San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

SEP 07 2016

Ms. Melinda Hicks
Kern Oil and Refining Co.
7224 E Panama Ln
Bakersfield, CA 93307

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-37
Project # 1161776

Dear Ms. Hicks:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The application is for a new sulfur recovery unit.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authorities to Construct with Certificates of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the 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.

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

Thank you for your cooperation in this matter.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Enclosures

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

Seyed Sadredin
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San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

New Claus Unit

Facility Name:	Kern Oil and Refining Co.	Date:	9/1/16
Mailing Address:	7224 E Panama Ln Bakersfield, CA 93307	Engineer:	David Torii
		Lead Engineer:	Dan Klevann
Contact Person:	Melinda Hicks		
Telephone:	661-845-0761		
Application #(s):	S-37-122-7 and '152-0		
Project #:	1161776		
Deemed Complete:	5/10/16		

I. Proposal

Kern Oil and Refining Co. (Kern) has requested an Authority to Construct (ATC) permit for a new Claus sulfur recovery unit (SRU), to modify existing CSRU permit (S-37-122) by developing a specific limiting condition (SLC) that will limit the combined sulfur processing rate from the two SRUs for NSPS purposes (see 40 CFR 60 Subpart Ja discussion in section VIII, below) and to authorize use of a continuous emissions monitoring system (CEMS) to measure SOx emissions from SRUs S-37-122 and '152. The two CSRUs will share a new amine regeneration unit to be listed on S-37-152 as well as the existing enclosed sulfur pit listed on S-37-122.

Note that the SRU is a SOx control device for the facility's refinery gas-fired equipment. Consequently, the SRU is not a source operation pursuant to Rule 1020 and therefore not an emission unit pursuant to Rule 2201.

Note that several conditions on current permit S-37-122-5 are duplicated on facility-wide permit S-37-0. The duplicated conditions are not included on ATCs S-37-122-7 or '155-0.

Kern received their Title V Permit on 1/31/03. This modification can be classified as a Title V significant modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Kern must apply to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (2/18/16)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)

Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4454	Refinery Process Unit Turnaround (12/17/92)
Rule 4455	Components at Petroleum Refineries, Gas Liquids 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. 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 operates a petroleum refining operation engaged in the production of reformulated gasoline (Phase 3) and various petroleum distillates, including ultra-low sulfur diesel fuel.

The sulfur removal facility converts concentrated H_2S gas into elemental sulfur, CO_2, and water through the Claus process with tail gas treatment and incineration units. The Claus process involves the partial incineration of H_2S to form SO_2 (and water and heat). The reaction is controlled such that only 1/3 of H_2S is converted to SO_2. The SO_2 is then reacted with the remaining 2/3 of the H_2S to produce elemental sulfur (and additional water and heat) in three stages of catalytic reactions. Elemental sulfur flows to an enclosed sulfur pit. Water is sent to the sour water handling system. Heat is recovered from various points in the process. Approximately 93-97% of the sulfur is recovered in the main Claus process. The quantity of sulfur recovered is expected to be less than 10 long tons per day.

The treated gas exiting the Claus unit (tail gas) still contains some sulfur (0.8-1.5% per AP42, section 8.13-4) in the form of H_2S, SOx sulfur vapor, and traces of other sulfur compounds. This tail gas is then treated with an amine system to remove most of the remaining sulfur. First, the sulfur compounds are converted back into H_2S. Then the amine solution strips the H_2S from the tail gas. The stripped H_2S is directed back into the acid gas for the Claus plan for conversion to elemental sulfur.

The tail gas treating unit effluent gas contains only minor amounts of sulfur, mostly in the form of H_2S. This gas is incinerated in a thermal oxidizer to convert the remaining H_2S to SO_2 before being released to atmosphere.

The existing Claus sulfur recovery unit (S-37-122) consists of a Claus sulfur furnace, three catalytic reaction/converter vessels, enclosed sulfur pit, tail gas treating unit, 2.5 MMBtu/hr thermal oxidizer, and various other heat exchangers, scrubbers, knockouts, and pumps.

The proposed Claus sulfur recovery unit will consist of a Claus sulfur furnace, three catalytic reaction/converter vessels, tail gas treating unit, 1.9 MMBtu/hr thermal oxidizer, and various

other heat exchangers, scrubbers, knockouts, and pumps. The additional unit will share the enclosed sulfur pit and tail gas amine regenerator with existing CSRU S-37-122. The additional Claus sulfur recovery unit is being installed to ensure flare S-37-7's compliance with the petroleum refinery SOx performance target listed in Section 5.9.2 of SJVAPCD Rule 4311. The target limits petroleum refinery sulfur dioxide flare emissions to less than 0.50 tons per million barrels of crude processing capacity, calculated as an average over one calendar year. This second SRU will provide the redundancy needed to minimize flaring that occurs when the existing SRU is shut down for various reasons.

A process flow diagram is included in Appendix B.

The two SRUs will not operate concurrently (except for startup and shut down periods); therefore, Kern is proposing a specific limiting condition (SLC) to limit the total daily sulfur production to S-37-122's current limit of 20 tons/day.

V. Equipment Listing

S-37-152-0: CLAUS PROCESS SULFUR RECOVERY UNIT WITH REACTION FURNACE, THREE CONVERTER VESSELS, HYDROGENATION REACTOR, TAIL GAS TREATMENT UNIT, TAIL GAS AMINE SCRUBBING SYSTEM AND 1.9 MMBTU/HR INCINERATOR WITH ZEECO GB-8S BURNER OR EQUIVALENT, KNOCKOUTS, HEAT EXCHANGERS, CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) AND ASSOCIATED PIPING AND COMPONENTS, AND THE FOLLOWING EQUIPMENT SHARED WITH S-37-122: ENCLOSED SULFUR PIT WITH EDUCTOR VENT TO SULFUR PLANT AND AMINE REGENERATION UNIT

Pre-Project Equipment Description (see PTO in Appendix C):

S-37-122-5: CLAUS PROCESS SULFUR RECOVERY UNIT WITH REACTION FURNACE, THREE CONVERTER VESSELS, HYDROGENATION REACTOR, ENCLOSED SULFUR PIT WITH EDUCTOR VENT TO SULFUR PLANT, TAIL GAS TREATMENT UNIT INCLUDING AMINE SCRUBBING SYSTEM AND 2.5 MMBTU/HR INCINERATOR WITH JOHN ZINK VYD BURNER OR EQUIVALENT, KNOCKOUTS, HEAT EXCHANGERS, AND ASSOCIATED PIPING AND COMPONENTS

Proposed ATC:

S37-122-7: MODIFICATION OF CLAUS PROCESS SULFUR RECOVERY UNIT WITH REACTION FURNACE, THREE CONVERTER VESSELS, HYDROGENATION REACTOR, ENCLOSED SULFUR PIT WITH EDUCTOR VENT TO SULFUR PLANT, TAIL GAS TREATMENT UNIT INCLUDING AMINE SCRUBBING SYSTEM AND 2.5 MMBTU/HR INCINERATOR WITH JOHN ZINK VYD BURNER, KNOCKOUTS, HEAT EXCHANGERS, AND ASSOCIATED PIPING AND COMPONENTS: **SHARE NEW AMINE REGENERATION UNIT LISTED ON S-37-152; SHARE EXISTING ENCLOSED SULFUR PIT LISTED ON THIS PERMIT WITH S-37-152; ESTABLISH SPECIFIC LIMITING CONDITION (SLC) FOR S-37-122 AND -152 AND INSTALL CEMS TO MEASURE SOX EMISSIONS**

Post Project Equipment Description:

S-37-122-7: CLAUS PROCESS SULFUR RECOVERY UNIT WITH REACTION FURNACE, THREE CONVERTER VESSELS, HYDROGENATION REACTOR, TAIL GAS TREATMENT UNIT INCLUDING AMINE SCRUBBING SYSTEM AND 2.5 MMBTU/HR INCINERATOR WITH JOHN ZINK VYD BURNER OR EQUIVALENT, KNOCKOUTS, HEAT EXCHANGERS, AND ASSOCIATED PIPING AND COMPONENTS, INCLUDING THE FOLLOWING EQUIPMENT SHARED WITH S-37-152: ENCLOSED SULFUR PIT WITH EDUCTOR VENT TO SULFUR PLANT AND AMINE REGERATION UNIT

VI. Emission Control Technology Evaluation

The sulfur recovery units are equipped with amine absorption tail gas treating systems, which in turn are served by incinerators. This combination of sulfur recovery/emission control equipment is expected to result in low incinerator exhaust emissions of no higher than 220 ppmv S02 (Project 1040995, 3/11/05), and no higher than 10 ppmv H2S. This generally represents greater than 99.7% recovery of sulfur (AP42, section 8.13.3).

VII. General Calculations

A. Assumptions

- Fugitive component VOC emissions are calculated using CAPCOA revised EPA correlation equations for refineries and marketing terminals, from "California Implementation Guidelines for Estimating Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities", February 1999.
- SRUs S-37-122 and '152 will not operate concurrently (except for startup and shut down periods) (applicant).
- The SLC sulfur production limit is < 20 long tons per day (applicant).
- SRUs S-37-122 and '152 will not operate concurrently (except for startup and shut down periods) (applicant).
- Both S-37-122's and '152's incinerators will operate simultaneously 2 days/year on startup or shutdown days (applicant).
- Only one of the SRUs operates 363 days/year (applicant).
- Daily startup or shutdown emissions from each SRU will not exceed 224.0 lbs SOx (applicant).
- Sulfur oxide emissions from incinerator exhaust excluding startup and shutdown periods do not exceed 12,718 lb SOx/yr (PTO S-37-122-5 and applicant).
- SOx emissions are calculated based on the method used in Project 1040995, revision dated March 11, 2005. This assumes 2 days of SRU startup or shutdown at 224.0 lbs/day and 363 days of normal operation at 33.8 lbs/day.
- NOx, PM10, CO and VOC do not increase during startups or shutdowns.
- Pre and post-project tail gas flow rate: 37,900 scf/hr (project S1040995)
- 379.5 scf/lbmol
- NOx molecular weight = 46
- CO molecular weight = 28

B. Emission Factors

Existing SRU Emission Factors S-37-122		
	EF	Source
NOx	95 ppm@ 3%02	Current PTO
SOx (normal)	33.8 lbs/day	Current PTO
SOx (startup/shutdown)	224 lbs/day	Current PTO
SOx (annual)	12,718 lb-SOx/yr	Current PTO
PM10	0.0137 lb/MMBtu	Current PTO
CO	150 ppm@ 3%02	Current PTO
VOC	0.0055 lb/MMBtu	Current PTO

Proposed SRU Emission Factors S-37-152-0		
	EF	Source
NOx	95 ppm@ 3%02	Proposed and PTO S-37-122
SOx (normal)	33.8 lbs/day	Proposed and PTO S-37-122
SOx (startup/shutdown)	224 lbs/day	Proposed and PTO S-37-122
SOx (annual)	12,718 lb-SOx/yr	Proposed and PTO S-37-122
PM10	0.0137 lb/MMBtu	Proposed and PTO S-37-122
CO	150 ppm@ 3%02	Proposed and PTO S-37-122
VOC	0.0055 lb/MMBtu	Proposed and PTO S-37-122

C. Calculations

1. Pre-Project Potential to Emit (PE1)

S-37-122:

(95 scf-NOx/1E6 scf exhaust)(37,900 scf/hr)(24 hr/day)(lbmol NOx/379.5 scf NOx)(46 lb NOx/lbmol-NOx)(20.9/(20.9-3) = 12.2 lb-NOx/day

(95 scf-NOx/1E6 scf exhaust)(37,900 scf/hr)(8760 hr/yr)(lbmol NOx/379.5 scf NOx)(46 lb NOx/lbmol-NOx)(20.9/(20.9-3) = 4,464 lb-NOx/yr

SOx (normal): 33.8 lbs/day

SOx (startup/shutdown): 224.0 lbs/day

SOx (annual): (33.8 lb/day)(363 day) + (224.0 x 2) = 12,718 lb-SOx/yr

(0.0137 lb-PM10/MMBtu)(2.5 MMbtu/hr)(24 hr/day) = 0.8 lb-PM10/day

(0.0137 lb-PM10/MMBtu)(2.5 MMbtu/hr)(8760 hr/yr) = 300 lb-PM10/yr

(150 scfCO/1E6 scf exhaust)(37,900 scf/hr)(24 hr/day)(lbmol NOx/379.5 scf NOx)(28 lb CO/lbmol-NOx)(20.9/(20.9-3) = 11.8 lb-CO/day

150 scfCO/1E6 scf exhaust)(37,900 scf/hr)(8760 hr/yr)(lbmol NOx/379.5 scf NOx)(28 lb CO/lbmol-NOx)(20.9/(20.9-3) = 4,290lb-CO/yr

(0.0055 lb-VOC/MMBtu)(2.5 MMbtu/hr)(24 hr/day) = 0.3 lb-VOC/day

(0.0055 lb-VOC/MMBtu)(2.5 MMbtu/hr)(8760 hr/yr) = 120 lb-VOC/yr

Fugitive VOCs: 2.6 lb/day

Fugitive VOCs: (2.6 lb/day)(365 day/year) = 949 lb-VOC/year

PE1 (lb/day)					
	NO_X	SO_X	PM_{10}	CO	VOC
S-37-122	12.2	224.0	0.8	11.8	2.9*

*$0.3 + 2.6_{fugitive}$

PE1 (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
S-37-122	4,464	12,718	300	4,290	1,069*

*$120 + 949_{fugitive}$

2. Post Project Potential to Emit (PE2)

S-37-152-0:

(95 scf-NOx/1E6 scf exhaust)(37,900 scf/hr)(24 hr/day)(lbmol NOx/379.5 scf NOx)(46 lb NOx/lbmol-NOx)(20.9/(20.9-3) = 12.2 lb-NOx/day

(95 scf-NOx/1E6 scf exhaust)(37,900 scf/hr)(8760 hr/yr)(lbmol NOx/379.5 scf NOx)(46 lb NOx/lbmol-NOx)(20.9/(20.9-3) = 4,464 lb-NOx/yr

SOx (normal): 33.8 lbs/day

SOx (startup/shutdown): 224.0 lbs/day

SOx (annual): (33.8 lb/day)(363 day) + (224.0 x 2 days) = 12,717 lb-SOx/yr

(0.0137 lb-PM10/MMBtu)(1.9 MMbtu/hr)(24 hr/day) = 0.6 lb-PM10/day

(0.0137 lb-PM10/MMBtu)(1.9 MMbtu/hr)(8760 hr/yr) = 228 lb-PM10/yr

(150 scfCO/1E6 scf exhaust)(37,900 scf/hr)(24 hr/day)(lbmol CO/379.5 scf NOx)(28 lb CO/lbmol-CO)(20.9/(20.9-3) = 11.8 lb-CO/day

150 scfCO/1E6 scf exhaust)(37,900 scf/hr)(8760 hr/yr)(lbmol CO/379.5 scf CO)(28 lb CO/lbmol-CO)(20.9/(20.9-3) = 4,290lb-CO/yr

(0.0055 lb-VOC/MMBtu)(1.9 MMbtu/hr)(24 hr/day) = 0.3 lb-VOC/day
(0.0055 lb-VOC/MMBtu)(1.9 MMbtu/hr)(8760 hr/yr) = 92 lb-VOC/yr

Fugitive VOCs: 2.6 lb/day

Fugitive VOCs: (2.6 lb/day)(365 day/year) = 949 lb-VOC/year

PE2 (lb/day)					
	NO_X	SO_X	PM_{10}	CO	VOC
S-37-122	12.2	224.0	0.8	11.8	2.9
S-37-152-0	12.2	224.0	0.6	11.8	2.9*

*0.3 + $2.6_{fugitive}$

PE2 (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
S-37-122	4,464	12,717	300	4,290	1,069
S-37-152-0	4,464	12,717	228	4,290	1,041*

*92 + $949_{fugitive}$

The applicant has proposed the following combined annual emission limits for S-37-122-7 and '152-0:

PE2 Combined Annual Emissions from S-37-122-7 and '152-0 (lb/year)						
NO_X	SO_X	PM_{10}	CO	VOC		
4,470	13,166	300	4,296	120 (incineration)	1,896 (fugitive)	2,016 (total)

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

Pursuant to District Rule 2201, the 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 (AER) that have occurred at the source, and which have not been used on-site.

Pre-Project Stationary Source Potential to Emit [SSPE1] (lb/year)*					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE1	>20,000	95,411	45,281	>200,000	>20,000

*from 1133043

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

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

Post Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
Pre-Project SSPE (SSPE1)	>20,000	95,411	45,281	>200,000	>20,000
S-37-122	-4,464	-12,717	-300	-4,290	-1,069
Combined Emissions from S-37-122-7 and '152-0	+4,470	+13,166	+300	+4,296	+2,016
Post Project SSPE (SSPE2)	>20,000	95,860	45,281	>200,000	>20,000

5. Major Source Determination

Rule 2201 Major Source Determination:

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

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

Rule 2201 Major Source Determination (lb/year)						
	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO	VOC
SSPE1	>20,000	95,411	45,281	45,281	>200,000	>20,000
SSPE2	>20,000	95,860	45,281	>200,000	>20,000	>20,000
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	No	Yes	Yes

Note: PM2.5 assumed to be equal to PM10

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

Rule 2410 Major Source Determination:

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

PSD Major Source Determination (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Estimated Facility PE before Project Increase				>100		
PSD Major Source Thresholds	100	100	100	100	100	100
PSD Major Source ? (Y/N)				y		

As shown above, the facility is an existing PSD major source for at least one pollutant.

6. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed pollutant-by-pollutant for each unit within the project to determine the amount of offsets required.

As shown below in section VIII, this project 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 NOx and 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?
NO_x	4,464	50,000	N
SO_x	NA	80,000	N
PM_{10}	NA	30,000	N
VOC	1,041	50,000	N

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification

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

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

Step 1

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

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

Federal Major Modification Thresholds for Emission Increases			
Pollutant	**Total Emissions Increases (lb/yr)**	**Thresholds (lb/yr)**	**Federal Major Modification?**
NO_x	4,464	0	Y
VOC	1,041	0	Y
PM_{10}	228	30,000	No
SO_x	12,717	20,000	No

Since there is an increase in NO_x and VOC emissions, this project constitutes a Federal Major Modification. Federal Offset quantities are calculated below.

Federal Offset quantities are calculated below:

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

Only list pollutants for which the project is a Federal Major Modification and delete other pollutants. The calculated Federal offset quantity is entered into the Major Modification tracking spreadsheet under the heading "Federal Offset Quantity"

NOx

		Federal Offset Ratio	1.5
Permit No.	Actual Emissions (lb/year)	Potential Emissions (lb/year)	Emissions Change (lb/yr)
S-37-152-0	0	4,464	4,464
			0
			0
			0
		Net Emission Change (lb/year):	4,464
		Federal Offset Quantity: (NEC * 1.5)	6,696

VOC

		Federal Offset Ratio	1.5
Permit No.	Actual Emissions (lb/year)	Potential Emissions (lb/year)	Emissions Change (lb/yr)
S-37-152-0	0	1,041	1,041
			0
			0
			0
		Net Emission Change (lb/year):	1,041
		Federal Offset Quantity: (NEC * 1.5)	1,562

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

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

I. Project Emissions Increase - New Major Source Determination

The post-project potentials to emit from all new and modified units are compared to the PSD major source thresholds to determine if the project constitutes a new major source subject to PSD requirements.

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

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Total PE from New and Modified Units	2.2	0.5	6.3	2.1	0.1	0.1
PSD Major Source threshold	100	100	100	100	100	100
New PSD Major Source?	n	n	n	n	n	n

As shown in the table above, the potential to emit for the project, by itself, does not exceed any PSD major source threshold. Therefore Rule 2410 is not applicable and no further analysis is required.

10. 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 Determination

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. The SRU is a SOx control device for the facility's refinery-gas fired equipment. Consequently, the SRU is not a source operation pursuant to Rule 1020 and therefore not an emission unit pursuant to Rule 2201. Consequently, the SRU is not subject to BACT requirements.

B. Offsets

1. Offset Applicability

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:

As explained above in section IV, the modification will enable flare S-37-7 to comply with section 5.9.2 of Rule 4311.

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.

All of the above section 4.6.8 requirements are met; therefore, the proposed modification is exempt from offsets.

C. Public Notification

1. Applicability

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

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

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

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

b. PE > 100 lb/day

The PE2 for this new unit is compared to the daily PE Public Notice thresholds in the following table:

PE > 100 lb/day Public Notice Thresholds			
Pollutant	**PE2 (lb/day)**	**Public Notice Threshold**	**Public Notice Triggered?**
NO_X	12.2	100 lb/day	N
SO_X	224.0	100 lb/day	Y
PM_{10}	0.6	100 lb/day	N
CO	11.8	100 lb/day	N
VOC	2.9	100 lb/day	N

Therefore, public noticing for PE > 100 lb/day purposes is required.

c. Offset Threshold

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

Offset Thresholds				
Pollutant	**SSPE1 (lb/year)**	**SSPE2 (lb/year)**	**Offset Threshold**	**Public Notice Required?**
NO_X	>20,000	>20,000	20,000 lb/year	No
SO_X	95,411	95,860	54,750 lb/year	No
PM_{10}	45,281	45,281	29,200 lb/year	No
CO	>200,000	>200,000	200,000 lb/year	No
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 SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds			
Pollutant	**SSIPE (lb/year)**	**SSIPE Public Notice Threshold**	**Public Notice Required?**
NO_x	6	20,000 lb/year	No
SO_x	449	20,000 lb/year	No
PM_{10}	0	20,000 lb/year	No
CO	6	20,000 lb/year	No
VOC	947	20,000 lb/year	No

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

e. Title V Significant Permit Modification

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

2. Public Notice Action

As discussed above, public noticing is required for this project for SO_X emissions in excess of 100 lb/day and for triggering a Title V significant 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)

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

Proposed Rule 2201 (DEL) Conditions:

S-37-122-7:

- Except on days of startup or shutdown of the sulfur recovery unit, sulfur oxide emissions from incinerator exhaust shall not exceed 33.8 lb SOx (as SO2) per day. [District Rule 2201] Y

- On days of startup or shutdown of the sulfur recovery unit, sulfur oxide emissions from incinerator exhaust shall not exceed 224.0 lb SOx (as SO2) per day. [District Rule 2201]

- During periods of normal operation, combined sulfur oxide emissions from incinerators listed in S-37-122 and S-37-152 shall not exceed 33.8 lb SOx (as SO2) per day. [District Rule 2201] Y

- During periods of startup/shutdown, combined sulfur oxide emissions from incinerators listed in S-37-122 and S-37-152 shall not exceed 448 lb SOx (as SO2) per day. [District Rule 2201] Y

- 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 Rules 2520, 9.3.2, 4801 and Kern County Rule 407] Y

- Emission rates from incinerator exhaust shall not exceed any of the following: NOx (as NO2): 95 ppmv @ 3% O2, PM10: 0.0137 lb/MMBtu, VOC: 0.0055 lb/MMBtu, or CO: 150 ppmv @ 3% O2. [District Rule 2201, 2520, 4301] Y

S-37-152-0:

- Except on days of startup or shutdown of the sulfur recovery unit, sulfur oxide emissions from incinerator exhaust shall not exceed 33.8 lb SOx (as SO2) per day. [District Rule 2201] Y

- On days of startup or shutdown of the sulfur recovery unit, sulfur oxide emissions from incinerator exhaust shall not exceed 224.0 lb SOx (as SO2) per day. [District Rule 2201]

- During periods of normal operation, combined sulfur oxide emissions from incinerators listed in S-37-122 and S-37-152 shall not exceed 33.8 lb SOx (as SO2) per day. [District Rule 2201] Y
- During periods of startup/shutdown, combined sulfur oxide emissions from incinerators listed in S-37-122 and S-37-152 shall not exceed 448 lb SOx (as SO2) per day. [District Rule 2201] Y

- 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 Rules 2520, 9.3.2, 4801 and Kern County Rule 407] Y

- Emission rates from incinerator exhaust shall not exceed any of the following: NOx (as NO2): 95 ppmv @ 3% O2, PM10: 0.0137 lb/MMBtu, VOC: 0.0055 lb/MMBtu, or CO: 150 ppmv @ 3% O2. [District Rule 2201, 2520, 4301] Y

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, and as proposed by the applicant, source testing of the new SRU's thermal incinerator to demonstrate compliance with NOx, CO, and SOx emission limits shall be conducted within 60 days of startup of the additional SRU and not less than every 12 months thereafter. An SRU in standby mode shall not be required to be placed in operation for the purposes of source testing. If an SRU source test is delayed due a unit's operational status, the unit shall be source tested within 60 days of being placed in normal operating status.

2. Monitoring

Monitoring of SRU SOx emissions will be conducted using continuous emissions monitoring system (CEMS) operated in accordance with 40 CFR Part 60 Subpart Ja. Additionally, conditions 111 and 112 of PTO S-37-122-5 (existing SRU permit) shall be removed, as well as, references to daily SOx emissions monitoring listed in conditions 109 and 110 of the same permit.

3. Recordkeeping

The operator shall maintain all records of required monitoring for SOx emissions as stated above. In addition, other recordkeeping required in accordance with prohibitory rules, New Source Performance Standards, and Title V requirements will be included on the permit.

4. Reporting

Reporting required in accordance with prohibitory rules, New Source Performance Standards, and Title V requirements will be included on the permit.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to **Appendix D** of this document for the AAQA summary sheet.

The proposed location is in an attainment area for NO_X, CO, and SO_X. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO_X, CO, or SO_X.

The proposed location is in a non-attainment area for the state's PM_{10} as well as federal and state $PM_{2.5}$ thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM_{10} and $PM_{2.5}$.

G. Compliance Certification

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

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to install a sulfur recovery unit.

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

Rule 2410 Prevention of Significant Deterioration

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

Rule 2520 Federally Mandated Operating Permits

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

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

Rule 4001 New Source Performance Standards (NSPS)

40 CFR 60 Subpart J - Standards of Performance for Petroleum Refineries

Section 60.100(a) - Applicability, designation of affected facility, and reconstruction
The provisions of this subpart are applicable to all Claus sulfur recovery plants except Claus plants with a design capacity for sulfur feed of 20 long tons per day (LTD) or less. The Claus units S-37-122 and '152 each have a design capacity for sulfur feed of 20 long tons per day (LTD) or less and are therefore subject to this subpart.

Section 60.10(e) allows owners or operators to choose to comply with the applicable provisions of subpart Ja of this part to satisfy the requirements of this subpart for an affected facility. The applicant has chosen to comply with subpart Ja.

40 CFR 60 Subpart Ja - Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007

Section 60.100a - Applicability, designation of affected facility, and reconstruction

The applicability of Subpart Ja is discussed in §60.100a, specifically there are 3 ways in which Subpart Ja could apply to a facility: by being new, reconstructed or modified. The two subject SRUs included in this project were constructed prior to May 14, 2007 (S-37-152 was originally installed as S-34-6 at Alon Refinery); therefore, the units are not new sources. Additionally, the proposed equipment and activities included in this project do not constitute a reconstruction as defined in 40 CFR 60.15.

Lastly, this project does not result in a modification, as defined in 40 CFR 60.14, to either of the SRUs. 40 CFR 60.14 defines a modification as "any physical or operational change to an existing facility which results in an increase in the emission rate." This project does not result in an increase in the emission rate from either of the two SRUs; therefore it is not a modification. According to 40 CFR 60.14(c), "the addition of an affected facility to a stationary source as an expansion to that source shall not bring within the applicability of this part any other facility

within that source." Therefore, the relocation or change in ownership of an existing facility, in this case the second SRU, does not constitute a modification per the regulation.

Due to the reasons listed above, the facilities listed in this project are not subject to the requirements of this Subpart. However, Kern has elected to voluntarily comply with the standards outlined in 40 CFR 60 Subpart Ja.

§60.101a Definitions.

In regards to the discussion for compliance it is necessary to address the definition of a Fuel Gas Combustion Device specifically as it pertains to a Sulfur Recovery Plant. The definition states:
"*Fuel gas combustion device* means any equipment, such as process heaters and boilers, used to combust fuel gas. For the purposes of this subpart, *fuel gas combustion device* does not include flares or facilities in which gases are combusted to produce sulfur or sulfuric acid." Emphasis added

Kern's sulfur recovery plant does combust gases to produce sulfur; therefore, compliance with sections applicable to fuel gas combustion devices will not be required.

Additionally, the definition of a Sulfur Recovery Plant incorporates both sulfur recovery units into a single affected facility as they both share the same source of sour gas.

"*Sulfur recovery plant* means all process units which recover sulfur from H_2S and/or SO_2 from a common source of sour gas produced at a petroleum refinery. The *sulfur recovery plant* also includes sulfur pits used to store the recovered sulfur product, but it does not include secondary sulfur storage vessels or loading facilities downstream of the sulfur pits. For example, a Claus sulfur recovery plant includes: Reactor furnace and waste heat boiler, catalytic reactors, sulfur pits and, if present, oxidation or reduction control systems or incinerator, thermal oxidizer or similar combustion device. Multiple sulfur recovery units are a single affected facility only when the units share the same source of sour gas. *Sulfur recovery plants* that receive source gas from completely segregated sour gas treatment systems are separate affected facilities."

§60.102a Emissions limitations.

The portion of this section applicable to the proposed project is §60.102a(f)(2), whereas the rest of the section pertains to Fluid Catalytic Cracking Units (FCCU), Fluid Coking Units (FCU), Flares, Fuel Gas Combustion Devices and Sulfur Recovery Plants with a design production capacity greater than 20 long tons per day.

§60.102a(f)(2)(i), for a sulfur recovery plant with an oxidation control system or a reduction control system followed by incineration, requires SOx emissions from SRUs with a capacity of 20 LTD or less to meet 2,500 ppmv @ 0% O2. The most recent source test found a SOx emission concentration of 43.38 ppmv. Compliance is expected.

§60.103a Design, equipment, work practice or operational standards.

The portion of this section applicable to the proposed project is §60.103a(c)(3), whereas the remainder of §60.103a pertains to Delayed Coking Units, Flares or Fuel Gas Combustion Devices.

§60.103a(c) requires the owner or operator that operates a fuel gas combustion device, flare or sulfur recovery plant subject to this subpart to conduct a root cause analysis and a corrective action analysis for each of the conditions specified in paragraphs (c)(1) through (3) of this section. Sections (c)(1) and (c)(2) apply to flares and fuel gas combustion devices.

For a sulfur recovery plant (c)(3) the specified conditions are defined as, each time the SO_2 emissions are more than 227 kg (500 lb) greater than the amount that would have been emitted if the SO_2 or reduced sulfur concentration was equal to the applicable emissions limit in §60.102a(f)(2) (i.e. 2,500 ppmv SOx) during one or more consecutive periods of excess emissions or any 24-hour period, whichever is shorter.

Kern will install a continuous emissions monitoring system (CEMS) capable of monitoring the SO2 and O2 concentrations from the Sulfur Recovery Plant exhaust. The existing incinerator already has a flow meter that measures the flow volume to the incinerator and the 2nd SRU incinerator will have one as well, therefore compliance with this portion is expected.

§60.103a(d) requires that a root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a discharge meeting the conditions specified in paragraphs (c)(3) of this section. Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided in paragraphs (d)(1) through (5) of this section.

§60.103a(e) requires each owner or operator of a sulfur recovery plant subject to this subpart shall implement the corrective action(s) identified in the corrective action analysis conducted within 45 days of the discharge for which the root cause and corrective action analyses were required or as soon thereafter as practicable. If an owner or operator concludes that corrective action should not be conducted, the owner or operator shall record and explain the basis for that conclusion no later than 45 days following the discharge as specified in §60.108a(c)(6)(ix).

For corrective actions that cannot be fully implemented within 45 days following the discharge for which the root cause and corrective action analyses were required, the owner or operator shall develop an implementation schedule to complete the corrective action(s) as soon as practicable.

No later than 45 days following the discharge for which a root cause and corrective action analyses were required, the owner or operator shall record the corrective action(s) completed to date, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates as specified in §60.108a(c)(6)(x).

These requirements are also outlined in Kern's Flare Management Plan, meaning Kern is familiar with these practices and compliance is expected.

§60.104a Performance tests.

The portion of this section applicable to the proposed project is §60.103a(c)(3), the rest of the section pertains to FCCU, FCU, Flares or Fuel Gas Combustion Devices.

§60.104a(a) The owner or operator shall conduct a performance test for the sulfur recovery plant to demonstrate initial compliance with each applicable emissions limit in §60.102a according to the requirements of §60.8. The notification requirements of §60.8(d) apply to the initial performance test and to subsequent performance tests required by paragraph (b) of this section (or as required by the Administrator), but does not apply to performance tests conducted for the purpose of obtaining supplemental data because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments.

§60.104a(c) In conducting the performance tests required by this subpart (or as requested by the Administrator), the owner or operator shall use the test methods in 40 CFR part 60, Appendices A-1 through A-8 or other methods as specified in this section, except as provided in §60.8(b).

§60.104a(h) The owner or operator shall determine compliance with the SO_2 emissions limits for sulfur recovery plants in §60.102a(f)(1)(i) using the methods and procedures in §60.104a(h)(1-6).

Kern is required by permit to perform annual source testing on the existing sulfur recovery unit, compliance with the requirements for performance tests is expected.

§60.105a Monitoring of emissions and operations for fluid catalytic cracking units (FCCU) and fluid coking units (FCU). Not applicable.

§60.106a Monitoring of emissions and operations for sulfur recovery plants.

Only the portions of this section pertaining to the emissions limits required for Kern's sulfur recovery plant are addressed.

§60.106a(a)(1) The owner or operator of a sulfur recovery plant that is subject to the emissions limits in §60.102a(f)(2)(i), the owner or operator shall install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration (dry basis, zero percent excess air) of any SO_2 emissions into the atmosphere. The monitor shall include an oxygen monitor for correcting the data for excess air. The owner or operator shall install, operate, and maintain each SO_2 CEMS according to §60.106a(a)(1)(i – vii).

§60.106a(a)(5) For sulfur recovery plants that use oxygen or oxygen enriched air in the Claus burner and that elects to monitor O_2 concentration of the air/oxygen mixture supplied to the Claus burner, the owner or operator shall install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the O_2 concentration of the air/oxygen mixture supplied to the Claus burner in order to determine the allowable emissions limit. The owner or operator shall install, operate, and maintain each O_2 monitor according to §60.106a(a)(5)(i – v).

Kern will install a continuous emissions monitoring system (CEMS) capable of monitoring both of the SRUs in this project at a single release point, under normal operating conditions, to ensure compliance with the SOx emissions requirement.

§60.107a Monitoring of emissions and operations for fuel gas combustion devices and flares.
Not applicable.

§60.108a Recordkeeping and reporting requirements.

§60.108a(a) Each owner or operator subject to the emissions limitations in §60.102a shall comply with the notification, recordkeeping, and reporting requirements in §60.7 and other requirements as specified in this section.

§60.108a(b) Each owner or operator subject to an emissions limitation in §60.102a shall notify the Administrator of the specific monitoring provisions of §60.106a with which the owner or operator intends to comply. Notifications required by this paragraph shall be submitted with the notification of initial startup required by §60.7(a)(3).

§60.108a(c) The owner or operator shall maintain records of discharges greater than 500 lb SO_2 in excess of the allowable limits. The information described in §60.108a(c)(6)(i – xi) shall be recorded no later than 45 days following the end of a discharge exceeding the thresholds.

§60.108a(d) Each owner or operator subject to this subpart shall submit an excess emissions report for all periods of excess emissions according to the requirements of §60.7(c) except that the report shall contain the information specified in paragraphs (d)(1) through (7) of this section.

Kern will be required to follow all applicable monitoring, recordkeeping, and reporting requirements of this Subpart. Compliance is expected.

40 CFR 60 Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after January 4, 1983, and on or Before November 7, 2006

Unit S-37-122 and S-37-0 currently have conditions ensuring compliance with this subpart. Adding the S-37-122 subpart GGG conditions, not duplicated on S-37-0, to S-37-152-0 will ensure '152's compliance with subpart GGG. Note that S-37-122's GGG conditions duplicated on S-37-0 are not included on ATC '122-7.

40 CFR 60 Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006

Unit S-37-122 and S-37-0 currently have conditions ensuring compliance with this subpart. Adding the S-37-122 subpart VV conditions, not duplicated on S-37-0, to S-37-152-0 will ensure '152's compliance with subpart VV. Note that S-37-122's VV conditions duplicated on S-37-0 are not included on ATC '122-7.

Rule 4101 Visible Emissions

Rule 4101 states that 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 facility-wide permit has conditions that ensure compliance with this rule. Compliance is expected.

Rule 4102 Nuisance

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

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

The cancer risk for this project is shown below:

RMR Summary				
Categories	**CSRU Mod[1] (Unit 122-7)**	**CSRU (Unit 152-0)**	**Project Totals**	**Facility Totals**
Prioritization Score	N/A	0.3	0.3	>1.0
Acute Hazard Index	N/A	0.005	0.005	0.90
Chronic Hazard Index	N/A	0.002	0.002	0.11
Maximum Individual Cancer Risk	N/A	1.49E-07	1.49E-07	1.43E-05
T-BACT Required?	No	No		
Special Permit Requirements?	No	Yes		

Discussion of T-BACT

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

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot.

PM Conc. (gr/scf) = [(0.0137 lb/MMBtu)(7000 gr/lb)]/8578 dscf/MMBtu = 0.01 gr/scf

Since 0.01 grain/dscf is less than 0.1 grain/dscf, compliance with this rule is expected.

Rule 4454 Refinery Process Unit Turnaround

This rule requires process vessels to be vented through a control device or otherwise controlled through incineration when depressurized for maintenance or repair. The following condition is included on the permit to ensure compliance with this rule.

- 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] Y

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

This purpose of this rule is to limit VOC emissions from leaking components at petroleum refineries. Conditions 104 through 137 of the facility-wide permit currently ensures compliance with this rule.

Rule 4801 Sulfur Compounds

The rule limits sulfur compound emission (as SOx) concentrations to no more than 2000 ppmv, measured at the point of discharge.

For the Claus sulfur recovery plant incinerator, the maximum sulfur compound emissions are expected to be approximately 220 ppmv. However, during startup and shutdown, sulfur compound emissions may be greater. A 20,000 ppmv sulfur compound emission limit will be included on the permit. Compliance is expected.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

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

The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission unit(s) do not trigger Best Available Control Technology (BACT) and do not trigger Toxic Best Available Control Technology (T-BACT) requirements.

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

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATCs S-37-122-7 and '152-0 subject to the permit conditions on the attached draft ATCs in **Appendix F**.

X. Billing Information

Annual Permit Fees			
Permit Number	**Fee Schedule**	**Fee Description**	**Annual Fee**
S-37-122-7	3020-02 F	2.5 MMBtu/hr	$666
S-37-152-0	3020-02 E	1.9 MMBtu/hr	$451

Appendixes

A: Quarterly Net Emissions Change
B: Process Flow Diagram
C: Current PTO
D: HRA/AAQA Summary
E: Compliance Certification
F: Draft ATCs

APPENDIX A
Quarterly Net Emissions Change (QNEC)

Quarterly Net Emissions Change (QNEC)

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:

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year

$PE1_{quarterly}$= $PE1_{annual}$ ÷ 4 quarters/year

S-37-122 Quarterly NEC [QNEC]					
	PE2 (lb/yr)	PE2 (lb/qtr)	PE1 (lb/yr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO_X	4,464	1,116	4,464	1,116	0
SO_X	12,718	3,180	12,718	3,180	0
PM_{10}	300	75	300	75	0
CO	4,290	1,073	4,290	1,073	0
VOC	1,069	267	1,069	267	0

S-37-152 Quarterly NEC [QNEC]					
	PE2 (lb/yr)	PE2 (lb/qtr)	PE1 (lb/yr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO_X	4,464	1,116	0	0	1,116
SO_X	12,717	3,179	0	0	3,179
PM_{10}	228	57	0	0	57
CO	4,290	1,073	0	0	1,073
VOC	1,041	260	0	0	260

Application Emissions

Permit #: S-37-122-7	Last Updated
Facility: KERN OIL & REFINING CO.	07/12/2016 TORID

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	4464.0	12718.0	300.0	4290.0	1069.0
Daily Emis. Limit (lb/Day)	12.2	224.0	0.8	11.8	2.9
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

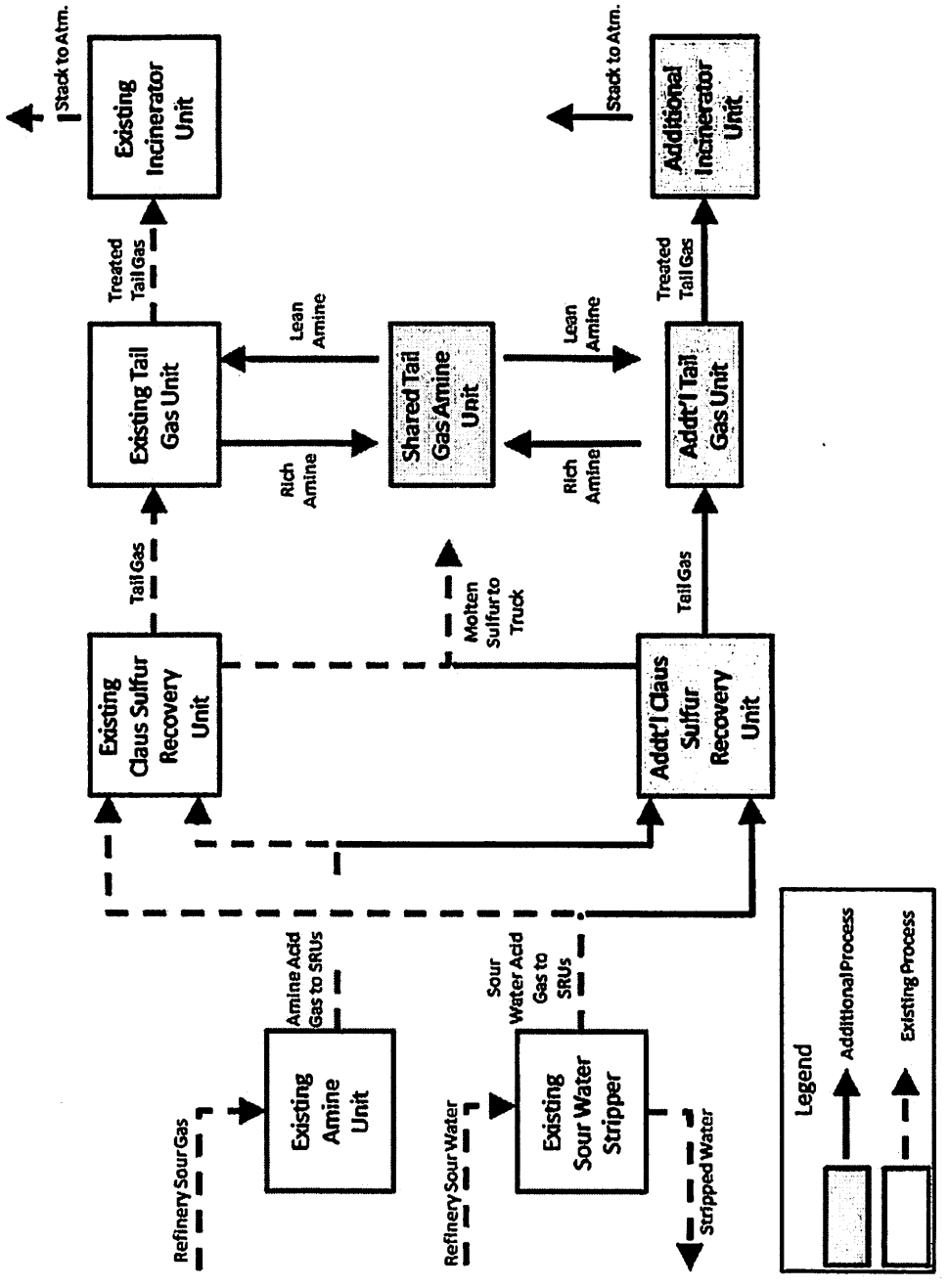
Application Emissions

Permit #: S-37-152-0	Last Updated
Facility: KERN OIL & REFINING CO.	07/12/2016 TORID

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	4464.0	12718.0	228.0	4290.0	1041.0
Daily Emis. Limit (lb/Day)	12.2	224.0	0.6	11.8	2.9
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1116.0	3180.0	57.0	1073.0	260.0
Q2:	1116.0	3180.0	57.0	1073.0	260.0
Q3:	1116.0	3180.0	57.0	1073.0	260.0
Q4:	1116.0	3180.0	57.0	1073.0	260.0
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
Process Flow Diagram


Stack to Atm.
Existing Incinerator Unit
Stack to Atm.
Additional Incinerator Unit
Treated Tail Gas
Treated Tail Gas
Existing Tail Gas Unit
Lean Amine
Rich Amine
Shared Tail Gas Amine Unit
Lean Amine
Rich Amine
Addt'l Tail Gas Unit
Tail Gas
Molten Sulfur to Truck
Tail Gas
Existing Claus Sulfur Recovery Unit
Addt'l Claus Sulfur Recovery Unit
Amine Acid Gas to SRUs
Sour Water Acid Gas to SRUs
Refinery Sour Gas
Existing Amine Unit
Refinery Sour Water
Existing Sour Water Stripper
Stripped Water
Legend
Additional Process
Existing Process

APPENDIX C
Current PTO

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-37-122-5 **EXPIRATION DATE:** 08/31/2016

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

EQUIPMENT DESCRIPTION:
CLAUS PROCESS SULFUR RECOVERY UNIT WITH REACTION FURNACE, THREE CONVERTER VESSELS, HYDROGENATION REACTOR, ENCLOSED SULFUR PIT WITH EDUCTOR VENT TO SULFUR PLANT, TAIL GAS TREATMENT UNIT INCLUDING AMINE SCRUBBING SYSTEM AND 2.5 MMBTU/HR INCINERATOR WITH JOHN ZINK VYD BURNER OR EQUIVALENT, KNOCKOUTS, HEAT EXCHANGERS, AND ASSOCIATED PIPING AND COMPONENTS

PERMIT UNIT REQUIREMENTS

1. VOC emission rate from fugitive components associated with this emissions unit shall not exceed 2.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
2. 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] Federally Enforceable Through Title V Permit
3. As referenced in this permit, a fugitive component leak shall be defined as the lower of the level specified in applicable rules, permit conditions, or the following: pumps in light liquid service - 1,000 ppmv; compressors - 500 ppmv; pressure relief devices in gas/vapor service - 500 ppmv; valves in gas/vapor and light liquid service - 500 ppmv; agitators - 10,000 ppmv; pumps in heavy liquid service - 2,000 ppmv; valves, and connectors in heavy liquid service, instrumentation systems, and pressure relief devices in liquid service - 500 ppmv; connectors in gas/vapor service and in light liquid service - 500 ppmv. Component type and service referenced in this condition shall be as defined in 40 CFR 63 Subpart H. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permit unit shall comply with applicable District Rule 4001 (NSPS, Subpart GGG) requirements. [District Rule 4001] Federally Enforceable Through Title V Permit
5. The owner or operator may apply to the Administrator for a determination of equivalency for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in Subpart GGG. In doing so, the owner or operator shall comply with the requirements of 40 CFR 60.484. [40 CFR 60.592(c)] Federally Enforceable Through Title V Permit
6. Each pump in light liquid service (PLLS) shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b), except as provided in 40 CFR 60.482-1(c) and 40 CFR 60.482-2(d), (e), and (f). Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. A leak is detected if an instrument reading of 10,000 ppm or greater is measured or if there are indications of liquids dripping from the pump seal. [40 CFR 60.482-2(a) and (b)] Federally Enforceable Through Title V Permit
7. When a leak is detected for each PLLS, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [40 CFR 60.482-2(c)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. Any PLLS equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of 40 CFR 60.482-2(a) provided the requirements specified in 40 CFR 60.482-2(d)(1) through (6) are met. [40 CFR 60.482(d)] Federally Enforceable Through Title V Permit

9. Any PLLS that is designated, as described in 40 CFR 60.486(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of 40 CFR 60.482-2(a), (c), and (d) if the pump meets the requirements specified in 40 CFR 60.482-2(e)(1), (2), and (3). [40 CFR 60.482-2(e)] Federally Enforceable Through Title V Permit

10. If any PLLS is equipped with a closed vent system capable of capturing and transporting leakage from the seal or seals to a control device that complies with the requirements of 40 CFR 60.482-10, it is exempt from the requirements of 40 CFR 60.482-2(a) through (e). [40 CFR 60.482-2(f)] Federally Enforceable Through Title V Permit

11. Any pump in PLLS that is designated, as described in 40 CFR 60.486(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of 40 CFR 60.482-2(a) and 40 CFR 60.482-2(d)(4) through (6) if: 1). The owner or operator of the pump demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 60.482-2(a); and 2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in 40 CFR 60.482-2(c) if a leak is detected. [40 CFR 60.482-2(g)] Federally Enforceable Through Title V Permit

12. Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in 40 CFR 60.485(c). [40 CFR 60.482-4(a)] Federally Enforceable Through Title V Permit

13. After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in 40 CFR 60.482-9. No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in 40 CFR 60.485(c). [40 CFR 60.482-4(b)] Federally Enforceable Through Title V Permit

14. Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in 40 CFR 60.482-10 is exempted from the requirements of 40 CFR 60.482-4(a) and (b). [40 CFR 60.482-4(c)] Federally Enforceable Through Title V Permit

15. Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the 40 CFR 60.482-4(a) and (b), provided the owner or operator complies with the requirements in 40 CFR 60.482-4(d)(2) of this section. After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 60.482-9. [40 CFR 60.482-4(d)] Federally Enforceable Through Title V Permit

16. Except for in-situ sampling systems and sampling systems without purges, each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in 40 CFR 60.482-1(c). Each closed-purge, closed-loop, or closed-vent system shall comply with the requirements specified in 40 CFR 60.482-5(b)(1), (2), (3), and (4). [40 CFR 60.482-5(a), (b), and (c)] Federally Enforceable Through Title V Permit

17. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 60.482-1(c). The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with this condition at all other times. [40 CFR 60.482-6(a) and (c)] Federally Enforceable Through Title V Permit

18. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. [40 CFR 60.482-6(b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

19. Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of 40 CFR 60.482-6(a), (b) and (c). [40 CFR 60.482-6(d)] Federally Enforceable Through Title V Permit

20. Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in 40 CFR 60.482-6(a) through (c) are exempt from the requirements of 40 CFR 60.482-6(a) through (c). [40 CFR 60.482-6(e)] Federally Enforceable Through Title V Permit

21. Each valve in gas/vapor service and in light liquid service shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b) and shall comply with 40 CFR 60.482-7(b) through (e), except as provided in 40 CFR 60.482-7(f), (g), and (h), 40 CFR 60.483-1, 40 CFR 60.483-2, and 40 CFR 60.482-1(c). A leak is detected if an instrument reading of 10,000 ppm or greater is measured. [40 CFR 60.482-7(a) and (b)] Federally Enforceable Through Title V Permit

22. Any valve in gas/vapor service or in light liquid service for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months. [40 CFR 60.482-7(c)] Federally Enforceable Through Title V Permit

23. When a leak is detected for any valve in gas/vapor service or in light liquid service, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 60.482-9. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the best practices specified in 40 CFR 60.482-7(e)(1), (2), (3), and (4), where practicable. [40 CFR 60.482-7(d) and (e)] Federally Enforceable Through Title V Permit

24. Any valve in gas/vapor service or in light liquid service that is designated, as described in 40 CFR 60.486(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of 40 CFR 60.482-7(a) if the valve meets the requirements specified in 40 CFR 60.482-7(f)(1), (2), and (3). [40 CFR 60.482-7(f)] Federally Enforceable Through Title V Permit

25. Any valve in gas/vapor service or in light liquid service that is designated, as described in 40 CFR 60.486(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of 40 CFR 60.482-7(a) if: 1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 60.482-7(a); and 2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times. [40 CFR 60.482-7(g)] Federally Enforceable Through Title V Permit

26. Any valve in gas/vapor service or in light liquid service that is designated, as described in 40 CFR 60.486(f)(2), as a difficult-to-monitor valve is exempt from the requirements of 40 CFR 60.482-7(a) if: 1) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface; 2) The process unit within which the valve is located either becomes an affected facility through 40 CFR 60.14 or 40 CFR 60.15 or the owner or operator designates less than 3.0 percent of the total number of valves as difficult-to-monitor; and 3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year. [40 CFR 60.482-7(h)] Federally Enforceable Through Title V Permit

27. The owner or operator may elect to comply with the applicable provisions for valves in gas/vapor service and in light liquid service as specified in 40 CFR 60.483-1 and 60.483-2. [40 CFR 60.592(b)] Federally Enforceable Through Title V Permit

28. If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, the owner or operator shall follow either one of the following procedures: 1) The owner or operator shall monitor the equipment within 5 days by the method specified in 40 CFR 60.485(b) and shall comply with the requirements of 40 CFR 60.482-8(b) through (d); or 2) The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak. A leak is detected if an instrument reading of 10,000 ppm or greater is measured. [40 CFR 60.482-8(a) and (b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

29. When a leak is detected in pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the best practices described under 40 CFR 60.482-7(e). [40 CFR 60.482-8(c) and (d)] Federally Enforceable Through Title V Permit

30. Delay of leak repair will be allowed if the repair is technologically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Delay of repair is allowed for equipment which is isolated from the process and which does not remain in VOC service. Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown. [40 CFR 60.482-9(a)(b)(e)] Federally Enforceable Through Title V Permit

31. Delay of leak repair for valves will be allowed if the owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair and when repair procedures are effected and when repair procedures ar effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482-10. Delay of leak repair for pumps will be allowed if the repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and repair is completed as soon as practicable, but no later than 6 months after the leak was detected. [40 cfr 60.482-9(c)(d)] Federally Enforceable Through Title V Permit

32. For closed vent systems and control devices, vapor recovery systems shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent. [40 CFR 60.482-10(b)] Federally Enforceable Through Title V Permit

33. For closed vent systems and control devices, enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 degrees C. [40 CFR 60.482-10(c)] Federally Enforceable Through Title V Permit

34. Except as provided in 40 CFR 60.482-10(i) through (k), each closed vent system used to comply with the provisions of Subpart GGG shall be inspected according to the procedures and schedule specified in 40 CFR 60.482-10(f)(1) and (f)(2). Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practicable except as provided in 40 CFR 60.482-10(h). A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. Repair shall be completed no later than 15 calendar days after the leak is detected. [40 CFR 60.482-10(f) and (g)] Federally Enforceable Through Title V Permit

35. Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown. [40 CFR 60.482-10(h)] Federally Enforceable Through Title V Permit

36. If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of 40 CFR 60.482-10(f)(1)(i) and (f)(2). [40 CFR 60.482-10(i)] Federally Enforceable Through Title V Permit

37. Any parts of the closed vent system that are designated, as described in 40 CFR 60.482-10(l)(1), as unsafe to inspect are exempt from the inspection requirements of 40 CFR 60.482-10(f)(1)(i) and (f)(2) if they comply with the requirements specified in 40 CFR 60.482-10 (j)(1) and (j)(2). [40 CFR 60.482-10(j)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

38. Any parts of the closed vent system that are designated, as described in 40 CFR 60.482-10(l)(2), as difficult to inspect are exempt from the inspection requirements of 40 CFR 60.482-10(f)(1)(i) and (f)(2) if they comply with the requirements specified in 40 CFR 60.482-10(k)(1) through (k)(3). [40 CFR 60.482-10(k)] Federally Enforceable Through Title V Permit

39. The owner or operator shall record the following information: 1) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment; 2) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment; 3) For each inspection during which a leak is detected, a record of the information specified in 40 CFR 60.486(c); 4) For each inspection conducted in accordance with 40 CFR 60.485(b) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected; and 5) For each visual inspection conducted in accordance with 40 CFR 60.482-10(f)(1)(ii) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [40 CFR 60.482-10(l)] Federally Enforceable Through Title V Permit

40. Closed vent systems and control devices used to comply with provisions Subpart GGG shall be operated at all times when emissions may be vented to them. [40 CFR 60.482-10(m)] Federally Enforceable Through Title V Permit

41. In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in 40 CFR 60, Appendix A or other methods and procedures as specified in 40 CFR 60.485, except as provided in 40 CFR 60.8(b). [40 CFR 60.485(a)] Federally Enforceable Through Title V Permit

42. The owner or operator shall determine compliance with the standards in 40 CFR 60.482, 60.483, and 60.484 as follows: Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21. The following calibration gases shall be used: (i) Zero air (less than 10 ppm of hydrocarbon in air); and (ii) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [40 CFR 60.485(b)] Federally Enforceable Through Title V Permit

43. The owner or operator shall determine compliance with the no detectable emission standards in 40 CFR 60.482-2(e), 60.482-3(i), 60.482-4, 60.482-7(f), and 60.482-10(e) as follows: 1) The requirements of 40 CFR 60.485(b) shall apply. 2) Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance. [40 CFR 60.485(c)] Federally Enforceable Through Title V Permit

44. The owner or operator shall test each piece of equipment unless demonstrated that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used: 1) Procedures that conform to the general methods in ASTM E260-73, 91, or 96, E168-67, 77, or 92, E169-63, 77, or 93 (incorporated by reference as seen in 40 CFR 60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment; 2) Organic compounds that are considered by the Administrator to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid; and 3) Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Administrator disagrees with the judgment, the previous two procedures as specified in 40 CFR 60.485(d)(1) and (2) shall be used to resolve the disagreement. [40 CFR 60.485(d)] Federally Enforceable Through Title V Permit

45. The owner or operator shall demonstrate that an equipment is in light liquid service by showing that all the following conditions apply: 1) The vapor pressure of one or more of the components is greater than 0.3 kPa at 20 øC (1.2 in. H2O at 68 degrees F). Standard reference texts or ASTM D2879-83, 96, or 97 (incorporated by reference as seen in 40 CFR 60.17) shall be used to determine the vapor pressures; 2) The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20 degrees Celsius is equal to or greater than 20 percent by weight; and 3) The fluid is a liquid at operating conditions. [40 CFR 60.485(e)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

46. Samples used in conjunction with 40 CFR 60.485(d), (e), and (g) shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare. [40 CFR 60.485(f)] Federally Enforceable Through Title V Permit

47. An owner or operator of more than one affected facility subject to the provisions Subpart GGG may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility. [40 CFR 60.486(a)] Federally Enforceable Through Title V Permit

48. When each leak is detected as specified in 40 CFR 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following requirements apply: 1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment; 2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR 60.482-7(c) and no leak has been detected during those 2 months; and 3) The identification on equipment except on a valve, may be removed after it has been repaired. [40 CFR 60.486(b)] Federally Enforceable Through Title V Permit

49. When each leak is detected as specified in 40 CFR 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following information shall be recorded in a log and shall be kept for 5 years in a readily accessible location: 1) The instrument and operator identification numbers and the equipment identification number; 2) The date the leak was detected and the dates of each attempt to repair the leak; 3) Repair methods applied in each attempt to repair the leak; 4) "Above 10,000" if the maximum instrument reading measured by the methods specified in 40 CFR 60.485(a) after each repair attempt is equal to or greater than 10,000 ppm; 5) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak; 6) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown; 7) The expected date of successful repair of the leak if a leak is not repaired within 15 days; 8) Dates of process unit shutdown that occur while the equipment is unrepaired; and 9) The date of successful repair of the leak. [40 CFR 60.486(c) and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

50. The following information pertaining to the design requirements for closed vent systems and control devices described in 40 CFR 60.482-10 shall be recorded and kept in a readily accessible location: 1) Detailed schematics, design specifications, and piping and instrumentation diagrams; 2) The dates and descriptions of any changes in the design specifications; 3) A description of the parameter or parameters monitored, as required in 40 CFR 60.482-10(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring; 4) Periods when the closed vent systems and control devices required in 40 CFR 60.482-2, 60.482-3, 60.482-4, and 60.482-5 are not operated as designed, including periods when a flare pilot light does not have a flame; and 5) Dates of startups and shutdowns of the closed vent systems and control devices required in 40 CFR 60.482-2, 60.482-3, 60.482-4, and 60.482-5. [40 CFR 60.486(d)] Federally Enforceable Through Title V Permit

51. The following information pertaining to all equipment subject to the requirements in 40 CFR 60.482-1 to 60.482-10 shall be recorded in a log that is kept in a readily accessible location: 1) A list of identification numbers for equipment subject to the requirements of Subpart GGG; 2) (i) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR 60.482-2(e), 60.482-3(i) and 60.482-7(f). (ii) The designation of equipment as subject to the requirements of 40 CFR 60.482-2(e), 60.482-3(i) and 60.482-7(f) shall be signed by the owner or operator; 3) A list of equipment identification numbers for pressure relief devices required to comply with $^{\perp}$ 60.482-4; 4) (i) The dates of each compliance test as required in 40 CFR 60.482-2(e), 60.482-3(i), $^{\perp}$ 60.482-4, and 60.482-7(f). (ii) The background level measured during each compliance test. (iii) The maximum instrument reading measured at the equipment during each compliance test; and 5) A list of identification numbers for equipment in vacuum service. [40 CFR 60.486(e)] Federally Enforceable Through Title V Permit

52. The following information pertaining to all valves subject to the requirements of 40 CFR 60.482-7(g) and (h) and to all pumps subject to the requirements of 40 CFR 60.482-2(g) shall be recorded in a log that is kept in a readily accessible location: 1) A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump; and 2) A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve. [40 CFR 60.486(f)] Federally Enforceable Through Title V Permit

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53. The following information shall be recorded for valves complying with 40 CFR 60.483-2: 1) A schedule of monitoring; 2) The percent of valves found leaking during each monitoring period. [40 CFR 60.486(g)] Federally Enforceable Through Title V Permit

54. The following information shall be recorded in a log that is kept in a readily accessible location: 1) Design criterion required in 40 CFR 60.482-2(d)(5) and 60.482-3(e)(2) and explanation of the design criterion; and 2) Any changes to this criterion and the reasons for the changes. [40 CFR 60.486(h)] Federally Enforceable Through Title V Permit

55. The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in 40 CFR 60.480(d): 1) An analysis demonstrating the design capacity of the affected facility; 2) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol; and 3) An analysis demonstrating that equipment is not in VOC service. [40 CFR 60.486(i)] Federally Enforceable Through Title V Permit

56. Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location. [40 CFR 60.486(j)] Federally Enforceable Through Title V Permit

57. The provisions of 40 CFR 60.7 (b) and (d) do not apply to affected facilities subject to Subpart GGG. [40 CFR 60.486(k)] Federally Enforceable Through Title V Permit

58. All semiannual reports to the Administrator shall include the following information, summarized from the information in 40 CFR 60.486: 1) Process unit identification; 2) For each month during the semiannual reporting period, i) Number of valves for which leaks were detected as described in 40 CFR 60.482-7(b) or 40 CFR 60.483-2, (ii) Number of valves for which leaks were not repaired as required in 40 CFR 60.482-7(d)(1), (iii) Number of pumps for which leaks were detected as described in 40 CFR 60.482-2(b) and (d)(6)(i), (iv) Number of pumps for which leaks were not repaired as required in 40 CFR 60.482-2(c)(1) and (d)(6)(ii), (v) Number of compressors for which leaks were detected as described in 40 CFR 60.482-3(f), (vi) Number of compressors for which leaks were not repaired as required in 40 CFR 60.482-3(g)(1), and (vii) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible; 3) Dates of process unit shutdowns which occurred within the semiannual reporting period; 4) Revisions to items reported in the semiannual report if changes have occurred since the initial report, as required in 40 CFR 60.487 (a) and (b), or subsequent revisions to the initial report. [40 CFR 60.487(c)] Federally Enforceable Through Title V Permit

59. An owner or operator electing to comply with the provisions of 40 CFR 60.483-1 and 60.483-2 shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions. [40 CFR 60.487(d)] Federally Enforceable Through Title V Permit

60. An owner or operator shall report the results of all performance tests in accordance with 40 CFR 60.8 of the General Provisions. The provisions of 40 CFR 60.8(d) do not apply to affected facilities subject to the provisions of Subpart GGG except that an owner or operator must notify the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests. [40 CFR 60.487(e)] Federally Enforceable Through Title V Permit

61. The semiannual reporting requirements of 40 CFR 60.487(a), (b), and (c) remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with the requirements of 40 CFR 60.487(a), (b), and (c), provided that they comply with the requirements established by the State. [40 CFR 60.487(f)] Federally Enforceable Through Title V Permit

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62. Compressors are exempt from the standards of Subpart GGG if the owner or operator demonstrates that a compressor is in hydrogen service. Each compressor is presumed not to be in hydrogen service unless an owner or operator demonstrates that the piece of equipment is in hydrogen service. For a piece of equipment to be considered in hydrogen service, it must be determined that the percent hydrogen content can be reasonably expected always to exceed 50 percent by volume. For purposes of determining the percent hydrogen content in the process fluid that is contained in or contacts a compressor, procedures that conform to the general method described in ASTM E-260, E-168, or E-169 shall be used. An owner or operator may use engineering judgment to demonstrate that the percent content exceeds 50 percent by volume, provided the engineering judgment demonstrates that the content clearly exceeds 50 percent by volume. When an owner or operator and the Administrator do not agree on whether a piece of equipment is in hydrogen service, however, the procedures that conform to the general method described in ASTM E-260, E-168, or E-169 shall be used to resolve the disagreement. If an owner or operator determines that a piece of equipment is in hydrogen service, the determination can be revised only after following the procedures that conform to the general method described in ASTM E-260, E-168, or E-169. [40 CFR 60.593(b)] Federally Enforceable Through Title V Permit

63. An owner or operator may use the following provision in addition to 40 CFR 60.485(e): Equipment is in light liquid service if the percent evaporated is greater than 10 percent at 150 øC as determined by ASTM Method D86-78, 82, 90, 95, or 96. [40 CFR 60.593(d)] Federally Enforceable Through Title V Permit

64. Equipment that is in vacuum service is excluded from the requirements of 40 CFR 60.482-2 to 40 CFR 60.482-10 if it is identified as required in 40 CFR 60.486(e)(5). [40 CFR 60.482-1(d)] Federally Enforceable Through Title V Permit

65. Permittee shall comply with all applicable testing, recordkeeping, and reporting requirements specified in Rule 4001 - New Source Performance Standards, including but not limited to Subparts A, Dc and J. [District Rule 4001] Federally Enforceable Through Title V Permit

66. Vacuum system exhaust gas shall either be collected, compressed, and added to refinery gas; controlled and combusted in an appropriate firebox or incinerator with at least 90 percent VOC control efficiency; or controlled by an equivalent method approved by the APCO. [District Rule 4453] Federally Enforceable Through Title V Permit

67. 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

68. 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

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69. 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

70. 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

71. 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

72. 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

73. 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

74. 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

75. 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

76. 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

77. 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

78. 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

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79. 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

80. 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

81. 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

82. 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

83. 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

84. 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

85. 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

86. 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

87. 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

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88. 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

89. 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

90. 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

91. 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

92. 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

93. 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

94. 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

95. 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

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96. 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

97. 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

98. 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

99. 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

100. 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

101. 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

102. Sulfur pit shall be enclosed and shall be vented to the sulfur plant for processing. [District Rule 2201] Federally Enforceable Through Title V Permit

103. Sulfur production from Claus sulfur recovery plant shall not exceed 20 long-tons per day. [40 CFR 60.100(a)] Federally Enforceable Through Title V Permit

104. Tail gas incinerator shall be fired only on purchased commercial natural gas, refinery fuel gas, or any combination thereof. [District Rule 2201, 4001] Federally Enforceable Through Title V Permit

105. Operator shall not burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H2S) in excess of 100 ppmv@ 0% O2. [District Rules 2201 ,2520, 9.4.2 and 4301, 5.2.1, & 40 CFR Part 60, Subpart J, 60.104(a)(1)] Federally Enforceable Through Title V Permit

106. The combustion in the fuel gas combustion devices of gases released as a result of start-up, shutdown, upset, malfunction, or the result of relief valve leakage is exempt from the 100 ppmv@ 0% O2 requirement. [District Rules 2201, 4001, Subpart J, 60.104(a)(1)] Federally Enforceable Through Title V Permit

107. All refinery fuel gas combusted in the heaters shall be monitored for H2S content by a continuous emissions monitoring (CEM) system. CEM shall be installed, calibrated, operated, and reported according to EPA guidelines as specified under 40 CFR 60, Subpart J, Specification 7, and general requirements. CEM results shall be calculated on a rolling three (3) hour basis. [District Rules 2201, 4001, Subpart J, 60.105(a)(4) and 60.105(a)(4)iii] Federally Enforceable Through Title V Permit

108. Operator shall report all rolling 3-hour periods during which the average concentration of H2S as measured by the H2S continuous monitoring system exceeds 100 ppmv@ 0% O2. [District Rules 2201, 4001, Subpart J, 60.105(e)(3)(ii)] Federally Enforceable Through Title V Permit

109. Except on days of startup or shutdown of the sulfur recovery unit, sulfur oxide emissions from incinerator exhaust shall not exceed 33.8 lb SOx (as SO2) per day. Permittee shall calculate emissions of SOx for each day based on measurements of exhaust gas flow rate and daily monitoring of SOx emission concentration. Exhaust gas flow rate shall be measured directly or calculated using a District-approved method. [District Rule 2201] Federally Enforceable Through Title V Permit

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110. On days of startup or shutdown of the sulfur recovery unit, sulfur oxide emissions from incinerator exhaust shall not exceed 224.0 lb SOx (as SO2) per day. Permittee shall calculate emissions of SOx for each day based on exhaust gas flow rate and daily monitoring of SOx emission concentration. Exhaust gas flow rate shall be measured directly or calculated using a District-approved method. [District Rule 2201] Federally Enforceable Through Title V Permit

111. Incinerator stack flow rate calculation method shall be verified for accuracy by annual source testing for stack gas flow rate using EPA Method 2 and 4. Should the annual source test not verify the calculated stack flow, the stack flow shall be modified by applying an equivalence factor equal to the ratio of the source test measured stack flow rate to the calculated stack flow rate corresponding to operating conditions at the date and time the source test was conducted, or other equivalence factor method approved by the District. [District Rule 2201] Federally Enforceable Through Title V Permit

112. SOx emissions shall be monitored using a District-approved portable analyzer system capable of measuring total SOx concentration as SO2 (ppmv) and which includes a water removal system that does not result in the entrainment of SOx or sulfur compounds in the collected condensate. Portable analyzer shall be operated and maintained in accordance with manufacturer's recommendations. [District Rule 2201] Federally Enforceable Through Title V Permit

113. Sulfur oxide emissions from incinerator exhaust shall not exceed 12,718 lb SOx (as SO2) per year. Annual emissions shall be calculated as the sum of the daily emissions calculated for each day as required in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

114. 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

115. Emission rates from incinerator exhaust, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 95 ppmv @ 3% O2, VOC: 0.0055 lb/MMBtu, or CO: 150 ppmv @ 3% O2. [District Rules 2201, 2520, 4301] Federally Enforceable Through Title V Permit

116. PM10 emission rates from incinerator shall not exceed 0.0137 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301] Federally Enforceable Through Title V Permit

117. The duration of each startup and shutdown period for the sulfur recovery unit shall not exceed 37.0 hours and 23.4 hours respectfully. [District Rule 2201] Federally Enforceable Through Title V Permit

118. Incinerator 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

119. Source testing to demonstrate compliance with NOx, CO, and SOx emission limits shall be conducted within 60 days of startup and not less than once every 12 months thereafter. [District Rule 2201] Federally Enforceable Through Title V Permit

120. Compliance with lb/day SOx emission limit shall be demonstrated by source testing of hourly SOx emissions in accordance with approved methods, and multiplying the results by 24 hours per day. [District Rule 2201] Federally Enforceable Through Title V Permit

121. 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

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

123. 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

124. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

125. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, SOx (lb/hr) - EPA MEthod 6B or 8, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

126. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

127. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results used to determine compliance with the conditions of this permit shall be maintained. The 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

128. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

129. Particulate matter emissions shall not exceed 0.1 grain/dscf at dry standard conditions. [District Rule 4201] Federally Enforceable Through Title V Permit

130. 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

131. 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

APPENDIX D
HRA/AAQA Summary

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	David Torii – Permit Services
From:	Marissa Williams – Technical Services
Date:	July 27, 2016
Facility Name:	Kern Oil & Refining Company
Location:	7724 E. Panama Lane, Bakersfield, CA
Application #(s):	S-37-122-7 and 152-0
Project #:	S-1161776

A. RMR SUMMARY

RMR Summary				
Categories	**CSRU Mod[1] (Unit 122-7)**	**CSRU (Unit 152-0)**	**Project Totals**	**Facility Totals**
Prioritization Score	N/A	0.3	0.3	>1.0
Acute Hazard Index	N/A	0.005	0.005	0.90
Chronic Hazard Index	N/A	0.002	0.002	0.11
Maximum Individual Cancer Risk	N/A	1.49E-07	1.49E-07	1.43E-05
T-BACT Required?	No	No		
Special Permit Requirements?	No	Yes		

[1] There is no hourly or annual emission increase from this unit; therefore, no RMR analysis is required.

Proposed Permit Requirements

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

Unit # 152-0

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction.
2. The new Claus sulfur recovery unit S-37-155 and existing sulfur recovery unit S-37-122 shall not operate simultaneously except during startup or shutdown.

RMR REPORT

I. Project Description

Technical Services received a request on July 11, 2016 to perform an Ambient Air Quality Analysis (AAQA) and a Risk Management Review (RMR) for the proposed installation of a new Claus sulfur recovery unit (CSRU) (Unit 152-0) and the modification of an existing CSRU (Unit 122-7).

This project will develop a specific limiting condition (SLC) for the combined sulfur processing rate from the two CSRUs. The two CSRUs will share a new amine regeneration unit to be listed on S-37-152, as well as the existing enclosed sulfur pit listed on S-37-122. The new Claus sulfur recovery unit 152-0 will include a reaction furnace, three converter vessels, a hydrogenation reactor, an enclosed sulfur pit, a tail gas treatment unit, and a 1.9 MMbtu/hr incinerator. For unit 122-7, there is no hourly or annual emission increase; therefore, no RMR analysis is required for this unit.

II. Analysis

Toxic emissions for the incinerator fueled by refinery gas were calculated using emission factors from December 2009 Emission Estimation Protocol for Petroleum Refineries by the American Petroleum Institute and Western States Petroleum Association. Toxic emissions from oilfield fugitives were calculated using emission factors derived from 1991 source tests of central valley sites along with VOC emission rates supplied by the processing engineer. Emissions were input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, May 28, 2015), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines. The prioritization score for the facility is greater than 1.0 (see RMR Summary Table). Therefore, a refined health risk assessment was required. The AERMOD model was used with the parameters outlined below and meteorological data for 2007-2011 from Arvin to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the SHARP Program, which then used the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Unit 152-0 (Incinerator)			
Source Type	Point	**Location Type**	Rural
Stack Height (m)	38.1	**Closest Receptor (m)**	360
Stack Diameter. (m)	0.37	**Type of Receptor**	Residential
Stack Exit Velocity (m/s)	3.15	**Max Hours per Year**	8760
Stack Exit Temp. (°K)	949.7	**Fuel Type**	Refinery Gas
Process Rate (MMscf/hr)	0.0019	**Process Rate (MMscf/hr)**	16.64

Analysis Parameters Unit 152-0 (Fugitives)			
Source Type	Area	**Release Height (m)**	5.0
X-Length (m)	8.0	**Y-Length (m)**	15.0
VOC Emission Rate (lb/hr)	0.121	**VOC Emission Rate (lb/yr)**	1,041.0

Technical Services performed modeling for criteria pollutants CO, NO_x, SO_x, and PM10 with the emission rates below:

Unit #	NO_x (Lbs.)		SO_x (Lbs.)		CO (Lbs.)		PM_{10} (Lbs.)	
	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.
152-0	0.51	4,464	9.3	12,718	0.5	4,290	0.025	228

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO_x	Pass[1]	X	X	X	Pass
SO_x	Pass	Pass	X	Pass	Pass
PM_{10}	X	X	X	Pass[2]	Pass[2]
$PM_{2.5}$	X	X	X	Pass[2]	Pass[2]

*Results were taken from the attached PSD spreadsheet.
[1]The project was compared to the 1-hour NO2 National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.
[2]The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. *Conclusions*

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

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

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

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

APPENDIX E
Compliance Certification

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

April 27, 2016

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

Subject: **Federal Major Modification Statewide Compliance Certification**
S-37 ATC Application – Additional SRU

Dear Mr. Scandura:

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

Bruce W. Cogswell

Bruce W. Cogswell
Senior Vice President/Chief Operating Officer

APPENDIX F
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-37-122-7 **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 CLAUS PROCESS SULFUR RECOVERY UNIT WITH REACTION FURNACE, THREE CONVERTER VESSELS, HYDROGENATION REACTOR, ENCLOSED SULFUR PIT WITH EDUCTOR VENT TO SULFUR PLANT, TAIL GAS TREATMENT UNIT INCLUDING AMINE SCRUBBING SYSTEM AND 2.5 MMBTU/HR INCINERATOR WITH JOHN ZINK VYD BURNER, KNOCKOUTS, HEAT EXCHANGERS, AND ASSOCIATED PIPING AND COMPONENTS: SHARE NEW AMINE REGENERATION UNIT LISTED ON S-37-152; SHARE EXISTING ENCLOSED SULFUR PIT LISTED ON THIS PERMIT WITH S-37-152; ESTABLISH SPECIFIC LIMITING CONDITIONS (SLC) FOR S-37-122 AND -152

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. VOC emission rate from fugitive components associated with this emissions unit shall not exceed 2.6 lb/day. [District Rule 22001] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services
8-37-122-7 : Aug 18 2018 12:57PM – TORID : Joint Inspection NOT Required

4. 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 4455 as applicable. [District Rule 2201] Federally Enforceable Through Title V Permit

5. As referenced in this permit, a fugitive component leak shall be defined as the lower of the level specified in applicable rules, permit conditions, or the following: pumps in light liquid service - 1,000 ppmv; compressors - 500 ppmv; pressure relief devices in gas/vapor service - 500 ppmv; valves in gas/vapor and light liquid service - 500 ppmv; agitators - 10,000 ppmv; pumps in heavy liquid service - 2,000 ppmv; valves, and connectors in heavy liquid service, instrumentation systems, and pressure relief devices in liquid service - 500 ppmv; connectors in gas/vapor service and in light liquid service - 500 ppmv. Component type and service referenced in this condition shall be as defined in 40 CFR 63 Subpart H. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Permit unit shall comply with applicable District Rule 4001 (NSPS, Subpart GGG) requirements, as listed in facility-wide permit S-37-0. [District Rule 4001] Federally Enforceable Through Title V Permit

7. 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

8. The equipment listed in this permit is subject to the applicable requirements of Rule 4455, as listed in facility-wide permit S-37-0. [District Rules 4454 and 4455] Federally Enforceable Through Title V Permit

9. Permittee shall comply with all applicable testing, recordkeeping, and reporting requirements specified in Rule 4001 - New Source Performance Standards, including but not limited to Subparts A and Ja. [District Rule 4001] Federally Enforceable Through Title V Permit

10. Vacuum system exhaust gas shall either be collected, compressed, and added to refinery gas; controlled and combusted in an appropriate firebox or incinerator with at least 90 percent VOC control efficiency; or controlled by an equivalent method approved by the APCO. [District Rule 4453] Federally Enforceable Through Title V Permit

11. Sulfur pit shall be enclosed and shall be vented to the sulfur plant for processing. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Combined sulfur production from Claus sulfur recovery units listed in S-37-122 and S-37-152 shall not exceed 20 long-tons per day. [CFR 60.100(a)] Federally Enforceable Through Title V Permit

13. Tail gas incinerator shall be fired only on purchased commercial natural gas, refinery fuel gas, or any combination thereof. [District Rules 2201, 4001] Federally Enforceable Through Title V Permit

14. Operator shall not discharge or cause the discharge of any gases into the atmosphere in excess of 2,500 ppm by volume (dry basis) of SO2 at zero percent excess air. [40 CFR Part 60, Subpart Ja, 60.102a(f)(2)(i)] Federally Enforceable Through Title V Permit

15. For the incinerator emissions from the sulfur recovery plant as defined in 40 CFR §60.101a, a continuous emissions monitoring system shall be installed, calibrated, operated, and reported according to EPA guidelines as specified under 40 CFR, Subpart Ja. [40 CFR Part 60, Subpart Ja] Federally Enforceable Through Title V Permit

16. Operator shall submit an excess emissions report for all periods of excess emissions according to the requirements of §60.7(c) except that the report shall contain the information specified in paragraphs (d)(1) through (7) of 60.108a(d). [40 CFR Part 60, Subpart Ja] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

17. Operator shall submit a monitoring systems performance report semi-annually according to the requirements of §60.7(c). All reports shall be postmarked by the 30th day following the end of each six-month period. [40 CFR Part 60, §60.7(c)] Federally Enforceable Through Title V Permit

18. Except on days of startup or shutdown of the sulfur recovery unit, sulfur oxide emissions from incinerator exhaust shall not exceed 33.8 lb SOx (as SO2) per day. [District Rule 2201] Federally Enforceable Through Title V Permit

19. On days of startup or shutdown of the sulfur recovery unit, sulfur oxide emissions from incinerator exhaust shall not exceed 224.0 lb SOx (as SO2) per day. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Combined annual emissions from incinerators listed in S-37-122 and S-37-152 shall not exceed 4,470 lb-NOx, 13,166 lb SOx (as SO2), 300 lb-PM10, 4,296 lb-CO nor 120 lb-VOC [District Rule 2201] Federally Enforceable Through Title V Permit

21. Annual fugitive VOC emissions shall not exceed 1,896 lb. [District Rule 2201] Federally Enforceable Through Title V Permit

22. During periods of normal operation, combined sulfur oxide emissions from incinerators listed in S-37-122 and S-37-152 shall not exceed 33.8 lb SOx (as SO2) per day. [District Rule 2201] Federally Enforceable Through Title V Permit

23. During periods of startup/shutdown, combined sulfur oxide emissions from incinerators listed in S-37-122 and S-37-152 shall not exceed 448 lb SOx (as SO2) per day. [District Rule 2201] Federally Enforceable Through Title V Permit

24. 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 Rules 2520, 9.3.2, 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit

25. Emission rates from incinerator exhaust shall not exceed any of the following: NOx (as NO2): 95 ppmv @ 3% O2, PM10: 0.0137 lb/MMBtu, VOC: 0.0055 lb/MMBtu, or CO: 150 ppmv @ 3% O2. [District Rule 2201, 2520, 4301] Federally Enforceable Through Title V Permit

26. Incinerator 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 demonstrate compliance with NOx, CO, and SOx emission limits shall be conducted once every 12 months. An SRU in standby mode shall not be required to be placed in normal operation for the purposes of sources testing. If an SRU source test is delayed due to a unit's operational status, the unit shall be source tested within 60 days of being placed in normal operating status. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Compliance with lb/day SOx emission limit shall be demonstrated by source testing of hourly SOx emissions in accordance with approved methods, and multiplying the results by 24 hours per day. [District Rule 2201] Federally Enforceable Through Title V Permit

29. 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

30. Compliance source testing shall be conducted under conditions representative of normal operation. [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. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, SOx (lb/hr) - EPA MEthod 6B or 8, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rule 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

34. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(Amended December 16, 1993). [District Rules 108.1 and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

35. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

36. Particulate matter emissions shall not exceed 0.1 grain/dscf at dry standard conditions. [District Rule 4201] Federally Enforceable Through Title V Permit

37. Operator shall maintain all records of the reason for alternative monitoring and 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-37-152-0 **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

EQUIPMENT DESCRIPTION:
CLAUS PROCESS SULFUR RECOVERY UNIT WITH REACTION FURNACE, THREE CONVERTER VESSELS, HYDROGENATION REACTOR, TAIL GAS TREATMENT UNIT, TAIL GAS AMINE SCRUBBING SYSTEM AND 1.9 MMBTU/HR INCINERATOR WITH ZEECO GB-8S BURNER OR EQUIVALENT, KNOCKOUTS, HEAT EXCHANGERS, CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) AND ASSOCIATED PIPING AND COMPONENTS, AND THE FOLLOWING EQUIPMENT SHARED WITH S-37-122: ENCLOSED SULFUR PIT WITH EDUCTOR VENT TO SULFUR PLANT AND AMINE REGENERATION UNIT

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. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services
S-37-152-0: Aug 10 2016 12:57PM – TORID : Joint Inspection NOT Required

5. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

6. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

7. VOC emission rate from fugitive components associated with this emissions unit shall not exceed 2.6 lb/day. [District Rule 22001] Federally Enforceable Through Title V Permit

8. 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 4455 as applicable. [District Rule 2201] Federally Enforceable Through Title V Permit

9. As referenced in this permit, a fugitive component leak shall be defined as the lower of the level specified in applicable rules, permit conditions, or the following: pumps in light liquid service - 1,000 ppmv; compressors - 500 ppmv; pressure relief devices in gas/vapor service - 500 ppmv; valves in gas/vapor and light liquid service - 500 ppmv; agitators - 10,000 ppmv; pumps in heavy liquid service - 2,000 ppmv; valves, and connectors in heavy liquid service, instrumentation systems, and pressure relief devices in liquid service - 500 ppmv; connectors in gas/vapor service and in light liquid service - 500 ppmv. Component type and service referenced in this condition shall be as defined in 40 CFR 63 Subpart H. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Permit unit shall comply with applicable District Rule 4001 (NSPS, Subpart GGG) requirements, as listed in facility-wide permit S-37-0. [District Rule 4001] Federally Enforceable Through Title V Permit

11. 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

12. The equipment listed in this permit is subject to the applicable requirements of Rule 4455, as listed in facility-wide permit S-37-0. [District Rules 4454 and 4455] Federally Enforceable Through Title V Permit

13. Permittee shall comply with all applicable testing, recordkeeping, and reporting requirements specified in Rule 4001 - New Source Performance Standards, including but not limited to Subparts A and Ja. [District Rule 4001] Federally Enforceable Through Title V Permit

14. Vacuum system exhaust gas shall either be collected, compressed, and added to refinery gas; controlled and combusted in an appropriate firebox or incinerator with at least 90 percent VOC control efficiency; or controlled by an equivalent method approved by the APCO. [District Rule 4453] Federally Enforceable Through Title V Permit

15. Sulfur pit shall be enclosed and shall be vented to the sulfur plant for processing. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Combined sulfur production from Claus sulfur recovery units listed in S-37-122 and S-37-152 shall not exceed 20 long-tons per day. [CFR 60.100(a)] Federally Enforceable Through Title V Permit

17. Tail gas incinerator shall be fired only on purchased commercial natural gas, refinery fuel gas, or any combination thereof. [District Rules 2201, 4001] Federally Enforceable Through Title V Permit

18. Operator shall not discharge or cause the discharge of any gases into the atmosphere in excess of 2,500 ppm by volume (dry basis) of SO2 at zero percent excess air. [40 CFR Part 60, Subpart Ja, 60.102a(f)(2)(i)] Federally Enforceable Through Title V Permit

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19. For the incinerator emissions from the sulfur recovery plant as defined in 40 CFR §60.101a, a continuous emissions monitoring system shall be installed, calibrated, operated, and reported according to EPA guidelines as specified under 40 CFR, Subpart Ja. [40 CFR Part 60, Subpart Ja] Federally Enforceable Through Title V Permit

20. Operator shall submit an excess emissions report for all periods of excess emissions according to the requirements of §60.7(c) except that the report shall contain the information specified in paragraphs (d)(1) through (7) of 60.108a(d). [40 CFR Part 60, Subpart Ja] Federally Enforceable Through Title V Permit

21. Operator shall submit a monitoring systems performance report semi-annually according to the requirements of §60.7(c). All reports shall be postmarked by the 30th day following the end of each six-month period. [40 CFR Part 60, §60.7(c)] Federally Enforceable Through Title V Permit

22. Except on days of startup or shutdown of the sulfur recovery unit, sulfur oxide emissions from incinerator exhaust shall not exceed 33.8 lb SOx (as SO2) per day. [District Rule 2201] Federally Enforceable Through Title V Permit

23. On days of startup or shutdown of the sulfur recovery unit, sulfur oxide emissions from incinerator exhaust shall not exceed 224.0 lb SOx (as SO2) per day. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Combined annual emissions from incinerators listed in S-37-122 and S-37-152 shall not exceed 4,470 lb-NOx, 13,166 lb SOx (as SO2), 300 lb-PM10, 4,296 lb-CO nor 120 lb-VOC [District Rule 2201] Federally Enforceable Through Title V Permit

25. Annual fugitive VOC emissions shall not exceed 1,896 lb. [District Rule 2201] Federally Enforceable Through Title V Permit

26. During periods of normal operation, combined sulfur oxide emissions from incinerators listed in S-37-122 and S-37-152 shall not exceed 33.8 lb SOx (as SO2) per day. [District Rule 2201] Federally Enforceable Through Title V Permit

27. During periods of startup/shutdown, combined sulfur oxide emissions from incinerators listed in S-37-122 and S-37-152 shall not exceed 448 lb SOx (as SO2) per day. [District Rule 2201] Federally Enforceable Through Title V Permit

28. 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 Rules 2520, 9.3.2, 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit

29. Emission rates from incinerator exhaust shall not exceed any of the following: NOx (as NO2): 95 ppmv @ 3% O2, PM10: 0.0137 lb/MMBtu, VOC: 0.0055 lb/MMBtu, or CO: 150 ppmv @ 3% O2. [District Rule 2201, 2520, 4301] Federally Enforceable Through Title V Permit

30. Incinerator 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

31. Source testing to demonstrate compliance with NOx, CO, and SOx emission limits shall be conducted within 60 days of startup and once every 12 months. An SRU in standby mode shall not be required to be placed in normal operation for the purposes of sources testing. If an SRU source test is delayed due to a unit's operational status, the unit shall be source tested within 60 days of being placed in normal operating status. [District Rule 2201] Federally Enforceable Through Title V Permit

32. Compliance with lb/day SOx emission limit shall be demonstrated by source testing of hourly SOx emissions in accordance with approved methods, and multiplying the results by 24 hours per day. [District Rule 2201] Federally Enforceable Through Title V Permit

33. 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

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

35. 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

36. 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

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37. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, SOx (lb/hr) - EPA MEthod 6B or 8, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rule 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

38. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(Amended December 16, 1993). [District Rules 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

39. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

40. Particulate matter emissions shall not exceed 0.1 grain/dscf at dry standard conditions. [District Rule 4201] Federally Enforceable Through Title V Permit

41. Operator shall maintain all records of the reason for alternative monitoring and 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