San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

SEP 1 1 2017

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

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-37
Project # 1170673

Dear Ms. Hicks:

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

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

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

Thank you for your cooperation in this matter.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Enclosures

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

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San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Compressor Replacement

Facility Name:	Kern Oil and Refining Co.	Date:	August 30, 2017
Mailing Address:	7224 E Panama Ln Bakersfield, CA 93307	Engineer:	Richard Edgehill
		Lead Engineer:	Steve Davidson
Contact Person:	Melinda Hicks and Nick Diercks (Environtech)		
Telephone:	661-845-0761, 661-377-0073 #13 (direct)		
Application #(s):	S-37-4-20		
Project #:	S-1170673		
Deemed Complete:	March 28, 2017		
Facility Name:	Kern Oil and Refining Co.		
Mailing Address:	7224 E Panama Ln Bakersfield, CA 93307		

I. Proposal

Kern Oil and Refining Co. (Kern) has requested an Authority to Construct (ATC) to replace the 165 hp IC engine listed on S-37-85 serving the Platformer (S-37-4) # 2 Hydrogen Compressor with a new electrically-driven compressor (Hydrogen Booster Compressor) to be included with S-37-4 equipment. PTO S-37-85-5 will be cancelled.

Note that the new compressor will be larger than the compressor being replaced and therefore does not meet the criteria of a replacement unit in 40 CFR 51.165 (a)(1)(xxi)(A) through (D). Because emissions from the compressor are considered as new, the project triggers a Federal Major Modification. BACT and public notice are required.

Disposition of Outstanding ATCs

ATC S-37-4-19 authorized replacement of the 180 hp IC engine listed on S-37-92 serving the Platformer (S-37-4) Hydrogen Booster Compressor with an electrically-driven compressor to be to be included with S-37-4 equipment. ATC S-37-4-19 will be implemented prior to this project and serves as the base document.

ATC S-37-4-19 and PTO S-37-4-17 are included in **Attachment I**.

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

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (2/18/16)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standard (NSPS) (4/14/1999)
40 CFR 60	Subpart J – Standards of Performance for Petroleum Refineries Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries
Rule 4002	National Emission Standards for Hazardous Air Pollutants (NESHAPS) (5/20/2004)
40 CFR 63	Subpart CC - National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries – (Not applicable, not a major HAP source)
Rule 4101	Visible Emissions (2/17/2005)
Rule 4102	Nuisance (12/17/1992)
Rule 4201	Particulate Matter Concentration (12/17/1992)
Rule 4301	Fuel Burning Equipment (12/17/1992)
Rule 4305	Boilers, Steam Generators, and Process Heaters, Phase II (8/21/2003)
Rule 4306	Boilers, Steam Generators, and Process Heaters, Phase III (10/16/2008)
Rule 4320	Advanced Emissions Reductions Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (Adopted 10/16/2008)
Rule 4351	Boilers, Steam Generators, and Process Heaters - RACT (8/21/2003)
Rule 4455	Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants (4/20/05)
Rule 4801	Sulfur Compounds (12/17/1992)
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 gasoline and various petroleum distillates, including ultra-low sulfur diesel fuel.

S-37-4

This Platformer Unit (S-37-4) receives hydro-treated petroleum naphtha as feed. The feed is routed through a series of heaters and catalysts. The feed must be reheated between each catalytic reactor since the overall reaction in each vessel is endothermic. After the last reactor, the hydrogen is allowed to flash off from the product in a separator vessel. The product is identified as platformate and is utilized in other refinery processes in the production of gasoline and other petroleum products.

Proposed Modification

The 165 hp IC engine serving the Platformer #2 Hydrogen Compressor (listed under S-36-85) will be replaced with a new electrically-driven compressor. PTO S-37-85-5 will be cancelled. The proposed compressor and associated fugitive emissions will be included with the S-37-4 equipment.

V. Equipment Listing

Pre-Project Equipment Description:

~~S-37-85-5: 165 BHP INGERSOLL-RAND MODEL 6JVG NATURAL GAS-FIRED IC ENGINE EQUIPPED WITH 3-WAY CATALYST SERVING THE #2 HYDROGEN COMPRESSOR - MIDDLE, AT THE PLATFORMER UNIT (#S-37-4)~~ – TO BE CANCELLED

ATC S-37-4-19: MODIFICATION OF PLATFORMER UNIT INCLUDING SEPARATOR, ADSORBER, 3 REACTORS, 4 FT. DIA. STABILIZER TOWER, ACCUMULATORS, 29.3 MMBTU/HR CHARGE HEATER #1 WITH ZEECO GLSF-12 LOW NOX BURNERS, 17.9 MMBTU/HR CHARGE HEATER #2 WITH ZEECO GLSF-12 LOW NOX BURNERS, AND 11.9 MMBTU/HR CHARGE HEATER #3 WITH ZEECO GLSF-10 LOW NOX BURNERS: REPLACE COMPRESSOR AND ENGINE LISTED ON PERMIT S-37-92 WITH ELECTRICAL POWERED COMPRESSOR

Proposed Modification:

S-37-4-20: MODIFICATION OF PLATFORMER UNIT INCLUDING SEPARATOR, ADSORBER, 3 REACTORS, 4 FT. DIA. STABILIZER TOWER, ACCUMULATORS, 29.3 MMBTU/HR CHARGE HEATER #1 WITH ZEECO GLSF-12 LOW NOX BURNERS, 17.9 MMBTU/HR CHARGE HEATER #2 WITH ZEECO GLSF-12 LOW NOX BURNERS, AND 11.9 MMBTU/HR CHARGE HEATER #3 WITH ZEECO GLSF-10 LOW NOX BURNERS: REPLACE ENGINE POWERING THE # 2 HYDROGEN COMPRESSOR (LISTED ON S-37-85) WITH AN ELECTRIC MOTOR-POWERED COMPRESSOR (HYDROGEN BOOSTER COMPRESSOR)

Post Project Equipment Description:

S-37-4-20: PLATFORMER UNIT INCLUDING SEPARATOR, ADSORBER, 3 REACTORS, 4 FT. DIA. STABILIZER TOWER, ACCUMULATORS, 29.3 MMBTU/HR CHARGE HEATER #1 WITH ZEECO GLSF-12 LOW NOX BURNERS, 17.9 MMBTU/HR CHARGE HEATER #2 WITH ZEECO GLSF-12 LOW NOX BURNERS, AND 11.9 MMBTU/HR CHARGE HEATER #3 WITH ZEECO GLSF-10 LOW NOX BURNERS AND ASSOCIATED PIPING, COMPONENTS, AND COMPRESSORS

VI. Emission Control Technology Evaluation

Fugitive component counts are expected to decrease with the installation of the electric compressor. VOC emissions from fugitive components are and will continue to be minimized with an inspection, maintenance, and repair program consistent with applicable District Rule 4455.

VII. General Calculations

A. Assumptions

- Facility will operate 24 hours per day, 7 days per week, and 52 weeks per year.
- There will be no change in combustion emissions associated with permits S-37-4 and there.
- S-37-4 heaters are not being modified therefore NSR requirements of BACT, offsets, and public notice are not applicable to the heater. No calculations will be performed for the S-37-4 heaters. VOC emissions from the heaters will be stated for inclusion in the PAS emissions profiles.
- Fugitive emissions calculations below are for the entire permit unit S-37-4.
- Pre-project control efficiencies for fugitive emissions for evaluation of Baseline Emissions (BE) are assumed be the ratio emissions factors obtained using EPA Correlation Equations for refineries with Rule 4455 leak thresholds divided by Refinery Average Emissions Factors (conservatively assumed to be uncontrolled emissions). Additional details are provided in the Baseline Emissions section below.

B. Emission Factors

S-37-85 (to be cancelled)

- The fugitive emissions from the compressors are calculated using California Implementation Guidelines for Estimating Mass Emissions of fugitive Hydrocarbon Leaks at Petroleum Facilities, CAPCOA/CARB Table IV-3a: CAPCOA -Revised 1995 EPA Protocol Refinery Correlation Equations. (see **Attachment II**)

IC engine Baseline Emissions calculation

Pre-Project Emission Factors				
Pollutant	ppmv (@ 15% O_2)	lb/hp-hr	lb/scf	Source
VOC	250	0.002292	0.0003155	Current Permits

S-37-85-4 (heaters)

VOC: 0.0055 lb/MMBtu (current permit)

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Current PTO S-37-4-19

Fugitive Emissions

Daily VOC emissions: 99.9 lb-VOC/day
Annual VOC Emissions: 36,467 lb-VOC/year

S-37-4 heater VOC emissions

0.0055 lb/MMBtu x 60 MMbtu/hr x 24 hr/day = 7.9 lb/day (2,891 lb/yr)

Total VOC emission from '-4:

99.9 (fugitives) + 7.9 (combustion) = 107.8 lb VOC/day

36,467 (fugitives) + 2,891 (combustion) = 39,358 lb VOC/yr

S-37-85 (to be cancelled):

Full-Time Engine/Compressor

Emissions (S-37-85)											
	(lb/hp-hr)	x	(hp)	X	(hr/day)	=	(lb/day)	x	(day/year)	=	(lb/year)
NO_x	0.000659	x	165	X	24	=	2.6	x	365	=	949
SO_x	0.0000208	x	165	X	24	=	0.1	x	365	=	37
PM_{10}	0.0001410	x	165	X	24	=	0.6	x	365	=	219
CO	0.03208	x	165	X	24	=	127.0	x	365	=	46,355
VOC	0.002292	x	165	X	24	=	9.1	x	365	=	3,322

Daily Fugitive VOC emissions: 2.4 lb-VOC/day (**Attachment II**)

Annual Fugitive VOC Emissions: 866 lb-VOC/year

2. Post Project Potential to Emit (PE2)

S-37-4

Fugitive Emissions from new compressor: 1.8 lb/day, 647 lb/yr (**Attachment II**)

Fugitive Emissions

	VOC
Daily	99.9 + 1.8 = 101.7
Annual	36,467 + 647 = 37,114

S-37-4 heater VOC emissions

0.0055 lb/MMBtu x 60 MMbtu/hr x 24 hr/day = 7.9 lb/day (2,891 lb/yr)

Total VOC emission from '-4:

101.7 (fugitives) + 7.9 (combustion) = 109.6 lb/day

37,114 (fugitives) + 2,891 (combustion) = 40,005 lb/yr

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

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

Facility-wide VOC emissions exceed both the offset threshold for VOC's (20,000 lb VOC/ yr) and the Major Source threshold for VOC's (20,000 lb VOC/ yr). No other pollutants are emitted by this project; therefore, SSPE1 calculations for these pollutants are not necessary.

Facility-wide VOC emissions exceed both the offset threshold for VOC's (20,000 lb VOC/ yr) and the Major Source threshold for VOC's (20,000 lb VOC/ yr). No other pollutants are emitted by this project; therefore, SSPE1 calculations for these pollutants are not necessary.

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.

Facility-wide VOC emissions exceed both the offset threshold for VOC's (20,000 lb VOC/ yr) and the Major Source threshold for VOC's (20,000 lb VOC/ yr). No other pollutants are emitted by this project; therefore, SSPE2 calculations for these pollutants are not necessary.

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

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

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				443*		
PSD Major Source Thresholds	100	100	100	100	100	100
PSD Major Source ? (Y/N)	N	N	N	Y	N	N

* SSPE Calculator

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 calculate the QNEC, and if applicable, to determine the amount of offsets required.

Pursuant to District Rule 2201, BE = PE1 for:

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

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to District Rule 2201.

As the new compressor has only fugitive emissions, the baseline fugitive VOC emissions will be calculated for the equipment removed, S-37-85.

S-37-4

The facility is proposing to replace a compressor with a new compressor (new emissions unit); therefore BE = 0 for the new compressor.

S-37-85

Actual source test data **(Attachment IV)** indicated that VOC emissions were less than 25 ppmv @ 15% O2 (current BACT Guideline 3.3.12, **Attachment V**). Therefore, the unit is a Clean Emissions Unit. Therefore, Baseline Emissions (BE) are equal to the Potential to Emit calculated above adjusted to the BACT emissions limit of 25 ppmv @ 15% O_2.

BE: 25 ppmv @ 15% O_2/250 ppmv @ 15% O_2 x 3,322 lb/yr = 332 lb/yr

Fugitive Emissions

Applicant has demonstrated that the Rule 4455 leak thresholds, when used in the EPA Correlation Equations for refineries, represent 95% control over the Refinery Average Emissions Factors for valves. The Refinery Average Emissions factors are considered to be a conservative (low) estimate of uncontrolled emissions i.e. the Average Factors include some (implicit) I&M control efficiency (7/14/17 email).

A sample calculation for valves using the Rule 4455 minimum leak detection limit is shown below.

Correlation equation emission limit for valves:

2.27E-06(SV)^ 0.747 kg/hr

Refinery Average Emissions Factor for gas valve:

0.0268 kg/hr/source

Control Efficiency

[1 - (2.27E-06(400)^0.747/0.0268)] x 100

[1 – 0.000199/0.0268] = 99.3 %

The results of calculations for connectors, pumps, and compressors are listed in the table below.

Component	Refinery Average Emission Factor, kg/hr/source	Correlation Equation Emission Limit, kg/hr/source	Control Efficiency, %
Gas Valves	2.68 E-02	1.99 E-04	99.3
Liquid Valves	1.09 E-02	1.19 E-04	98.9
Gas Connectors	2.5 E-04	1.26 E-04	49.7
Liquid Connectors	2.5 E-04	7.56 E-05	69.8
Pumps	1.14 E-01	2.42 E-03	97.9
Compressors	6.36 E-01	7.33 E-04	99.9

As indicated in the table above, valves, pumps, and compressors are clean emissions units for VOC and BE = PE1.

BE = HAE, which is assumed to be zero, for the other components.

Components	Control Efficiency, %	BE
Gas Valves	99.3	PE1 = 161 lb/yr
Liquid Valves	98.9	
Gas Connectors	49.7	HAE = 0
Liquid Connectors	69.8	
Pumps	97.9	PE1 = 0
Compressors (others)*	99.9	HAE = 0
Total		161 lb/yr

*No "others" Refinery Average Emissions Factor, BE assumed to be HAE

Therefore, BE = PE1 = 161 lb/yr for S-37-85 fugitive emissions.

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, CO, and VOCs, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	**Project PE2 (lb/year)**	**Threshold (lb/year)**	**SB 288 Major Modification Calculation Required?**
NO_x	0	50,000	No
SO_x	0	80,000	No
PM_{10}	0	30,000	No
VOC	37,114 (fugitive emissions only)	50,000	No

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.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	**Total Emissions Increases (lb/yr)**	**Thresholds (lb/yr)**	**Federal Major Modification?**
NO_x*	0	0	No
VOC*	647 (fugitive emissions from new compressor)	0	Yes
PM_{10}	0	30,000	No
$PM_{2.5}$	0	20,000	No
SO_x	0	80,000	No

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

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

VOC **Federal Offset Ratio** **1.5**

Permit No.	Actual Emissions (lb/year)	Potential Emissions (lb/year)	Emissions Change (lb/yr)
S-37-4	0	647	647
			0
			0
			0
		Net Emission Change (lb/year):	647
		Federal Offset Quantity: (NEC * 1.5)	971

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)

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10
- Sulfuric acid mist
- Hydrogen sulfide (H2S)
- Total reduced sulfur (inlcuding H2S)
- Reduced sulfur compounds

I. Project Location Relative to Class 1 Area

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

II. Project Emission Increase – Significance Determination

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

As a screening tool, the post-project potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if the total potentials to emit from all new and modified units are below the applicable thresholds, no futher PSD analysis is needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)					
	NO_2	SO_2	CO	PM	PM_{10}
Total PE from New and Modified Units*	0	0	0	0	0
PSD Significant Emission Increase Thresholds	40	40	100	25	15
PSD Significant Emission Increase?	N	N	N	N	N

*Combustion equipment not being modified

As demonstrated above, because the post-project total potentials to emit from all new and modified emission units are below the PSD significant emission increase thresholds, this project is not subject to the requirements of Rule 2410 and no further discussion is required.

10. Quarterly Net Emissions Change (QNEC)

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

QNEC = PE2 - BE, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
BE = Baseline Emissions (per Rule 2201) 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 BE can be calculated as follows:

Quarterly Net Emissions Change (QNEC) (lbs/year)	
	VOC
ATC S-37-4-19	39,358
ATC S-37-4-20	40,005
Emissions Increase	647
QNEC = ΔPE/4	161.75

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. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

a. Any new emissions unit with a potential to emit exceeding two pounds per day,
b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or

d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

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

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

As seen in Section VII.C.2 above, the applicant is proposing to install a new electrical compressor with a PE of 1.8 lb/day for VOC. BACT is not triggered for VOCs for new emissions unit purposes.

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

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

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

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

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project constitutes a Federal Major Modification for VOCs. Therefore, BACT is triggered for VOCs for all emission units showing an emissions increase (fugitive emissions VOCs).

2. BACT Guideline

BACT Guidelines 7.7.2 and 7.7.3, apply to the electrical compressors (See **Attachment V**).

Petroleum Refining - Valves & Connectors
Petroleum Refining - Pump and Compressor Seals

3. Top-Down BACT Analysis

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

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

VOC:	Leak defined as a reading of methane in excess of 100 ppmv above background when measure per EPA Method 21 and an Inspection and Maintenance Program pursuant to District Rule 4455 and Leak defined as a reading of methane in excess of 500 ppmv above background when measure per EPA Method 21 and an Inspection and Maintenance Program pursuant to District Rule 4455

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE2					>20,000
Offset Thresholds					20,000
Offsets calculations required?					Yes

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for all criteria pollutants. However, this project only results in an VOC emission. Therefore offset calculations for VOCs will be required for this project.

The quantity of offsets in pounds per year for VOC is calculated as follows for sources with an SSPE1 less than the offset threshold levels before implementing the project being evaluated.

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

Where,
PE2 = Post Project Potential to Emit, (lb/year)
BE = Baseline Emissions, (lb/year)

ICCE = Increase in Cargo Carrier Emissions, (lb/year)
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 for:

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

otherwise,
BE = HAE

S-37-4 New Compressor

The compressor is a new emissions unit and therefore BE = 0.

PE2 = 0 lb/yr for S-37-85

Applicant has not provided HAE information on '-85 fugitive emissions and has agreed to assume that it is zero for offset purposes.

	PE2	BE
New Compressor	647	0 (BE)
'-85 IC engine	0	332 (Adjusted PE1 to BACT Limit)
'-85 fugitive emissions	0	161
Total	647	493

Offsets Required (lb/year) = Σ[PE2 – BE] x DOR
= (647 – 493) x 1.5
= 231lb VOC/yr

Calculating the appropriate quarterly emissions to be offset is as follows:

Quarterly offsets required (lb/qtr) = (231 lb VOC/year) ÷ (4 quarters/year)
= 57.75 lb/qtr

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

To adjust the quarterly amount of offsets required, the fractional amount of offsets required in each quarter will be summed and redistributed to each quarter based on the number of days in each quarter. The redistribution is based on the Quarter 1 having the

fewest days and the Quarters 3 and 4 having the most days. The redistribution method is summarized in the following table:

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

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

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total Annual
57	58	58	58	231

The applicant has stated that the facility plans to use ERC certificate S-4809-1 to offset the increases in VOC emissions associated with this project. The above certificate has available quarterly VOC credits as follows:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
ERC # S-4809-1	1,000	1,000	1,000	1,000

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

Proposed Rule 2201 (offset) Conditions:

- {GC# 4447 - edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 57 lb, 2nd quarter - 58 lb, 3rd quarter - 58 lb, and fourth quarter – 58 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

- ERC Certificate Number S-4809-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

As demonstrated in the calculation above, the amount of offsets is zero. Therefore, offsets will not be required for this project.

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,
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant, and/or
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 Section VII.C.7, this project does not constitute an SB 288 Major Modification or a Federal Major Modification; therefore, public noticing for Federal Major Modification purposes is not required.

b. PE > 100 lb/day

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

c. Offset Threshold

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

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

Since the SSPE2 does not surpass the offset threshold levels, public noticing is not triggered for this project.

d) SSIPE > 20,000 lb/yr

The SSIPE (NEC) is calculated and shown as follows:

SSIPE= SSPE2 – SSPE1

Stationary Source Increase in Permitted Emissions (SSIPE)			
Pollutant	**SSPE2 (lb/yr)**	**SSPE1 (lb/yr)**	**SSIPE (lb/yr)**
VOC	>20,000	>20,000	647

As shown in the above table, the SSIPE for this project [exceeds/does not exceed] the 20,000 lb/yr public notice threshold.

Therefore, public noticing is not required for SSIPE purposes.

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project does constitute 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, this project is a Title V Significant Modification. Therefore, public notice will be required for this project.

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.

Fugitive emissions from the new electrical compressor are included in the DEL for the '-4 permit unit. The DEL is stated in the form of maximum fugitive VOC emissions per day

Proposed Rule 2201 (DEL) Conditions:

S-37-4

VOC emission rate from fugitive components the emissions units listed on this permit shall not exceed 101.7 lb/day. [District Rule 2201] Y

E. Compliance Assurance

1. Source Testing

No change to the source testing is necessary.

2. Monitoring

No change to the monitoring requirements is necessary.

3. Recordkeeping

The following new recordkeeping condition will be added to the proposed ATC:

39. Permit holder shall maintain accurate component count and resultant emissions from the Booster and #2 Hydrogen Compressors according to California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, CAPCOA/CARB Table IV-3a: CAPCOA -Revised 1995 EPA Protocol Refinery Correlation Equations. [District Rule 2201] Y

4. Reporting

No change to the reporting requirements is necessary.

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 project results in a decrease in VOC emissions. There is no AAQA for VOCs. Therefore, an AAQA is not required.

G. Compliance Certification

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

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to install a new compressor.

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

Rule 2410 Prevention of Significant Deterioration

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

Rule 2520 Federally Mandated Operating Permits

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

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

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. Three NSPS Subparts are applicable to the project. Each of the relevant subparts is identified below.

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

The new compressor drive shaft will vent to flare S-37-7 (fuel gas combustion device). However the flare is not being modified as indicated by the underlined wording of the subpart below.

§60.100a Applicability, designation of affected facility, and reconstruction.

(a) The provisions of this subpart apply to the following affected facilities in petroleum refineries: fluid catalytic cracking units (FCCU), fluid coking units (FCU), delayed coking units, fuel gas combustion devices (including process heaters), flares and sulfur recovery plants. The sulfur recovery plant need not be physically located within the boundaries of a petroleum refinery to be an affected facility, provided it processes gases produced within a petroleum refinery.
(b) Except for flares and delayed coking units, the provisions of this subpart apply only to affected facilities under paragraph (a) of this section which either commence construction, modification or reconstruction after May 14, 2007, or elect to comply with the provisions of this subpart in lieu of complying with the provisions in subpart J of this part. For flares, the provisions of this subpart apply only to flares which commence construction, modification or reconstruction after June 24,

2008. For the purposes of this subpart, a modification to a flare commences when a project that includes any of the activities in paragraphs (c)(1) or (2) of this section is commenced.

(c) For all affected facilities other than flares, the provisions in §60.14 regarding modification apply. As provided in §60.14(f), the special provisions set forth under this subpart shall supersede the provisions in §60.14 with respect to flares. For the purposes of this subpart, a modification to a flare occurs as provided in paragraphs (c)(1) or (2) of this section.

(1) Any new piping from a refinery process unit, including ancillary equipment, or a fuel gas system is physically connected to the flare (*e.g.*, for direct emergency relief or some form of continuous or intermittent venting).

(2) A flare is physically altered to increase the flow capacity of the flare.

(d) For purposes of this subpart, under §60.15, the "fixed capital cost of the new components" includes the fixed capital cost of all depreciable components which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following the relevant applicability date specified in paragraph (b) of this section.

[73 FR 35867, June 24, 2008, as amended at 77 FR 56464, Sep. 12, 2012; 80 FR 75230, Dec. 1, 2015]

In regards to Ja, the new compressor would not be considered an "affected facility" under Subpart Ja. The compressor replacement does not require a "new connection" to the flare as the new compressor will serve in the same capacity. Therefore, the existing flare is not being modified.

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

The replacement compressor is an "affected unit" and subject to the Subpart. The facility is currently in compliance with Subpart GGGa (VVa). Note that because the compressor drive shaft vents to flare S-37-7, which is a closed vent system as it meets the requirements of 40 CFR 60.18, 40 CFR 60.482-3a(i) stated below is satisfied. Compliance with the subpart is expected.

§60.482-3a Standards: Compressors.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in §60.482-1a(c) and paragraphs (h), (i), and (j) of this section.

(b) Each compressor seal system as required in paragraph (a) of this section shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482-10a; or

(3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

(d) Each barrier fluid system as described in paragraph (a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in paragraph (d) of this section shall be checked daily or shall be equipped with an audible alarm.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph (e)(2) of this section, a leak is detected.

(g)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482-9a.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of paragraphs (a) and (b) of this section, if it is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of §60.482-10a, except as provided in paragraph (i) of this section.

(i) Any compressor that is designated, as described in §60.486a(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 paragraphs (a) through (h) of this section if the compressor:

(1) Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the methods specified in §60.485a(c); and

(2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times requested by the Administrator.

(j) Any existing reciprocating compressor in a process unit which becomes an affected facility under provisions of §60.14 or §60.15 is exempt from paragraphs (a) through (e) and (h) of this section, provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of paragraphs (a) through (e) and (h) of this section.

Back to Top

§60.482-4a Standards: Pressure relief devices in gas/vapor service.

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

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to the equipment in this project.

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 compressor is electrical (no fuel combustion), visible emissions are not expected to exceed Ringelmann 1 or 20% opacity. Also, based on past inspections of the facility continued 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.

As demonstrated above, there are no increases in emissions associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

Rule 4301 Fuel Burning Equipment (12/17/92)

This rule specifies maximum emission rates for NOx (as NO2) 140 lb/hr, SOx (as SO2) 200 lb/hr, and total combustion air contaminant emissions from fuel burning equipment (defined as total PM in Rule 1020) 10 lb/hr. This rule also limits combustion contaminants to $\leq$ 0.1 gr/scf. According to Table 1.4-2, footnote c of AP-42 (July 1998), all PM emissions from natural gas combustion are less than 1 μm in diameter. Since the permit allows only gas as a fuel, it is reasonable to assume that the total PM emissions from the new heaters are equal to the PM10 emissions.

The equipment on these permits is currently in compliance with this Rule. The modifications associated with this project are not expected to alter the combustion of this equipment. Therefore, compliance with this rule is expected.

District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2

These units are natural gas-fired with a maximum heat input greater than 5 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4305, the units are subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2.*

In addition, these units are also subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3.*

Since the emissions limits of District Rule 4306 and all other requirements are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rule 4306 requirements will satisfy the requirements of District Rule 4305.

District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3

This rule limits NOx and CO emissions from boilers, steam generators, and process heaters rated greater than 5 MMBtu/hr. The units are currently in compliance with the requirement of this rule. The modifications associated with this project are not expected to alter the combustion of this equipment. Therefore, continued compliance with this rule is expected.

District Rule 4320 Advance Emission Reduction Options for Boilers, Steam Generators and Process Heaters Greater than 5 MMBtu/hr

This rule limits NOx, CO, SO2 and PM10 emissions from boilers, steam generators and process heaters rated greater than 5 MMBtu/hr. This rule also provides a compliance option of payment of fees in proportion to the actual amount of NOx emitted over the previous year.

The units in this project are all rated at greater than 5 MMBtu/hr heat input and are subject to this rule.

Kern pays annual emissions fee to the District and comply with the particulate matter control requirements in Section 5.4.

Therefore, continued compliance with District Rule 4320 requirements is expected.

District Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1

This rule applies to boilers, steam generators, and process heaters at NOx Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. The emission limits, monitoring provisions, and testing requirements of this rule are satisfied when the unit is operated in compliance with Rule 4306. Therefore, compliance with this rule is expected.

Rule 4455 Components at Petroleum Refineries, Gas Liquid Processing Facilities, and Chemical Plants (4/20/2005)

This rule requires periodic inspection of fugitive components and expedient repair of leaking components at refineries and chemical plants. The new and existing fugitive components are

subject to this rule and will be included in the facility's inspection and maintenance program. Continued compliance is expected.

Rule 4801 Sulfur Compounds (12/17/92)

This rule limits sulfur compound emissions to 2000 ppmv as SO2. The heaters included in this project are currently in compliance with this rule. The applicant is not proposing any changes that are expected to effect sulfur emissions. Continued compliance is expected.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

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

Greenhouse Gas (GHG) Significance Determination

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

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing

use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15301 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

Indemnification Agreement/Letter of Credit Determination

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

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

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful COC review period, issue ATC S-37-4-20 subject to the permit conditions on the attached draft ATCs in **Attachment VII**.

X. Billing Information

Annual Permit Fees			
Permit Number	**Fee Schedule**	**Fee Description**	**Annual Fee**
S-37-4-20	3020-02-H	59.1 MMBtu	$1128

Attachments

I: Current PTO S-37-4-17 and ATC S-37-4-19
II: Fugitive Emissions
III: Emissions Profiles
VI: Title V Compliance Certification Form
V: BACT Guidelines
VI: BACT Analysis
VII: Draft ATC

ATTACHMENT I
Current PTOs S-37-4-17, 85-5, and ATC S-37-4-19

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-37-4-17 **EXPIRATION DATE:** 08/31/2016

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

EQUIPMENT DESCRIPTION:
PLATFORMER UNIT INCLUDING SEPARATOR, ADSORBER, 3 REACTORS, 4 FT. DIA. STABILIZER TOWER, ACCUMULATORS, 29.3 MMBTU/HR CHARGE HEATER #1 WITH ZEECO GLSF-12 LOW NOX BURNERS, 17.9 MMBTU/HR CHARGE HEATER #2 WITH ZEECO GLSF-12 LOW NOX BURNERS, AND 11.9 MMBTU/HR CHARGE HEATER #3 WITH ZEECO GLSF-10 LOW NOX BURNERS

PERMIT UNIT REQUIREMENTS

1. Heaters 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
2. Sulfur content of fuel combusted in this unit shall not exceed 100 ppmv (as total reduced sulfur), based on a 3 hour rolling average. [District Rules 2201 and 40 CFR Part 60, Subpart J, 60.104(a)(1)] Federally Enforceable Through Title V Permit
3. 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
4. Permittee shall obtain and analyze a representative gas sample for total reduced sulfur of the fuel combusted in this unit at least once per year. Each sample shall be analyzed for the following reduced sulfur compounds: carbon disulfide, carbonyl sulfide, dimethyl disulfide, dimethyl sulfide, hydrogen sulfide and methyl mercaptan. For each sample, permittee shall record the analytical results for total sulfur, calculated as the sum of the results for all analytes, expressed as H2S, and shall calculate and record the ratio of total sulfur to H2S. Samples shall be analysed using ASTM D6228-98, or an alternative analytical method approved in advance by the APCO. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The permittee shall demonstrate continuous compliance with the sulfur content limit (as total reduced sulfur) of the fuel combusted in this unit by calculation, as the product of the fuel H2S concentration and the ratio of total sulfur to H2S, based on the most recently conducted fuel sample analysis for total sulfur. The total sulfur of the fuel shall be calculated for each one hour H2S monitoring result, and the hourly fuel sulfur values shall be averaged over a rolling three hour period to determine compliance. [District Rule 2201]
6. Emission rates from each heater, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 25 ppmv @ 3% O2 or 0.030 lb/MMBtu, VOC: 5.5 lb/MMscf, PM10: 7.6 lb/MMscf or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
8. Daily combustion emissions from this permit unit shall not exceed any of the following: NOx (as NO2): 42.6 lb/day, VOC: 7.8 lb/day, PM10: 10.8 lb/day, or CO: 52.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. The duration of each startup and shutdown period for each heater shall not exceed 12 hours and 9 hours respectively. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

10. The permittee shall record the date and the duration of each startup and each shutdown. [District Rules 4305 and 4306]

11. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

12. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

13. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

14. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

15. Heater exhaust stacks 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

16. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

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

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

19. 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

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

21. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

22. 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

23. The following test methods shall be used unless otherwise approved by the APCO and EPA: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, 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

24. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

25. 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

26. 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

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

28. 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

29. 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

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

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

32. VOC emission rate from fugitive components associated with this emissions unit shall not exceed 97.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

33. 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-2a: 1995 EPA Protocol Refinery Screening Value Range Emission Factors. Permit holder shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

34. 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

35. 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

36. 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

37. 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

38. 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

39. 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

40. 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

41. 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

42. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

43. 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

44. 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

45. 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

46. 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

47. 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

48. 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

49. 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

50. 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

51. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

52. 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

53. 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

54. 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

55. 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

56. 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

57. 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

58. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

59. 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

60. 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

61. 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

62. 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

63. 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

64. 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

65. 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

66. 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

67. 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

68. Permit unit shall comply with applicable District Rule 4001 (NSPS, Subpart GGG) requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

69. 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

70. Affected facilities for which construction or modification commenced after January 4, 1983 shall comply with applicable requirements of 40CFR, Subpart GGG. [40CFR60.590(a)]]

71. Each Subpart GGG 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)]

72. 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

73. Any Subpart GGG 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

74. Any Subpart GGG 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

75. If any Subpart GGG 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

76. Any Subpart GGG 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

77. Except during pressure releases, each Subpart GGG 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

78. After each pressure release, the Subpart GGG 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

79. Any Subpart GGG 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

80. Any pressure relief device that is equipped with a rupture disk upstream of the Subpart GGG 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

81. Except for in-situ sampling systems and sampling systems without purges, each Subpart GGG 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

82. Each Subpart GGG 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

83. Each Subpart GGG 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

84. Subpart GGG 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

85. Subpart GGG 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

86. Each Subpart GGG 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

87. Any Subpart GGG 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

88. When a leak is detected for any Subpart GGG 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

89. Any Subpart GGG 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

90. Any Subpart GGG 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

91. Any Subpart GGG 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

92. The owner or operator may elect to comply with the applicable provisions for Subpart GGG 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

93. If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and Subpart GGG valves in heavy liquid service, Subpart GGG pressure relief devices in light liquid or heavy liquid service, and Subpart GGG 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

94. When a leak is detected in Subpart GGG pumps and valves in heavy liquid service, Subpart GGG pressure relief devices in light liquid or heavy liquid service, and Subpart GGG 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

95. Delay of Subpart GGG 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

96. Delay of Subpart GGG 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

97. For Subpart GGG 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

98. For Subpart GGG 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

99. Except as provided in 40 CFR 60.482-10(i) through (k), each Subpart GGG 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

100. Delay of repair of a Subpart GGG 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

101. If a Subpart GGG 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

102. Any parts of the Subpart GGG 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

103. Any parts of the Subpart GGG 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

104. 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

105. 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

106. In conducting the Subpart GGG 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

107. 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

108. 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

109. The owner or operator shall test each piece of Subpart GGG 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

110. The owner or operator shall demonstrate that the Subpart GGG 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

111. 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

112. 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

113. When each Subpart GGG 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

114. When each Subpart GGG 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

115. The following information pertaining to the design requirements for Subpart GGG 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

116. 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

117. The following information pertaining to all Subpart GGG valves subject to the requirements of 40 CFR 60.482-7(g) and (h) and to all Subpart GGG 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

118. The following information shall be recorded for Subpart GGG 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

119. 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

120. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

121. Information and data used to demonstrate that a piece of equipment is not in Subpart GGG 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

122. 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

123. All Subpart GGG 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

124. 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

125. 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

126. The Subpart GGG 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

127. 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

128. For compliance with Subpart GGG, 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

129. 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

130. 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 J. [District Rule 4001] Federally Enforceable Through Title V Permit

131. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-37-85-5 **EXPIRATION DATE:** 08/31/2016

SECTION: 05 **TOWNSHIP:** 31S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
165 BHP INGERSOLL-RAND MODEL 6JVG NATURAL GAS-FIRED IC ENGINE EQUIPPED WITH 3-WAY CATALYST SERVING THE #2 HYDROGEN COMPRESSOR - MIDDLE, AT THE PLATFORMER UNIT (#S-37-4)

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
2. Kern Oil and Refining Company shall operate and maintain controls as recommended by the emission control system supplier. [District NSR Rule] Federally Enforceable Through Title V Permit
3. NOx emission concentrations shall not exceed 25 ppm by volume at 15% O2 or exhaust emission concentrations shall be reduced by 96%. [District NSR Rule; District Rule 4701, 5.1; and District Rule 4702, 5.1] Federally Enforceable Through Title V Permit
4. VOC emissions concentrations shall not exceed 250 ppmv at 15% O2. [District NSR Rule; District Rule 4701, 5.1; and District Rule 4702, 5.1] Federally Enforceable Through Title V Permit
5. CO emission concentrations shall not exceed 2000 ppm by volume at 15% O2. [District NSR Rule; District Rule 4701, 5.1; and District Rule 4702, 5.1] Federally Enforceable Through Title V Permit
6. Emissions from the engine shall neither exceed SOx (as SO2) - 0.00002 lb/hp-hr, nor PM10 - 0.00014 lb/hp-hr. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O2 monitors may be allowed if approved by the APCO.] Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 2520, 9.3.2 & 9.4.2; 4701, 5.4; and 4702, 5.6 and 6.5] Federally Enforceable Through Title V Permit
8. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2520, 9.3.2; 4701, 5.4; and 4702, 5.6 and 6.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. All emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken by the portable analyzer shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4701, 5.4 and 4702, 5.6] Federally Enforceable Through Title V Permit

10. NOx, CO, and VOC emissions shall be measured (source tested) not less than once every 24 months. [District Rules 4701, 6.3.1 and 4702, 6.3.1] Federally Enforceable Through Title V Permit

11. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 1081; 4701, 6.4; and 4702, 6.4] Federally Enforceable Through Title V Permit

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

13. 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

14. Unit shall be fired only on PUC-regulated natural gas with a sulfur content of less than or equal to 1.0 grain/100 scf. [District NSR Rule; District Rules 2520, 9.3.2 and 4801; Kern County Rule 407] Federally Enforceable Through Title V Permit

15. The permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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

17. The permittee shall maintain records of: (1) total hours of operation; (2) type and quantity of fuel used; (3) maintenance or modifications performed; (4) the date and time of NOx, CO, and O2 measurements; (5) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2; (6) make and model of exhaust gas analyzer; (7) exhaust gas analyzer calibration records; and (8) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4701, 6.2 and 4702, 6.2] Federally Enforceable Through Title V Permit

18. The permittee shall install and operate a nonresettable fuel meter and a nonresettable elapsed operating time meter. In lieu of installing a nonresettable fuel meter, the owner or operator may use a non-resettable elapsed operating time meter in conjunction with the engine manufacturer's maximum rated fuel consumption to determine annual fuel usage. The owner or operator shall maintain the required meters in proper operating condition. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4702 and 40 CFR 63, ZZZZ]

20. On and after October 19, 2013, the permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63, ZZZZ]

21. On and after October 19, 2013, the engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63, ZZZZ]

22. On and after October 19, 2013, the engine's oil and filter shall be changed every 1,440 hours of operation or every 12 months, whichever comes first. [40 CFR 63, ZZZZ]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. On and after October 19, 2013, the engine's spark plugs shall be inspected every 1,440 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63, ZZZZ]

24. On and after October 19, 2013, the engine's hoses and belts shall be inspected every 1,440 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63, ZZZZ]

25. On and after October 19, 2013, the permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [40 CFR 63, ZZZZ]

26. On and after October 19, 2013, the permittee shall maintain monthly records of all performance tests, opacity and visible emissions observations and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63, ZZZZ]

27. On and after October 19, 2013, the permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63, ZZZZ]

28. The Permittee shall begin the daily recording of the inlet temperature to the catalyst bed by June 26, 2012 in order to ensure compliance with the requirements of 40 CFR 64, Compliance Assurance Monitoring (CAM). [District Rule 2520, 9.4.2 and 40 CFR 64] Federally Enforceable Through Title V Permit

29. Pursuant to Rule 4702, beginning in 2014, the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by June 30 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4702 Table 2. [District Rule 4702]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-37-4-19

ISSUANCE DATE: 12/22/2016

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

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

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

EQUIPMENT DESCRIPTION:
MODIFICATION OF PLATFORMER UNIT INCLUDING SEPARATOR, ADSORBER, 3 REACTORS, 4 FT. DIA. STABILIZER TOWER, ACCUMULATORS, 29.3 MMBTU/HR CHARGE HEATER #1 WITH ZEECO GLSF-12 LOW NOX BURNERS, 17.9 MMBTU/HR CHARGE HEATER #2 WITH ZEECO GLSF-12 LOW NOX BURNERS, AND 11.9 MMBTU/HR CHARGE HEATER #3 WITH ZEECO GLSF-10 LOW NOX BURNERS: REPLACE COMPRESSOR AND ENGINE LISTED ON PERMIT S-37-92 WITH ELECTRICAL POWERED COMPRESSOR

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. Permit S-37- 92 shall be canceled upon implementation of this ATC. [District Rule] Federally Enforceable Through Title V Permit
4. Heaters 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
5. Sulfur content of fuel combusted in this unit shall not exceed 100 ppmv (as total reduced sulfur), based on a 3 hour rolling average. [District Rules 2201 and 40 CFR Part 60, Subpart J, 60.104(a)(1)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services
S-37-4-19 : May 23 2017, 9:00AM – EDGEHILR : Joint Inspection NOT Required

6. 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

7. Permittee shall obtain and analyze a representative gas sample for total reduced sulfur of the fuel combusted in this unit at least once per year. Each sample shall be analyzed for the following reduced sulfur compounds: carbon disulfide, carbonyl sulfide, dimethyl disulfide, dimethyl sulfide, hydrogen sulfide and methyl mercaptan. For each sample, permittee shall record the analytical results for total sulfur, calculated as the sum of the results for all analytes, expressed as H2S, and shall calculate and record the ratio of total sulfur to H2S. Samples shall be analysed using ASTM D6228-98, or an alternative analytical method approved in advance by the APCO. [District Rule 2201] Federally Enforceable Through Title V Permit

8. The permittee shall demonstrate continuous compliance with the sulfur content limit (as total reduced sulfur) of the fuel combusted in this unit by calculation, as the product of the fuel H2S concentration and the ratio of total sulfur to H2S, based on the most recently conducted fuel sample analysis for total sulfur. The total sulfur of the fuel shall be calculated for each one hour H2S monitoring result, and the hourly fuel sulfur values shall be averaged over a rolling three hour period to determine compliance. [District Rule 2201]

9. Emission rates from each heater, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 25 ppmv @ 3% O2 or 0.030 lb/MMBtu, VOC: 5.5 lb/MMscf, PM10: 7.6 lb/MMscf or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

10. {588} Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

11. Daily combustion emissions from this permit unit shall not exceed any of the following: NOx (as NO2): 42.6 lb/day, VOC: 7.8 lb/day, PM10: 10.8 lb/day, or CO: 52.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. The duration of each startup and shutdown period for each heater shall not exceed 12 hours and 9 hours respectively. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

13. The permittee shall record the date and the duration of each startup and each shutdown. [District Rules 4305 and 4306]

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

15. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

18. Heater exhaust stacks 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

19. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

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

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

22. 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

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

24. 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

25. 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

26. The following test methods shall be used unless otherwise approved by the APCO and EPA: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, 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

27. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

28. {552} 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

29. {520} 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

30. {483} Nitrogen oxide (NOx) emission concentrations in ppmv shall be referenced at dry stack gas conditions, and shall be calculated to 3.00 percent by volume stack gas oxygen and averaged over 60 minutes, and lb/MMBtu rates shall be calculated as lb NO2/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit

31. 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

CONDITIONS CONTINUE ON NEXT PAGE

32. 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

33. {4194} Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]

34. {4253} Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

35. VOC emission rate from fugitive components associated with this emissions unit shall not exceed 99.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

36. 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-2a: 1995 EPA Protocol Refinery Screening Value Range Emission Factors. Permit holder shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit

37. 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

38. 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

39. 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

40. 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

41. 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

42. 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

CONDITIONS CONTINUE ON NEXT PAGE

43. 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

44. 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

45. 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

46. 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

47. 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

48. 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

49. 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

50. 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

51. 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

52. 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

CONDITIONS CONTINUE ON NEXT PAGE

53. 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

54. 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

55. 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

56. 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

57. 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

58. 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

59. 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

60. 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

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

CONDITIONS CONTINUE ON NEXT PAGE

62. 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

63. 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

64. 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

65. 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

66. 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

67. 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

68. 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

69. 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

70. 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

71. Permit unit shall comply with applicable District Rule 4001 (NSPS, Subpart GGG) requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

72. 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

CONDITIONS CONTINUE ON NEXT PAGE

73. Affected facilities for which construction or modification commenced after January 4, 1983 shall comply with applicable requirements of 40CFR, Subpart GGG. [40CFR60.590(a)]]

74. Each Subpart GGG 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)]

75. 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

76. Any Subpart GGG 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

77. Any Subpart GGG 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

78. If any Subpart GGG 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

79. Any Subpart GGG 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

80. Except during pressure releases, each Subpart GGG 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

81. After each pressure release, the Subpart GGG 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

82. Any Subpart GGG 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

83. Any pressure relief device that is equipped with a rupture disk upstream of the Subpart GGG 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

CONDITIONS CONTINUE ON NEXT PAGE

84. Except for in-situ sampling systems and sampling systems without purges, each Subpart GGG 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

85. Each Subpart GGG 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

86. Each Subpart GGG 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

87. Subpart GGG 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

88. Subpart GGG 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

89. Each Subpart GGG 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

90. Any Subpart GGG 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

91. When a leak is detected for any Subpart GGG 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

92. Any Subpart GGG 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

93. Any Subpart GGG 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

CONDITIONS CONTINUE ON NEXT PAGE

94. Any Subpart GGG 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

95. The owner or operator may elect to comply with the applicable provisions for Subpart GGG 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

96. If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and Subpart GGG valves in heavy liquid service, Subpart GGG pressure relief devices in light liquid or heavy liquid service, and Subpart GGG 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

97. When a leak is detected in Subpart GGG pumps and valves in heavy liquid service, Subpart GGG pressure relief devices in light liquid or heavy liquid service, and Subpart GGG 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

98. Delay of Subpart GGG 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

99. Delay of Subpart GGG 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

100. For Subpart GGG 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

101. For Subpart GGG 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

CONDITIONS CONTINUE ON NEXT PAGE

102. Except as provided in 40 CFR 60.482-10(i) through (k), each Subpart GGG 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

103. Delay of repair of a Subpart GGG 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

104. If a Subpart GGG 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

105. Any parts of the Subpart GGG 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

106. Any parts of the Subpart GGG 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

107. 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

108. 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

109. In conducting the Subpart GGG 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

110. 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

111. 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

CONDITIONS CONTINUE ON NEXT PAGE

112. The owner or operator shall test each piece of Subpart GGG 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

113. The owner or operator shall demonstrate that the Subpart GGG 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

114. 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

115. 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

116. When each Subpart GGG 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

117. When each Subpart GGG 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

118. The following information pertaining to the design requirements for Subpart GGG 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

CONDITIONS CONTINUE ON NEXT PAGE

119. 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 60.482-4; 4) (i) The dates of each compliance test as required in 40 CFR 60.482-2(e), 60.482-3(i), 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

120. The following information pertaining to all Subpart GGG valves subject to the requirements of 40 CFR 60.482-7(g) and (h) and to all Subpart GGG 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

121. The following information shall be recorded for Subpart GGG 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

122. 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

123. 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

124. Information and data used to demonstrate that a piece of equipment is not in Subpart GGG 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

125. 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

126. All Subpart GGG 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

127. 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

CONDITIONS CONTINUE ON NEXT PAGE

128. 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

129. The Subpart GGG 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

130. 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

131. For compliance with Subpart GGG, 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

132. 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

133. 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 J. [District Rule 4001] Federally Enforceable Through Title V Permit

134. 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

ATTACHMENT II
Fugitive Emissions

Kern Oil & Refining Co.
S-37-85 (PE1)

Fugitive Emissions Using Correlation Equation Emission Factors

California Implementation Guidelines for Estimating Mass Emissions
of Fugitive Hydrocarbon Leaks at Petroleum Facilities

Table IV-3a: CAPCOA -Revised 1995 EPA Protocol Refinery Correlation Equations for Refineries and Marketing Terminals

Equipment Type	Service	Component Count	% Default Zeros	%Pegged (>10,000)	% in Correlation Range	Correlation Screening Value (ppm)	Default Zero Emissions (lb/day)	Pegged Emissions (lb/day)	Correlation Emissions (lb/day)	VOC emissions (lb/day)
Valves	All	15	50.0%	0.7%	49.3%	400	0.003	0.356	0.078	0.44
Pump Seals	All	0	50.0%	1.0%	49.0%	1,000	0.000	0.000	0.000	0.00
Others	All	6	50.0%	0.0%	50.0%	1,000	0.001	0.000	0.116	0.12
Connectors	All	60	50.0%	0.5%	49.5%	400	0.012	0.476	0.198	0.69
Flanges	All	34	50.0%	0.5%	49.5%	400	0.000	0.855	0.277	1.13
Open-ended lines	All	0	50.0%	0.5%	49.5%	1,000	0.000	0.000	0.000	0.00

Total VOC Emissions (lb/day) = 2.4
Total VOC Emissions (lb/yr) = 866

Factors Used in Calculations - For Reference

Equipment Type	Service	Default Zero Factor (kg/hr)	Pegged Factor (kg/hr)	Correlation Equation (kg/hr)
Valves	All	7.800E-06	6.400E-02	2.27E-06(SV)^0.747
Pump Seals	All	1.900E-05	8.900E-02	5.07E-05(SV)^0.622
Others	All	4.000E-06	8.200E-02	8.69E-06(SV)^0.642
Connectors	All	7.500E-06	3.000E-02	1.53E-06(SV)^0.736
Flanges	All	3.100E-07	9.500E-02	4.53E-06(SV)^0.706
Open-ended lines	All	2.000E-06	3.300E-02	1.90E-06(SV)^0.724

Kern Oil & Refining Co.
New Compressor S-37-4 (PE2)

Fugitive Emissions Using Correlation Equation Emission Factors

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

Equipment Type	Service	Component Count	% Default Zeros	%Pegged (>10,000)	% in Correlation Range	Correlation Screening Value (ppm)	Default Zero Emissions (lb/day)	Pegged Emissions (lb/day)	Correlation Emissions (lb/day)	VOC emissions (lb/day)
Valves	All	17	50.0%	0.7%	49.3%	100	0.004	0.403	0.031	0.44
Pump Seals	All	0	50.0%	1.0%	49.0%	500	0.000	0.000	0.000	0.00
Others	All	4	50.0%	0.0%	50.0%	500	0.000	0.000	0.050	0.05
Connectors	All	50	50.0%	0.5%	49.5%	100	0.010	0.397	0.059	0.47
Flanges	All	29	50.0%	0.5%	49.5%	100	0.000	0.729	0.089	0.82
Open-ended lines	All	0	50.0%	0.5%	49.5%	1,000	0.000	0.000	0.000	0.00

Total VOC Emissions (lb/day) = 1.8
Total VOC Emissions (lb/yr) = 647

Factors Used in Calculations - For Reference

Equipment Type	Service	Default Zero Factor (kg/hr)	Pegged Factor (kg/hr)	Correlation Equation (kg/hr)
Valves	All	7.800E-06	6.400E-02	2.27E-06(SV)^0.747
Pump Seals	All	1.900E-05	8.900E-02	5.07E-05(SV)^0.622
Others	All	4.000E-06	8.200E-02	8.69E-06(SV)^0.642
Connectors	All	7.500E-06	3.000E-02	1.53E-06(SV)^0.736
Flanges	All	3.100E-07	9.500E-02	4.53E-06(SV)^0.706
Open-ended lines	All	2.000E-06	3.300E-02	1.90E-06(SV)^0.724

ATTACHMENT III
Emissions Profiles

SJVUAPCD
SOUTHERN

Application Emissions

8/30/17
4:04 pm

Permit #: S-37-4-20	Last Updated
Facility: KERN OIL & REFINING CO	08/30/2017 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	15768.0	9461.0	3995.0	19447.0	40005.0
Daily Emis. Limit (lb/Day)	43.3	25.9	10.9	53.3	109.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	161.0
Q2:	0.0	0.0	0.0	0.0	162.0
Q3:	0.0	0.0	0.0	0.0	162.0
Q4:	0.0	0.0	0.0	0.0	162.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:					57.0
Q2:					58.0
Q3:					58.0
Q4:					58.0

ATTACHMENT IV
Source Test Information

TABLE #2
Kern Oil & Refining Company
NOx, CO & VOC Emission Results
Platformer Mid Compressor (S-37-85-5)

TEST	1	2	3	AVERAGE	LIMIT
Test Location	Outlet	Outlet	Outlet		
Test Date	2/17/2016	2/17/2016	2/17/2016		
Test Time	827-857	908-938	948-1018		
Standard Temp., °F	60	60	60		
O_2, %	<0.25	0.25	0.30	0.27	
NOx, ppm	67.20	61.87	72.65	67.24	
NOx, ppm @ 15% O_2	19.20	17.68	20.80	**19.23**	**25**
NOx, lbs/MMBtu	0.0706	0.0650	0.0765	0.0707	
CO, ppm	4429.80	5661.76	2781.66	4291.07	
CO, ppm @ 15% O_2	1265.66	1617.65	796.55	**1226.62**	**2000**
CO, lbs/MMBtu	2.8320	3.6195	1.7823	2.7446	
VOC, ppm	13.60	6.60	7.90	9.37	
VOC, ppm @ 15% O_2	3.89	1.89	2.26	**2.68**	**250**
VOC, lbs/MMBtu	0.0050	0.0024	0.0029	0.0034	

WHERE:

NOx = Oxides of Nitrogen (MW=46)

CO = Carbon Monoxide (MW=28)

O_2 = Oxygen

ppm = Parts Per Million Concentration

DSCFM = Dry Standard Cubic Feet per Minute

lbs/MMBtu = Pounds per Million Btu

Fd = 8710 (EPA F Factor for Natural Gas)

Tstd. = Standard Temp.; °R = °F + 460

VOC = Total Non-methane Non-ethane Hydrocarbons as CH_4 (MW = 16)

CALCULATIONS:

15%O_2 correction = ppm of pollutant * 5.9 / (20.9 - %O_2)

lbs/MMBtu = Fd * MW * ppm * 2.59E-9 * 20.9 / (20.9 - %O_2)

Fd = 8710

ATTACHMENT V
BACT Guidelines

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 3.3.12*

Last Update: 3/19/2015

Non-Agricultural Fossil** Fuel-Fired IC Engines > 50 bhp

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	1. For all compression-ignited engines: Use of an engine meeting the latest Tier standard 2. For all spark-ignited engines: 25 ppmvd @ 15% O2 or 0.15 g/bhp-hr	1. For all compression-ignited engines: 50 percent reduction of latest Tier standard for VOC emissions using a catalytic oxidation system. 2. For rich-burn spark-ignited engines: 12 ppmvd @ 15% O2 or 0.069 g/bhp-hr	Electric Motor (except for engines that will be used to generate electricity)
SOx	Compliance with District Rule 4702 SOx Emission Control Requirements		Electric Motor (except for engines that will be used to generate electricity)
PM10	0.06 g/bhp-hr (Total PM)***		Electric Motor (except for engines that will be used to generate electricity)
NOx	0.07 g/bhp-hr or 5 ppmvd @ 15% O2		1. 2 ppmvd @ 15% O2 Natural Gas-Fired Turbine 2. Electric Motor (except for engines that will be used to generate electricity)
CO	1. For compression-ignited engines > 300 bhp and < or = 500 bhp: 49 ppmvd @ 15% O2 2. For compression-ignited engines > 500 bhp: 23 ppmvd @ 15% O2 3. For four stroke lean burn spark-ignited engines > 500 bhp: 47 ppmvd @ 15% O2 4. For all engines rated > or = 2,064 bhp: 33 pmvd @ 15% O2 5. For all other engines (not included in categroies 1 through 4 above): 56 ppmvd @ 15% O2 or 0.6 g/bhp-hr	For all compression-ignited engines: 12 ppmvd @ 15% O2 using an oxidation catalyst	Electric Motor (except for engines that will be used to generate electricity)

** For the purposes of this determination, fossil fuels includes diesel, gasoline, natural gas, propane, kerosene, and similar hydrocarbon compounds derived from petroleum oil or natural gas. Fossil fuels also include similar synthetic fuels such as biodiesel and/or any fuel containing one or more fossil fuels.

***This total PM10 emission limit is based on EPA Method 5 (front hald and back half) testing, which typically yields results as much as four times higher than when using the ISO 8178 Test Method. The ISO 8178 Test Method only reports filterable (i.e. front half) emissions.

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

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

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.12.1*

Last Update: 11/26/2006

Chemical Plants - Valves & Connectors

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

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

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

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.12.2*

Last Update: 11/27/2006

Chemical Plants Pump and Compressor Seals

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

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

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

ATTACHMENT VI
BACT Analysis

Petroleum Refining - Valves & Connectors

Top Down BACT Analysis for VOC emissions:

Step 1 - Identify All Control Technologies

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

Step 2 - Eliminate Technologically Infeasible Options

The identified control technology is feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

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

Step 4 - Cost Effectiveness Analysis

The applicant has proposed the identified control technology. Therefore, a cost analysis is not required.

Step 5 - Select BACT

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

Petroleum Refining - Pump and Compressor Seals

Top Down BACT Analysis for VOC emissions:

Step 1 - Identify All Control Technologies

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

Step 2 - Eliminate Technologically Infeasible Options

The identified control technology is feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

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

Step 4 - Cost Effectiveness Analysis

The applicant has proposed the identified control technology. Therefore, a cost analysis is not required.

Step 5 - Select BACT

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

ATTACHMENT VII
Title V and Statewide Compliance Certification

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

July 19, 2017

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

Subject: **Federal Major Modification Statewide Compliance Certification**
ATC Application – Electric Compressor Project S-1170673

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.

Sincerely,

David A. McCoy
VP - Refining

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

[X] SIGNIFICANT PERMIT MODIFICATION
[ ] MINOR PERMIT MODIFICATION
[ ] ADMINISTRATIVE AMENDMENT

COMPANY NAME: Kern Oil & Refining Co.	FACILITY ID: S-37
1. Type of Organization:[X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name:	
3. Agent to the Owner: David A. McCoy	

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

DM Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).

DM Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.

DM Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

DM Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true, accurate, and complete.

DM For minor modifications, this application meets the criteria for use of minor permit modification procedures pursuant to District Rule 2520.

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

DM Cay
Signature of Responsible Official

2/27/17
Date

Dave McCoy
Name of Responsible Official (please print)

Vice President, Refining
Title of Responsible Official (please print)

ATTACHMENT VIII
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-37-4-20

ISSUANCE DATE: DRAFT

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

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

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

EQUIPMENT DESCRIPTION:
MODIFICATION OF PLATFORMER UNIT INCLUDING SEPARATOR, ADSORBER, 3 REACTORS, 4 FT. DIA. STABILIZER TOWER, ACCUMULATORS, 29.3 MMBTU/HR CHARGE HEATER #1 WITH ZEECO GLSF-12 LOW NOX BURNERS, 17.9 MMBTU/HR CHARGE HEATER #2 WITH ZEECO GLSF-12 LOW NOX BURNERS, AND 11.9 MMBTU/HR CHARGE HEATER #3 WITH ZEECO GLSF-10 LOW NOX BURNERS: REPLACE ENGINE POWERING THE # 2 HYDROGEN COMPRESSOR (LISTED ON S-37-85) WITH AN ELECTRIC MOTOR-POWERED COMPRESSOR (HYDROGEN BOOSTER COMPRESSOR)

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. Upon implementation of this Authority to Construct, PTO S-37-85-5 shall be cancelled. [District Rule 2201] Federally Enforceable Through Title V Permit
4. ATC shall be implemented concurrently with or subsequent to ATC S-37-4-19. [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-37-4-20 : Aug 30 2017 4:03PM -- EDGEHILR : Joint Inspection NOT Required

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 57 lb, 2nd quarter - 58 lb, 3rd quarter - 58 lb, and fourth quarter - 58 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

6. ERC Certificate Number S-4809-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Heaters 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

8. Sulfur content of fuel combusted in this unit shall not exceed 100 ppmv (as total reduced sulfur), based on a 3 hour rolling average. [District Rules 2201 and 40 CFR Part 60, Subpart J, 60.104(a)(1)] Federally Enforceable Through Title V Permit

9. 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

10. Permittee shall obtain and analyze a representative gas sample for total reduced sulfur of the fuel combusted in this unit at least once per year. Each sample shall be analyzed for the following reduced sulfur compounds: carbon disulfide, carbonyl sulfide, dimethyl disulfide, dimethyl sulfide, hydrogen sulfide and methyl mercaptan. For each sample, permittee shall record the analytical results for total sulfur, calculated as the sum of the results for all analytes, expressed as H2S, and shall calculate and record the ratio of total sulfur to H2S. Samples shall be analysed using ASTM D6228-98, or an alternative analytical method approved in advance by the APCO. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The permittee shall demonstrate continuous compliance with the sulfur content limit (as total reduced sulfur) of the fuel combusted in this unit by calculation, as the product of the fuel H2S concentration and the ratio of total sulfur to H2S, based on the most recently conducted fuel sample analysis for total sulfur. The total sulfur of the fuel shall be calculated for each one hour H2S monitoring result, and the hourly fuel sulfur values shall be averaged over a rolling three hour period to determine compliance. [District Rule 2201]

12. Emission rates from each heater, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 25 ppmv @ 3% O2 or 0.030 lb/MMBtu, VOC: 5.5 lb/MMscf, PM10: 7.6 lb/MMscf or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

13. {588} Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

14. Daily combustion emissions from this permit unit shall not exceed any of the following: NOx (as NO2): 42.6 lb/day, VOC: 7.8 lb/day, PM10: 10.8 lb/day, or CO: 52.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. The duration of each startup and shutdown period for each heater shall not exceed 12 hours and 9 hours respectively. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

16. For fugitive emissions components associated with Hydrogen Booster Compressor: Any leak greater than 500 ppmv for pump seals and compressor seals and 100 ppmv for valves and connectors, when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21 or leaking at a rate of greater than 3 drops of liquid per minute, shall be repaired in a manner consistent with the procedures specified in Rule 4409 (adopted April 20, 2005). This requirement shall not apply to inaccessible or unsafe-to-access components as identified in the revised Operator Management Plan required by Rule 4455. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit

17. The permittee shall record the date and the duration of each startup and each shutdown. [District Rules 4305 and 4306]

CONDITIONS CONTINUE ON NEXT PAGE

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

19. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

22. Heater exhaust stacks 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

23. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

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

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

26. 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

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

28. 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

29. 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

CONDITIONS CONTINUE ON NEXT PAGE

30. The following test methods shall be used unless otherwise approved by the APCO and EPA: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, 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

31. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

32. {552} 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

33. {520} 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

34. {483} Nitrogen oxide (NOx) emission concentrations in ppmv shall be referenced at dry stack gas conditions, and shall be calculated to 3.00 percent by volume stack gas oxygen and averaged over 60 minutes, and lb/MMBtu rates shall be calculated as lb NO2/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit

35. 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

36. 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

37. {4194} Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]

38. {4253} Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

39. VOC emission rate from fugitive components associated with this emissions unit shall not exceed 101.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

40. 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-2a: 1995 EPA Protocol Refinery Screening Value Range Emission Factors. Permit holder shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit

41. Permit holder shall maintain accurate component count and resultant emissions from the Hydrogen Booster Compressor and #2 Hydrogen Compressors according to California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, CAPCOA/CARB Table IV-3a: CAPCOA -Revised 1995 EPA Protocol Refinery Correlation Equations. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

42. 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

43. 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

44. 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

45. 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

46. 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

47. 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

48. 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

49. 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

50. 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

CONDITIONS CONTINUE ON NEXT PAGE

51. 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

52. 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

53. 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

54. 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

55. 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

56. 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

57. 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

58. 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

59. 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

60. 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

CONDITIONS CONTINUE ON NEXT PAGE

61. 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

62. 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

63. 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

64. 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

65. 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

66. 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

67. 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

CONDITIONS CONTINUE ON NEXT PAGE

68. 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

69. 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

70. 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

71. 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

72. 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

73. 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

74. 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

75. 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

76. Permit unit shall comply with applicable District Rule 4001 (NSPS, Subpart GGG) requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

77. 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

78. Affected facilities for which construction or modification commenced after January 4, 1983 shall comply with applicable requirements of 40CFR, Subpart GGG. [40CFR60.590(a)]]

79. Each Subpart GGG 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)]

80. 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

CONDITIONS CONTINUE ON NEXT PAGE

81. Any Subpart GGG 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

82. Any Subpart GGG 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

83. If any Subpart GGG 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

84. Any Subpart GGG 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

85. Except during pressure releases, each Subpart GGG 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

86. After each pressure release, the Subpart GGG 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

87. Any Subpart GGG 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

88. Any pressure relief device that is equipped with a rupture disk upstream of the Subpart GGG 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

89. Except for in-situ sampling systems and sampling systems without purges, each Subpart GGG 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

90. Each Subpart GGG 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

91. Each Subpart GGG 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

CONDITIONS CONTINUE ON NEXT PAGE

92. Subpart GGG 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

93. Subpart GGG 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

94. Each Subpart GGG 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

95. Any Subpart GGG 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

96. When a leak is detected for any Subpart GGG 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

97. Any Subpart GGG 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

98. Any Subpart GGG 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

99. Any Subpart GGG 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

100. The owner or operator may elect to comply with the applicable provisions for Subpart GGG 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

101. If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and Subpart GGG valves in heavy liquid service, Subpart GGG pressure relief devices in light liquid or heavy liquid service, and Subpart GGG 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

CONDITIONS CONTINUE ON NEXT PAGE

102. When a leak is detected in Subpart GGG pumps and valves in heavy liquid service, Subpart GGG pressure relief devices in light liquid or heavy liquid service, and Subpart GGG 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

103. Delay of Subpart GGG 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

104. Delay of Subpart GGG 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

105. For Subpart GGG 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

106. For Subpart GGG 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

107. Except as provided in 40 CFR 60.482-10(i) through (k), each Subpart GGG 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

108. Delay of repair of a Subpart GGG 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

109. If a Subpart GGG 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

110. Any parts of the Subpart GGG 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

CONDITIONS CONTINUE ON NEXT PAGE

111. Any parts of the Subpart GGG 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

112. 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

113. 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

114. In conducting the Subpart GGG 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

115. 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

116. 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

117. The owner or operator shall test each piece of Subpart GGG 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

118. The owner or operator shall demonstrate that the Subpart GGG 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

CONDITIONS CONTINUE ON NEXT PAGE

119. 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

120. 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

121. When each Subpart GGG 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

122. When each Subpart GGG 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

123. The following information pertaining to the design requirements for Subpart GGG 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

124. 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 § 60.482-4; 4) (i) The dates of each compliance test as required in 40 CFR 60.482-2(e), 60.482-3(i), § 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

125. The following information pertaining to all Subpart GGG valves subject to the requirements of 40 CFR 60.482-7(g) and (h) and to all Subpart GGG 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

CONDITIONS CONTINUE ON NEXT PAGE

126. The following information shall be recorded for Subpart GGG 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

127. 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

128. 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

129. Information and data used to demonstrate that a piece of equipment is not in Subpart GGG 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

130. 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

131. All Subpart GGG 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

132. 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

133. 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

134. The Subpart GGG 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

CONDITIONS CONTINUE ON NEXT PAGE

135. 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

136. For compliance with Subpart GGG, 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

137. 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

138. 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 J. [District Rule 4001] Federally Enforceable Through Title V Permit

139. 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