice of Violation for violating any of the provisions of Rule 4455 during the annual inspection period for that component type. When the inspection frequency changes from annual to quarterly inspections, the operator shall notify the APCO in writing within five (5) calendar days after changing the inspection frequency, giving the reason(s) and date of change to quarterly inspection frequency. [District Rule 4455, 5.2.9 & 5.2.10] Federally Enforceable Through Title V Permit

44. The operator shall initially inspect a process PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the time of the release. To insure that the process PRD is operating properly, and is leak-free, the operator shall re-inspect the process PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the date of the release using EPA Method 21. If the process PRD is found to be leaking at either inspection, the PRD leak shall be treated as if the leak was found during quarterly operator inspections. [District Rule 4455, 5.2.11] Federally Enforceable Through Title V Permit

45. Except for process PRD, a component shall be inspected within 15 calendar days after repairing the leak or replacing the component using EPA Method 21. [District Rule 4455, 5.2.12] Federally Enforceable Through Title V Permit

46. A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. Any attempt by an operator to count such District inspections as part of the mandatory operator's inspections is considered to be willful circumvention and is a violation of this rule. [District Rule 4455, 5.2.13] Federally Enforceable Through Title V Permit

47. Upon detection of a leaking component, the operator shall affix to that component a weatherproof readily visible tag that contains the information specified in Section 5.3.3. The tag shall remain affixed to the component until the leaking component has been repaired or replaced; has been re-inspected using EPA Method 21; and is found to be in compliance with the requirements of Rule 4455. [District Rule 4455, 5.3.1 5.3.2 and 5.3.3] Federally Enforceable Through Title V Permit

48. An operator shall minimize all component leaks immediately to the extent possible, but not later than one (1) hour after detection of leaks in order to stop or reduce leakage to the atmosphere. [District Rule 4455, 5.3.4] Federally Enforceable Through Title V Permit

49. If the leak has been minimized but the leak still exceeds the applicable leak standards of Rule 4455, an operator shall repair or replace the leaking component, vent the leaking component to a closed vent system, or remove the leaking component from operation as soon as practicable but not later than the time period specified in Table 3. For each calendar quarter, the operator may be allowed to extend the repair period as specified in Table 3, for a total number of leaking components, not to exceed 0.05 percent of the number of components inspected, by type, rounded upward to the nearest integer where required. [District Rule 4455, 5.3.5] Federally Enforceable Through Title V Permit

50. If the leaking component is an essential component or a critical component and which cannot be immediately shut down for repairs, the operator shall minimize the leak within one hour after detection of the leak. If the leak has been minimized, but the leak still exceeds any of the applicable leak standards of Rule 4455, the essential component or critical component shall be repaired or replaced to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4455 5.3.6] Federally Enforceable Through Title V Permit

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51. For any component that has incurred five repair actions for major gas leaks or major liquid leaks, or any combination of major gas leaks and major liquid leaks within a continuous 12-month period, the operator shall comply with at least one of the requirements specified in Sections 5.3.7.1, 5.3.7.2, 5.3.7.3, or 5.3.7.4 by the applicable deadlines specified in Sections 5.3.7.5 and 5.3.7.6. If the original leaking component is replaced with a new like-in-kind component before incurring five repair actions for major leaks within 12-consecutive months, the repair count shall start over for the new component. An entire compressor or pump need not be replaced provided the compressor part(s) or pump part(s) that have incurred five repair actions as described in Section 5.3.7 are brought into compliance with at least one of the requirements of Sections 5.3.7.1 through 5.3.7.6. [District Rule 4455, 5.3.7] Federally Enforceable Through Title V Permit

52. The operator shall monitor process PRD by using electronic process control instrumentation that allows for real time continuous parameter monitoring or by using telltale indicators for the process PRD where parameter monitoring is not feasible. [District Rule 4455, 5.4.1] Federally Enforceable Through Title V Permit

53. After a release from a process PRD in excess of 500 pounds of VOC in a continuous 24-hour period, the operator shall immediately conduct a failure analysis and implement corrective actions as soon as practicable but not later than 30 days to prevent the reoccurrence of similar release. For refineries processing greater than 20,000 barrels of crude oil per day, any subsequent release in excess of 500 pounds of VOC within a continuous 24-hour period shall be subject to the requirements of Section 5.4.5. [District Rule 4455, 5.4.3 & 5.4.4] Federally Enforceable Through Title V Permit

54. The operator of a refinery processing greater than 20,000 barrels of crude oil per day shall connect all process PRDs serving that process equipment to an APCO-approved closed vent system as defined in Section 3.0 if any of the conditions specified in Sections 5.4.5.1 and 5.4.5.2 occurs. Process PRDs subject to the provisions of Section 5.4.5 shall be connected to an APCO-approved closed-vent system as soon as practicable, but no later than the first turnaround after the requirement to connect becomes effective. [District Rule 4455, 5.4.5] Federally Enforceable Through Title V Permit

55. All major components and critical components shall be physically identified clearly and visibly for inspection, repair, and recordkeeping purposes. The physical identification shall consist of labels, tags, manufacturer's nameplate identifier, serial number, or model number, or other system approved by the APCO that enables an operator or District personnel to locate each individual component. The operator shall replace tags or labels that become missing or unreadable as soon as practicable but not later than 24 hours after discovery. The operator shall comply with the requirements of Sections 6.1.4 if there is any change in the description of major components or critical components. [District Rule 4455, 5.5.1 & 5.5.2] Federally Enforceable Through Title V Permit

56. The operator shall keep a copy of the operator management plan at the facility and make it available to the APCO, ARB and US EPA upon request. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved operator management plan. [District Rule 4455, 6.1.2 & 6.1.4] Federally Enforceable Through Title V Permit

57. The operator shall maintain an inspection log containing, at a minimum, 1) total number of components inspected, and total number and percentage of leaking components found by component types, 2) location, type, name or description of each leaking component, and description of any unit where the leaking component is found, 3) date of leak detection and method of leak detection, 4) for gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak, 5) date of repair, replacement, or removal from operation of leaking components, 6) identification and location of essential component and critical components found leaking that cannot be repaired until the next process unit turnaround or not later one year after leak detection, whichever comes earlier, 7) methods used to minimize the leak from essential components and critical components that cannot be repaired until the next process unit turnaround or not later one year after leak detection, whichever comes earlier, 8) after the component is repaired or is replaced, the date of reinspection and the leak concentration in ppmv, 9) inspector's name, business mailing address, and business telephone number, and 10) the facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log. [District Rule 4455, 6.2.1] Federally Enforceable Through Title V Permit

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58. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, analyzer reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. [District Rule 4455, 6.2.3] Federally Enforceable Through Title V Permit

59. The operator shall notify the APCO, by telephone or other methods approved by the APCO, of any process PRD release described in Sections 5.4.4 and 5.4.5, and any release in excess of the reportable quantity limits as stipulated in 40 CFR, Part 117, Part 302 and Part 355, including any release in excess of 100 pounds of VOC, within one hour of such occurrence or within one hour of the time said person knew or reasonably should have known of its occurrence. [District Rule 4455, 6.3.1] Federally Enforceable Through Title V Permit

60. The operator shall submit a written report to the APCO within thirty (30) calendar days following a PRD release subject to 6.3.1. The written report shall include 1) process PRD type, size, and location, 2) date, time and duration of the process PRD release, 3) types of VOC released and individual amounts, in pounds, including supporting calculations, 4) cause of the process PRD release, and 5) corrective actions taken to prevent a subsequent process PRD release. [District Rule 4455 6.3.2] Federally Enforceable Through Title V Permit

61. Copies of all records shall be retained for a minimum of five (5) years after the date of an entry. Such records shall be made available to the APCO, ARB, or US EPA upon request. [District Rule 4455, 6.2.2, 6.2.3 & 6.2.4] Federally Enforceable Through Title V Permit

62. Measurements of gaseous leak concentrations shall be conducted according to US EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in US EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. [District Rule 4455, 6.4.1] Federally Enforceable Through Title V Permit

63. The VOC content of exempt streams shall be determined using American Society of Testing and Materials (ASTM) D 1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 for liquids. [District Rule 4455, 6.4.2] Federally Enforceable Through Title V Permit

64. For exempt streams, the percent by volume liquid evaporated at 150 deg C shall be determined using ASTM D 86. [District Rule 4455, 6.4.3] Federally Enforceable Through Title V Permit

65. Equivalent test methods other than specified in Sections 6.4.1 through 6.4.5 may be used provided such test methods have received prior approval from the US EPA, ARB, and APCO. [District Rule 4455, 6.4] Federally Enforceable Through Title V Permit

66. Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of 40 CFR 60.482-3a for all equipment within 180 days of initial startup. [40 CFR 60.482-1a(a)]

67. Compliance with 40 CFR 60.482-3a shall be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 40 CFR 60.485a. [40 CFR 60.482-1a(b)]

68. An owner or operator may request a determination of equivalence of a means of emission limitation to the requirements of 40 CFR 60.482-3a as provided in 40 CFR 60.484a. [40 CFR 60.482-1a(c)(1)]

69. If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of 40 CFR 60.482-3a, an owner or operator shall comply with the requirements of that determination. [40 CFR 60.482-1a(c)(2)]

70. Equipment that is in vacuum service is excluded from the requirements of 40 CFR 60.482-3a if it is identified as required in 40 CFR 60.486a(e)(5). [40 CFR 60.482-1a(d)]

71. Unless exempt under 40 CFR 60.482-3a, each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in 40 CFR 60.482-3a(h) and (i). The barrier fluid system shall be in heavy liquid service or shall not be in VOC service. Each compressor shall be operated and equipped as specified in 40 CFR 60.482-3a(b)(1), (2), or (3). [40 CFR 60.482-3a(a), (b), and (c)]

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72. Any compressor that is designated, as described in 40 CFR 60.486a(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, is exempt from the requirements of 40 CFR 60.482-3a(a) through (h) if the compressor meets the requirements specified in 40 CFR 60.482-3a(i)(1) and (2). [40 CFR 60.482-3a(i), and District Rule 2201]

73. Any existing reciprocating compressor in a process unit which becomes an affected facility under the provisions of 40 CFR 60.14 or 40 CFR 60.15 is exempt from 40 CFR 60.482a(a), (b), (c), (d), (e), and (h), provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of 40 CFR 60.482-3a(a), (b), (c), (d), (e), and (h). [40 CFR 60.593a(c)]

74. {3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]