San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

OCT 10 2014

Mr. David Campbell
San Joaquin Refining Company, Inc.
PO Box 5576
Bakersfield, CA 93388

Re: Proposed Authority to Construct/Certificate of Conformity (Minor Mod)
District Facility # S-36
Project # S-1142278

Dear Mr. Campbell:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. You have requested administrative corrections/modifications to the diesel treating unit permit S-36-51 to clarify equipment identifications and as-built condition.

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

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

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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

www.valleyair.org www.healthyairliving.com

Thank you for your cooperation in this matter.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Enclosures

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

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

Facility Name:	San Joaquin Refining Company	Date:	October 2, 2014
Mailing Address:	PO Box 5576	Engineer:	Stephen Leonard
		Lead Engineer:	Allan Phillips
Contact Person:	David Campbell		
Telephone:	661-327-8248		
Fax:	661-327-2150		
E-Mail:	davidc@sjr.com		
Application #(s):	S-36-51-20, '-51-21		
Project #:	S-1142278		
Deemed Complete:	July 8, 2014		

SJVAPCD AQE
OCT 06 2014

I. Proposal

San Joaquin Refining Company (SJR) has submitted ATC applications to modify their 103.4 MMBtu/hr diesel treating unit permit S-36-51-14. The proposed modifications are administrative changes intended to clarify, simplify, delete, or correct equipment listed in conditions with proper SJR identification codes and service of equipment. This ATC is intended to be converted to PTO shortly after issuance. A second ATC is being issued to include the same administrative corrections to previously issued, but not yet implemented, ATC S-36-51-19, which authorizes the installation of selective catalytic reduction (SCR) heater H-101 for Rule 4320 compliance. See Appendix A for the list of requested administrative corrections.

SJR is a Title V facility. SJR received their Title V permit on February 7, 2002. These modifications can be classified as Title V minor modifications pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authorities to Construct. SJR must apply to administratively amend their Title V permit prior to operating the equipment.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4305	Boilers, Steam Generators and Process Heaters – Phase II (8/21/03)
Rule 4306	Boilers, Steam Generators and Process Heaters – Phase III (10/16/08)
Rule 4320	Advanced Emissions Reduction Options for Boilers, Steam Generators and Process Heaters Greater Than 5.0 MMBtu/hr (10/16/08)
Rule 4351	Boilers, Steam Generators, and Process Heaters – Phase I (08/21/03)
Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice

California Environmental Quality Act (CEQA)

III. Project Location

The facility is located at the corner of Shell Street and Standard Street 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

The diesel hydrotreating unit S-36-51 removes sulfur and nitrogen from diesel feedstock to meet the specification for low sulfur diesel motor fuels. Sulfur is recovered in the sulfur recovery unit, with gases produced in the sulfur recovery unit being further treated to remove sulfur in the tail gas treating unit.

V. Equipment Listing

Pre-Project Equipment Description:

S-36-51-14: 103.4 MMBTU/HR DIESEL TREATING UNIT WITH SULFUR RECOVERY UNIT AND SAFETY FLARE

Proposed Modification:

S-36-51-20: MODIFICATION OF 103.4 MMBTU/HR DIESEL TREATING UNIT WITH SULFUR RECOVERY UNIT AND SAFETY FLARE: CORRECT LISTED RATINGS OF CERTAIN HEATERS, DESIGNATION AND/OR SERVICES OF CERTAIN VESSELS AND TANKS, AND OTHER ADMINISTRATIVE CORRECTIONS

S-36-51-21: MODIFICATION OF 103.4 MMBTU/HR DIESEL TREATING UNIT WITH SULFUR RECOVERY UNIT, CAUSTIC SCRUBBER, AND SAFETY FLARE: INSTALL SCR ON H-101 FOR RULE 4320 COMPLIANCE AND REMOVE OIL-FIRING PROVISIONS; ALSO CORRECT LISTED RATINGS OF CERTAIN HEATERS, DESIGNATION AND/OR SERVICES OF CERTAIN VESSELS AND TANKS, AND OTHER ADMINISTRATIVE CORRECTIONS

Post Project Equipment Description:

S-36-51-20, '-21: 103.4 MMBTU/HR DIESEL TREATING UNIT WITH SULFUR RECOVERY UNIT, CAUSTIC SCRUBBER, AND SAFETY FLARE

VI. Emission Control Technology Evaluation

These administrative modifications do not qualify as a Rule 2201 modification; therefore a review of emission control technology is not required.

VII. General Calculations

These administrative modifications do not qualify as a Rule 2201 modification; therefore calculations for PE, SSPE, SB 288 major modification, Federal Major Modification, and public notice are not required.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

These administrative modifications do not qualify as a Rule 2201 modification; therefore this rule does not apply and no further discussion is required.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to Rule 2520, and has received their Title V Operating Permit. The proposed modifications constitute a Minor Modification to the Title V Permit.

In accordance with Rule 2520, the modifications:

1. Do not violate any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
   a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
   b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

The facility has applied for a COC. Therefore the facility must apply to modify their Title V permit with an Administrative Amendment (AA) prior to operating with the proposed modifications. The facility may construct/operate under the ATC upon submittal of the Title V AA application, and the following conditions are listed on the ATCs to ensure compliance.

- {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]
- {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]

Rule 4001 New Source Performance Standards (NSPS)

40 CFR 60.18 (Subpart A) – General Provisions (general control device requirements)

The flare listed on S-36-51 is an affected facility under 40 CFR 60 Subparts A and J. The flare is not being modified as part of this project. Therefore, continued compliance with the requirements of 40 CFR 60 Subparts A and J is expected.

40 CFR 60.40c (Subpart Dc) – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

NSPS Subpart Dc applies to steam-generating units greater than 10 MMBtu/hr, but less than or equal to 100 MMBtu/hr for which construction, modification, or reconstruction has commenced after June 9, 1989. The boilers/heaters at this facility were constructed prior to that date. The Code of Federal Regulations, Title 40, Part 60, Subpart A, "General Provisions"

defines modification as resulting in an increase in emissions from an affected facility of any air pollutant or which a standard applies. This project does not result in an expected increase in emissions. Therefore, this project is not considered a modification under NSPS and this rule does not apply.

40 CFR 60.100 (Subpart J) – Standards of Performance for Petroleum Refineries

The provisions of this subpart are applicable to fluid catalytic cracking unit catalyst regenerators, fuel gas combustion devices, and all Claus sulfur recovery units except Claus plants of 20 long tons per day or less.

SJR is not installing a fluid catalytic cracking unit or any equipment fired on refinery fuel gas. SJR is proposing to install SCR on three heaters for Rule 4320 compliance.

The flare listed on S-36-51 is an affected facility under 40 CFR 60 Subparts A and J, and is not being modified as part of this project. Therefore, continued compliance with the requirements of 40 CFR 60 Subparts A and J is expected.

40 CFR 60.590 (Subpart GGG) – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries

No equipment is being modified as part of this project that is associated with any components that can leak. Therefore, this subpart is not applicable to this project.

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

This rule incorporates NESHAPs from 40 CFR 61, Chapter 1.C and the NESHAPs from 40 CFR 63 Chapter 1.C, and applies to all sources of HAPs listed therein. The oil-firing capability is being removed from the modified units. No subparts of 40 CFR Part 61 or 40 CFR Part 63 applies to natural gas-fired boilers.

Rule 4101 Visible Emissions

Section 5.0 requires 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). Visible emissions are not expected to exceed Ringelmann 1 or 20% opacity, and the following condition will be listed on the permit to ensure compliance.

- {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of

this process heater's operation. Therefore, compliance with this rule is expected and the following condition will remain on the permit to ensure compliance.

- {98} No air contaminant shall be released into the atmosphere, which causes a public nuisance. [District Rule 4102]

California Health & Safety Code 41700 (Health Risk Assessment)

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 discussed 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 4201 Particulate Matter Concentration

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

The concentration of particulate matter in the exhaust can be calculated given the following data, based on the highest PM_{10} emission factor of all of the units being modified.

F-Factor for Natural Gas:	8,578 dscf/MMBtu at 60 °F
PM_{10} Emission Factor:	0.0137 lb-PM_{10}/MMBtu
Percentage of PM as PM_{10} in Exhaust:	100%

$$\frac{\left(\frac{0.0137\,lb\cdot PM}{MMBtu}\times\frac{7{,}000\,grain}{lb}\right)}{\frac{8{,}578\,ft^3}{MMBtu}\times 1.17}=0.0096\frac{grain\cdot PM}{ft^3}$$

Since 0.0096 grain/dscf is less than 0.1 grain/dscf, compliance with District Rule 4201 is expected and the following condition will be listed on each permit to ensure compliance.

- {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 and 4301]

Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO_2, NO_2, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to ≤ 0.1 gr/scf. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas and LPG combustion are less than 1 μm in diameter.

The following table compares the emissions from each modified unit with Rule 4301 limits.

Rule 4301 Limits				
Unit	Pollutant	Emissions (lb/hr)	Rule 4301 Limit (lb/hr)	Compliant?
S-36-51-19	NO_2	0.5	140	Yes
Heater #H-101	SO_2	.2	200	Yes
	Total PM	0.6	200	Yes

Since none of the Rule 4301 limits are exceeded, compliance with Rule 4301 is expected, and the relevant conditions will remain on each permit.

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

Rule 4305 applies to any gaseous or liquid fueled boiler, steam generator or process heater with a rated heat input greater than 5 MMBtu/hr. These units are subject to Rule 4305.

The units are subject to Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3.*

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

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

Rule 4306 applies to any gaseous or liquid fueled boiler, steam generator or process heater with a rated heat input greater than 5 MMBtu/hr. Therefore this unit is subject to Rule 4306.

This unit is also subject to Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators and Process Heaters Greater Than 5.0 MMBtu/hr.*

Since the emissions limits and other requirements of District Rule 4320 are equivalent or more stringent than District Rule 4305 and 4306 requirements, compliance with District Rule 4320 requirements will satisfy the requirements of District Rule 4306.

Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators and Process Heaters Greater Than 5.0 MMBtu/hr

Each of the burners being connected to SCR is subject to Rule 4320. The applicant has proposed to comply with the Staged Enhanced Schedule initial limit of Rule 4320, Table

1.D.2(b) (9 ppmv NO_x at 3% O_2) proposed with ATC S-36-51-19 which is carried over to S-36-51-21 in this project.

Since the 52.2 MMBtu/hr Crude Heater #4 will not be retrofitted for Rule 4320 compliance, and consistent with their Rule 4320 ECP, the facility has elected to pay the annual fees for this emissions unit. Therefore, the following conditions are listed on the permit to ensure compliance.

- 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]
- Permittee shall maintain records of fuel hhv and cumulative annual fuel use for each heater for a period of at least five years and shall make such records readily available for District inspection upon request. [District Rules 4320 and 4351]

Compliance with Rule 4320

Section 5.2.1 states that on and after the indicated Compliance Deadline (July 1, 2012), units shall not be operated in a manner which exceeds the applicable NO_x emissions limit specified in Table 1, which is 9 ppmv.

Section 5.2.1 also states that units shall not be operated in a manner to which exceeds a carbon monoxide (CO) emissions limit of 400 ppmv.

The applicant has proposed to limit the NO_x emissions from each unit to 9 ppmv. The units will retain their current permitted limits for CO, which is 400 ppmv for the Heater #VH4, 100 ppmv for the Wickes Boiler, and 20 ppmv for the Heater #H-101.

Section 5.4.1.1 states that on and after the applicable NO_x Compliance Deadline, operators can meet the PM requirements by firing units exclusively on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases.

Section 5.4.1.2 states that on and after the applicable NO_x Compliance Deadline, operators shall limit fuel sulfur content to no more than five (5) grains of total sulfur per 100 scf.

Unit S-36-51 (Heater #H-101) is authorized to burn both natural gas and PSA off gas. The sulfur content of the PSA off gas is limited to 1.23 grains per 100 scf. This is lower than 5 grains/100 scf, and the following condition will ensure compliance.

- Sulfur content of PSA off gas combusted in reformer furnace H-101 shall not exceed 0.0123 grains/dscf. Sampling of PSA off gas to determine compliance with sulfur content limit shall be conducted annually. [District Rule 2201]

Section 5.7.1 requires that the operator shall install and maintain an operational APCO approved Continuous Emissions Monitoring System (CEMS) for NO_x, CO, and oxygen, or implement an APCO-approved Alternate Monitoring System.

The applicant has proposed to continue to use Alternate Monitoring Scheme A, and the following conditions are listed on each permit.

- 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 4320]
- In stack oxygen monitors are acceptable for O2 measurement. [District Rules 4305, 4306 and 4320] (Taken from former PTOs S-36-1-14 and 41-16.)
- 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 performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320]
- 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 4320]
- 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 4320]

Section 6.3.1 requires each unit subject to the requirements in Section 5.2 to be source tested to determine compliance with the applicable emission limits at least once every 12 months, (no more than 30 days before or after the required annual source test date).

Section 6.3.1.1 allows units that demonstrate compliance on two consecutive 12-month source tests to defer the following 12-month source test for up to 36 months (no more than 30 days before or after the required 36-month source test date).

Section 6.2 specifies the source testing methods that may be used to demonstrate compliance during the source tests.

Section 6.1 requires that records of all monitoring and source test results be retained for a period of at least 5 years and made available for District inspection upon request.

The following conditions are listed on ATC S-36-51-21 (SCR Installation).

- Source testing to measure NO_x and CO emissions from the 47.1 MMBtu/hr Heater #H-101 shall be conducted within 60 days of initial startup. [District Rules 4305, 4306 and 4320]

The following conditions are listed on all permits in this project.

- {4345} Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320]
- {109} 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]
- {4350} The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] N
- {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
- {4346} NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320]
- {4347} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] N
- {4348} Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]
- {4349} Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]
- {4352} For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test

cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320]

- {4351} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320]

Section 6.3.2 allows for representative source testing.

Since there are no similar units listed at this facility, the existing representative source testing conditions are being removed from all permits in this project.

Conclusion: These units are expected to comply with Rule 4320.

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

Section 2.0 states that this rule is applicable to equipment with a rated heat input greater than 5.0 MMBtu/hr that is fired with gaseous and or liquid fuel, and is included in a major NO_X source.

Section 5 requires that any natural or induced draft unit to have a NO_x limit of no greater than 0.18 lb-NO_x/MMBtu (147 ppmv @ 3% O_2). The NO_x limit on the heater unit in this project, after install;; is 0.011 lb-NO_x/MMBtu (9 ppmv @ 3% O_2). Therefore, compliance with Rule 4351 is expected.

Rule 4801 Sulfur Compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO_2, on a dry basis averaged over 15 consecutive minutes.

Using the ideal gas equation and the highest of the SO_x emission factors presented in Section VII, the sulfur compound emissions are calculated as follows.

$$Volume\,SO_2 = \frac{n \cdot R \cdot T}{P}$$

Where

n = moles SO_2

T (Standard Temperature) = 60°F = 520°R

P (Standard Pressure) = 14.7 psi

R (Universal Gas Constant) = $\frac{10.73\,\text{psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot {}^\circ\text{R}}$

$$\frac{0.0034\,lb \cdot SOx}{MMBtu} \times \frac{MMBtu}{8{,}578\,dscf} \times \frac{1\,lb \cdot mol}{64\,lb} \times \frac{10.73\,psi \cdot ft^3}{lb \cdot mol \cdot {}^\circ R} \times \frac{520{}^\circ R}{14.7\,psi} \times \frac{1{,}000{,}000 \cdot parts}{million} = 2.35\,\frac{parts}{million}$$

Since the sulfur concentration of 2.35 ppmv is less than 2,000 ppmv, compliance with Rule 4801 is expected.

The current sulfur condition on each permit has been revised to state:

- The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. [District Rule 4801]

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

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

Greenhouse Gas (GHG) Significance Determination

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

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

District CEQA Findings

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible

expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful COC EPA Notice, issue ATCs S-36-51-20 and '- 51-21 subject to the permit conditions listed on the attached draft ATCs.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-36-51-19	3020-02-H	103.4 MMBtu/hr	$1,030

Appendixes

A: Current Permit to Operate S-36-51-14
B: Previously issued Authority to Construct S-36-51-19
C: List of Requested Corrections to Permits
D: Draft Authority to Construct Documents S-36-51-20 & S-36-51-21
E: Title V Compliance Certification Form

APPENDIX A

Current Permit to Operate
S-36-51-14

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-36-51-14 **EXPIRATION DATE:** 08/31/2016

SECTION: 23 **TOWNSHIP:** 29S **RANGE:** 27E

EQUIPMENT DESCRIPTION:
103.4 MMBTU/HR DIESEL TREATING UNIT WITH SULFUR RECOVERY UNIT AND SAFETY FLARE

PERMIT UNIT REQUIREMENTS

1. No modification to heater H-501 shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
2. When heater H-501 is not operated, the fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit
3. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant heater, at which time this permit will be administratively modified to remove DEU references. [District Rule 4306] Federally Enforceable Through Title V Permit
4. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of heater H-501. [District Rule 4306] Federally Enforceable Through Title V Permit
5. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit
6. The duration of each startup and shutdown period for the 47.1 MMBtu/hr furnace #H-101 shall not exceed 12.0 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
7. The duration of each startup and shutdown period for the 7.4 MMBtu/hr heater #H-201 shall not exceed 8.0 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
8. The duration of each startup and shutdown period for the 17.0 MMBtu/hr heater #H-501 shall not exceed 7.25 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
9. The duration of each startup and shutdown period for the 8.4 MMBtu/hr heater #H-601 shall not exceed 7.5 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
10. The duration of each startup and shutdown period for the 7.4 MMBtu/hr heater #H-602 shall not exceed 7.5 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
11. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Equipment includes caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps 970A and 970 B. [District NSR Rule] Federally Enforceable Through Title V Permit

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13. Equipment includes: 47.1 MMBtu/hr natural gas-fired and PSA offgas fired reformer furnace #H-101; 30.0 MMBtu/hr (limited to 17.0 MMBtu/hr by fuel limit) refinery fuel gas-fired 1st fractionator heater #H-501; and 7.44 MMBtu/hr refinery fuel gas-fired heater for #H-201 HDS reactor. [District Rule 2010] Federally Enforceable Through Title V Permit

14. Equipment includes: 10.5 MMBtu/hr (limited to 8 MMBtu/hr by fuel limit) refinery fuel gas-fired 3rd fractionator heater #H-602; and 8.4 MMBtu/hr refinery fuel gas-fired 2nd fractionator heater #H-601. [District Rule 2010] Federally Enforceable Through Title V Permit

15. Equipment includes draft fan C-101, reformer M-101, desulfur vessel V-101, shift convertor vessel V-102, process condenser drum V-103, and deaerator V-104. [District Rule 2010] Federally Enforceable Through Title V Permit

16. Equipment includes steam drum V-105, blowdown drum V-106, steam separator V-107, PSA adsorbers V-108 A,B,C & D, and offgas drum V-109. [District Rule 2010] Federally Enforceable Through Title V Permit

17. Equipment includes one 1275 bbl sour water pressure vessel, one 711 bbl, one 1275 bbl, and one 719 bbl light naphtha pressure vessels, and light naphtha loading rack with nitrogen purge system. [District Rule 2010] Federally Enforceable Through Title V Permit

18. Unit 200 (HDS section) includes oil filter A-201, O/H stripper B-201, coke drum B-202, intermediate stripper F-201, and HDS reactor R-201. [District Rule 2010] Federally Enforceable Through Title V Permit

19. Unit 300 (HDA section) includes hot separator B-301, recycle gas separator B-302, recycle gas compressor K/O drum B-310, hydrogen (H2) gas compressors K-301 A/B, and HDA reactor R-301. [District Rule 2010] Federally Enforceable Through Title V Permit

20. Unit 400 (amine wash & sour water stripper) includes amine solution filter A-401, OH separator B-401, amine K/O drum B-402, amine solution flash drum B-403, amine adsorber F-401, amine regenerator F-402, and amine storage tank T-401. [District Rule 2010] Federally Enforceable Through Title V Permit

21. Unit 400 includes sour water flash drum B-411, slop oil drum B-412, sour water stripper F-410, and sour water feed tank T-411. [District Rule 2010] Federally Enforceable Through Title V Permit

22. Unit 500 (1st fractionator) includes OH separator B-501, HDA feed surge drum B-502, OH separator for light ends stripper B-503, coke drum B-504, 1st fractionator F-501, light ends stripper F-502, and 1st fractionator feed heater H-501. [District Rule 2010] Federally Enforceable Through Title V Permit

23. Unit 600 (2nd/3rd fractionators) includes 2nd fractionator accumulator B-601, 3rd fractionator accumulator B-602, 2nd fractionator F-601, 3rd fractionator F-602, and kero stripper F-603. [District Rule 2010] Federally Enforceable Through Title V Permit

24. Unit 600 includes heavy solvent stripper F-604, 2nd fractionator reboiler H-601, 3rd fractionator reboiler H-602, compressors K-601 A/B, and vacuum pumps K-602 A/B. [District Rule 2010] Federally Enforceable Through Title V Permit

25. Sulfur recovery unit includes liquified oxygen storage facility combustion oxygen enriched air blower 10-K-01A, spare combustion oxygen enriched air blower 10-K-01B, amine acid gas and NH3 gas KO drums 10-V-01/02, and converter 1/2/3-common shell with hydrogenation reactor 10-V-04/05/06. [District Rule 2010] Federally Enforceable Through Title V Permit

26. Sulfur recovery unit includes sulfur pit vent eductor 10-K-02 (venting to thermal oxidizer 10-F-02), reaction furnace 10-F-01, thermal oxidizer and stack 10-F-02, sulfur pit 10-T-01, K/O drum sour water pumps 10-P-01 A/B, sulfur pump 10-P-03, and boiler feedwater pumps 10-P-04 A/B. [District Rule 2010] Federally Enforceable Through Title V Permit

27. Tailgas unit includes reducing gas generator (RGG) 11-F-01, contact condenser pumps 11-P-01 A/B, rich amine pumps 11-P-02 A/B, regenerator reflux pumps 11-P-03 A/B, amine sump pump 11-P-04, and lean amine pump 11-P-05. [District Rule 2010] Federally Enforceable Through Title V Permit

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28. Tail gas unit includes amine surge drum 11-T-01, hydrogenation reactor 11-V-01, contact condenser 11-V-02, amine absorber 11-V-03, amine regenerator 11-V-04, and regenerator reflux drum 11-V-05. [District Rule 2010] Federally Enforceable Through Title V Permit

29. The Claus sulfur recovery unit sulfur production shall not exceed six long tons per day. [District NSR Rule] Federally Enforceable Through Title V Permit

30. Fugitive emission rate from caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps P-970-A and P-970-B, calculated using the California Implementation Guideline for Estimating Mass Emissions of Fugitive Hydrocarbon leaks at Petroleum Facilities, Table IV-2a. 1995 EPA Protocol, Refinery Screening Value Range Emissions Factors, shall not exceed 1.1 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

31. Permittee shall maintain accurate fugitive emissions component counts and calculation of resulting emissions from caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps P-970-A and P-970-B using fugitive emissions factors described in this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

32. Gas leaks exceeding 10,000 ppmv and liquid leaks exceeding 3 drops per minute from the caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps P-970-A and P-970-B are a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit

33. Flare shall burn no more than 190,000 scf in any day of hydrogen plant gas, purchased natural gas, and all gases from diesel stripper, diesel hydrogenation flash drum, sour water stripper tank, vapors collected from S-36-104, and gases from heavy oil hydrofinisher processing unit on S-36-109. [Rule 2010] Federally Enforceable Through Title V Permit

34. Upon recommencing operation, permittee shall demonstrate fuel limitation for heater H-501 by either a non-resettable fuel meter for each heater and daily records of fuel use, or provide District approved documentation demonstrating how the fuel flow is limited to the permitted rating. [District NSR Rule] Federally Enforceable Through Title V Permit

35. Permittee shall demonstrate fuel limitation for heater H-602 by either a non-resettable fuel meter for each heater and daily records of fuel use, or provide District approved documentation demonstrating how the fuel flow is limited to the permitted rating. [District NSR Rule] Federally Enforceable Through Title V Permit

36. All gases from diesel stripper, diesel hydrogenation flash drum, and sour water stripper tank shall be sent to MEA section for sulfur compound removal except during plant shutdown or breakdown conditions pursuant to Rule 1100 when it shall be burned in the flare. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Flare equipped with flared gas flow meter serving hydrogen plant gas, purchased natural gas, and all gases from diesel stripper, diesel hydrogenation flash drum, sour water stripper tank, vapors collected from S-36-104, and gases from heavy oil hydrofinisher processing unit on S-36-109. These gases shall only be flared during breakdown conditions pursuant to Rule 1100 and during plant shutdowns. [District Rule 4001] Federally Enforceable Through Title V Permit

38. Hydrogen sulfide analyzer/recorder shall be located at exit of tail gas unit prior to thermal oxidizer 10-F-02 and shall be operational and utilized except during bypass of the tail gas treating unit during startup or shutdown. [District NSR Rule] Federally Enforceable Through Title V Permit

39. Bypass of the tailgas unit will occur only when natural gas is supplied to the main reactor furnace during startup or shutdown of the sulfur recovery unit or tail gas treating unit. [District NSR Rule] Federally Enforceable Through Title V Permit

40. Pressure in sour water tank and light naphtha tanks shall be maintained above 15 psig. Sour water tank pressure relief valve shall be set at 40 psig and the light naphtha pressure relief valves shall be set at 50 psig and shall vent to atmosphere. [District Rule 4001] Federally Enforceable Through Title V Permit

41. Light naphtha liquid from overhead accumulator shall be sent to light naphtha pressure storage vessels. [District NSR Rule] Federally Enforceable Through Title V Permit

42. Overhead accumulator offgas shall be sent to the fuel gas compressor for introduction into fuel gas system, or shall be flared under plant breakdown conditions pursuant to Rule 1100. [District NSR Rule] Federally Enforceable Through Title V Permit

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43. All sour water must be treated in sour water stripper prior to being exposed to the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit

44. Sour water pressure tank shall vent to sulfur plant or shall vent to flare during breakdown conditions pursuant to Rule 1100. [District NSR Rule] Federally Enforceable Through Title V Permit

45. If thermal oxidizer 10-F-2 is inoperative, sour water shall not be pumped from sour water storage vessel and diesel hydrotreating unit and heavy oil hydrofinishing processing unit shall be shut down. [District NSR Rule] Federally Enforceable Through Title V Permit

46. Sulfur recovery unit and tailgas unit overall sulfur removal shall be no less than 99.8% by weight except during startup or shutdown conditions. [District NSR Rule] Federally Enforceable Through Title V Permit

47. The inlet gas stream to the thermal oxidizer shall not contain greater than 10 ppmv H2S on a three hour rolling average basis except during startup or shutdown conditions of the sulfur recovery unit or tail gas treating unit. [District NSR Rule] Federally Enforceable Through Title V Permit

48. Startup and shutdown conditions for the sulfur recovery unit and tail gas treating unit combined shall not occur for more than 12 hours in any day. [District NSR Rule] Federally Enforceable Through Title V Permit

49. Thermal oxidizer sulfur compound emissions during startup or shutdown conditions of the sulfur recovery unit or tail gas treating unit shall not exceed 2000 ppm as SO2. [District NSR Rule and 4801] Federally Enforceable Through Title V Permit

50. SOx emissions from the sulfur recovery unit and tail gas treating unit through the thermal oxidizer shall not exceed 109.6 pounds per day. [District NSR Rule] Federally Enforceable Through Title V Permit

51. Only natural gas consisting primarily of methane and less than 5% by weight hydrocarbons heavier than butane and PSA offgas shall be combusted in reformer furnace #H-101. [District NSR Rule] Federally Enforceable Through Title V Permit

52. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 27.99 lb per day. [District NSR Rule] Federally Enforceable Through Title V Permit

53. Emissions from process heater H-101 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 0.015 lb/MMBtu. [District NSR Rule, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

54. Emissions from process heater H-201 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.0353 lb/MMBtu or 29.4 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O2. [District NSR Rule] Federally Enforceable Through Title V Permit

55. Upon recommencing operation, emissions from process heater H-501 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O2. [District NSR Rule, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

56. Emissions from process heaters H-602 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O2. [District NSR Rule, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

57. Emissions from process heater H-601 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 400 ppmv @ 3% O2. [District NSR Rule, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

58. Emissions from flare shall not exceed any of the following: PM10: 2.7 lb/day, SOx: 104.9 lb/day, NOx: 6.8 lb/day, VOC: 7.4 lb/day, or CO: 70.3 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

59. Sulfur content of PSA offgas combusted in reformer furnace H-101 shall not exceed 0.0123 grains/dscf. Sampling of PSA offgas to determine compliance with sulfur content limit shall be conducted annually. [District NSR Rule] Federally Enforceable Through Title V Permit

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60. Upon recommencing operation, sulfur content of fuel gas combusted by 1st fractionator feed heater H-501 shall not exceed 0.10 grains/dscf as determined on a rolling three (3) hour average basis. [40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit

61. Sulfur content of fuel gas combusted by 2nd fractionator feed heater H-602 and heater H-201 shall not exceed 0.0553 grains/dscf as determined on a rolling three (3) hour average basis. [District NSR Rule and 40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit

62. Sulfur content of fuel gas combusted by 3rd fractionator feed heater H-601 shall not exceed 0.069 grains/dscf as determined on a rolling three (3) hour average basis. [District NSR Rule and 40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit

63. Permittee shall maintain accurate records of number of fugitive emissions components and calculated emissions using Technical Guidance Document to AB2588 for refineries Tables D1-D3, AP-42 Table 9.1-2, or other District approved emission factors. [District Rule 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

64. Upon recommencing operation, heater H-501 shall be equipped with sampling facilities for source testing in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

65. All fired equipment, H-101, H-201, H-601, and H-602, shall be equipped with sampling facilities for source testing in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

66. Source testing of heaters H-101, H-201, H-501, H-601 and H-602 to measure NOx and CO emissions 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

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

68. 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

69. 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

70. 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

71. 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

72. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

73. Permittee shall comply with all applicable notification, reporting, recordkeeping, testing, and maintenance requirements of Rule 4001 (40 CFR 60; subparts J, GGG, and QQQ). Heaters H-201, H-501, H-601, H-602, and the flare are subject to Subpart J. [District Rule 4001] Federally Enforceable Through Title V Permit

74. Equipment shall include monitoring system as required by 40 CFR 60, Subpart J for monitoring and recording of sulfur content (dry basis) of fuel gas (except PUC regulated natural gas, psa offgas, and combinations of only PUC gas and psa offgas) prior to combustion. [District Rule 4001] Federally Enforceable Through Title V Permit

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75. The combustion in the thermal oxidizer, or other fuel gas combustion device of gases released as a result of start-up, shutdown, or malfunction is exempt from the 0.1 gr/dscf H2S requirement. The combustion in the flare of gases released as a result of start-up, shutdown, upset, malfunction, or the result of relief valve leakage is exempt from the 0.1 gr/dscf H2S requirement. [District Rule 4001, Subpart J] Federally Enforceable Through Title V Permit

76. Continuous emissions monitoring system 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 Rule 4001] Federally Enforceable Through Title V Permit

77. PSA gas monitoring shall be maintained pursuant to EPA approved alternate monitoring, one analysis for the sulfur content of the feedstock gas each reporting period and a statement confirming that the pipeline natural gas is the only feed to the hydrogen plant. [District Rule 4001] Federally Enforceable Through Title V Permit

78. Permittee shall maintain accurate daily records of amount of gas burned in the flare. [District Rule 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

79. Permittee shall sample flared gas for H2S content twice daily. [District Rule 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

80. Permittee shall maintain accurate records of fuel consumption data, operational data, startup and shutdown condition frequency and duration of the sulfur recovery unit, and gas sulfur content to verify daily emission limit compliance. [District NSR Rule and 1070] Federally Enforceable Through Title V Permit

81. All records required by this permit shall be made available for District inspection upon request for a period of five years. [District Rule 1070, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

82. Operator shall not burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H2S) in excess of 0.10 gr/dscf (230 mg/dscm). [40 CFR Part 60, subpart J, 60.104(a)(1)] Federally Enforceable Through Title V Permit

83. Operator shall report all rolling 3-hour periods during which the average concentration of H2S as measured by the H2S continuous monitoring system exceeds 0.10 gr/dscf (230 mg/dscm). [40 CFR Part 60, subpart J, 60.105(e)(3)(ii)] Federally Enforceable Through Title V Permit

84. Operator shall determine compliance with the H2S standard using EPA Method 11. [40 CFR Part 60, subpart J, 60.106(e)] Federally Enforceable Through Title V Permit

85. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

86. 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

87. Operator shall maintain all records for at least five years and conform to the recordkeeping requirements described in District Rule 2520. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

88. 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

89. Emissions of sulfur compounds from any of the following units, H-101, H-201, H-501, H-601, H-602 shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit

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90. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

91. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

92. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

93. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2.1; 4306, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

94. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period (Kern County Rule 407). To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.3.2 and 4801] Federally Enforceable Through Title V Permit

95. 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 Rules 4305, 5.0, 8.2; 4306, 8.1; and/or 4351, 8.1] Federally Enforceable Through Title V Permit

96. Emissions from H-101, H-201, H-501, H-601, and H-602 shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 forty-minute test runs for NOx and CO. [District Rule 1081] Federally Enforceable Through Title V Permit

97. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

98. Flares shall only be used with the net heating value of the gas being combusted being 200 Btu/scf or greater if the flare is non-assisted; or with the net heating value of the gas being combusted being 300 Btu/scf or greater if the flare is air-assisted or steam-assisted. [40 CFR 60.18 (c)(3)] Federally Enforceable Through Title V Permit

99. The net heating value of the gas being combusted in a flare shall be calculated annually, pursuant to 40 CFR 60.18(f)(3) and using EPA Method 18, ASTM D1946, and ASTM D2382. [40 CFR 60.18 (f)(3-6)] Federally Enforceable Through Title V Permit

100. Air-assisted flares shall be operated with an exit velocity less than Vmax, as determined by the equation specified in paragraph 40 CFR 60.18 (f)(6). [40 CFR 60.18 (c)(5)] Federally Enforceable Through Title V Permit

101. Nonassisted and steam-assisted flares shall be operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18 (f)(4), less than 60 ft/sec, except as provided in 40 CFR 60.18 (c)(4)(ii) and (iii). [40 CFR 60.18 (c)(4)(i)] Federally Enforceable Through Title V Permit

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

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

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

105. Flares shall be operated with a flame present at all times, and kept in operation when emissions may be vented to them. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. [40 CFR 60.18 (c)(2), 60.18 (e), and 60.18 (f)(2)] Federally Enforceable Through Title V Permit

106. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

107. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of District Rule 4801, section 3.1 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

108. Heat exchangers 11-E-01A and 11-E-01B shall not operate concurrently. [District Rule 2010] Federally Enforceable Through Title V Permit

109. Permittee shall keep an accurate record of dates of inspection and monitoring, components inspected and monitored, and results of fugitive emissions calculations for compliance with the daily emission limit of the caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps P-970-A and P-970-B. Such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and District NSR Rule] Federally Enforceable Through Title V Permit

110. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit

111. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit

112. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an alternative equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit

113. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit

114. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere. [District Rule 5.8] Federally Enforceable Through Title V Permit

115. The operator shall minimize sulfur dioxide flare emissions to less than 1.50 tons per million barrels of crude processing capacity, calculated as an average over one calendar year. [District Rule 4311, 5.9.1] Federally Enforceable Through Title V Permit

116. The operator shall monitor the vent gas flow to the flare with a flow measuring device. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

117. The operator shall maintain and retain on-site for a minimum of five years, and made available to the APCO, ARB, and EPA a copy of the approved flare minimization plan, a copy of annual reports submitted to the District, and all applicable flare monitoring data collected as required by this permit. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit

118. The operator of a flare subject to flare minimization shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, which ever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2] Federally Enforceable Through Title V Permit

119. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: the results of an investigation to determine the primary cause and contributing factors of the flaring event; any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; if appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and the date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit

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

121. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. [District Rule 4311, 6.3.4.1] Federally Enforceable Through Title V Permit

122. Vent gas flow shall be determined using a verification method recommended by the manufacturer of the flow monitoring equipment installed. [District Rule 4311, 6.3.5.2] Federally Enforceable Through Title V Permit

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

124. The operator shall provide the APCO with access to the flare monitoring system to collect the vent gas samples. [District Rule 4311, 6.6.7] Federally Enforceable Through Title V Permit

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

126. The operator shall monitor and record the water level and pressure of the water seal that services the flare daily. [District Rule 4311, 6.8] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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

APPENDIX B

Previously issued Authority to Construct S-36-51-19

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

PERMIT NO: S-36-51-19 **ISSUANCE DATE:** 12/12/2011

LEGAL OWNER OR OPERATOR: SAN JOAQUIN REFINING COMPANY
MAILING ADDRESS: PO BOX 5576
BAKERSFIELD, CA 93388

LOCATION: STANDARD AND SHELL ST
BAKERSFIELD, CA 93308

SECTION: 23 **TOWNSHIP:** 29S **RANGE:** 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 103.4 MMBTU/HR DIESEL TREATING UNIT WITH SULFUR RECOVERY UNIT, CAUSTIC SCRUBBER, AND SAFETY FLARE: INSTALL SCR ON H-101 FOR RULE 4320 COMPLIANCE AND REMOVE OIL-FIRING PROVISIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. No modification to heater H-501 shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
4. When heater H-501 is not operated, the fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit
5. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant heater, at which time this permit will be administratively modified to remove DEU references. [District Rule 4306] Federally Enforceable Through Title V Permit
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of heater H-501. [District Rule 4306] 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

DAVID WARNER, Director of Permit Services
S-36-51-19 Dec 12 2011 1 23PM – ROEDERS Joint Inspection NOT Required

7. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit
8. The duration of each startup and shutdown period for the 47.1 MMBtu/hr furnace #H-101 shall not exceed 12.0 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
9. The duration of each startup and shutdown period for the 7.4 MMBtu/hr heater #H-201 shall not exceed 8.0 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
10. The duration of each startup and shutdown period for the 17.0 MMBtu/hr heater #H-501 shall not exceed 7.25 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
11. The duration of each startup and shutdown period for the 8.4 MMBtu/hr heater #H-601 shall not exceed 7.5 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
12. The duration of each startup and shutdown period for the 7.4 MMBtu/hr heater #H-602 shall not exceed 7.5 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
13. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Equipment includes caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps 970A and 970 B. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Equipment includes: 47.1 MMBtu/hr natural gas-fired and PSA offgas fired reformer furnace #H-101; 30.0 MMBtu/hr (limited to 17.0 MMBtu/hr by fuel limit) refinery fuel gas-fired 1st fractionator heater #H-501; and 7.44 MMBtu/hr refinery fuel gas-fired heater for #H-201 HDS reactor. [District Rule 2010] Federally Enforceable Through Title V Permit
16. Heater H-101 shall be equipped with a SCR system. The heater shall not be operated unless the SCR system is operating. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The exhaust stack from heater H-101 shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
18. Ammonia slip from the SCR unit shall not exceed 10 ppmv @ 3% O2. [District Rule 4102]
19. Monthly records of the total amount of ammonia used by the SCR system shall be maintained. [District Rules 1070 and 2520, 9.4.1] Federally Enforceable Through Title V Permit
20. Equipment includes: 10.5 MMBtu/hr (limited to 8 MMBtu/hr by fuel limit) refinery fuel gas-fired 3rd fractionator heater #H-602; and 8.4 MMBtu/hr refinery fuel gas-fired 2nd fractionator heater #H-601. [District Rule 2010] Federally Enforceable Through Title V Permit
21. Equipment includes draft fan C-101, reformer M-101, desulfur vessel V-101, shift convertor vessel V-102, process condenser drum V-103, and deaerator V-104. [District Rule 2010] Federally Enforceable Through Title V Permit
22. Equipment includes steam drum V-105, blowdown drum V-106, steam separator V-107, PSA adsorbers V-108 A,B,C & D, and offgas drum V-109. [District Rule 2010] Federally Enforceable Through Title V Permit
23. Equipment includes one 1,275 bbl sour water pressure vessel, one 711 bbl, one 1,275 bbl, and one 719 bbl light naphtha pressure vessels, and light naphtha loading rack with nitrogen purge system. [District Rule 2010] Federally Enforceable Through Title V Permit
24. Unit 200 (HDS section) includes oil filter A-201, O/H stripper B-201, coke drum B-202, intermediate stripper F-201, and HDS reactor R-201. [District Rule 2010] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

25. Unit 300 (HDA section) includes hot separator B-301, recycle gas separator B-302, recycle gas compressor K/O drum B-310, hydrogen (H2) gas compressors K-301 A/B, and HDA reactor R-301. [District Rule 2010] Federally Enforceable Through Title V Permit

26. Unit 400 (amine wash & sour water stripper) includes amine solution filter A-401, OH separator B-401, amine K/O drum B-402, amine solution flash drum B-403, amine adsorber F-401, amine regenerator F-402, and amine storage tank T-401. [District Rule 2010] Federally Enforceable Through Title V Permit

27. Unit 400 includes sour water flash drum B-411, slop oil drum B-412, sour water stripper F-410, and sour water feed tank T-411. [District Rule 2010] Federally Enforceable Through Title V Permit

28. Unit 500 (1st fractionator) includes OH separator B-501, HDA feed surge drum B-502, OH separator for light ends stripper B-503, coke drum B-504, 1st fractionator F-501, light ends stripper F-502, and 1st fractionator feed heater H-501. [District Rule 2010] Federally Enforceable Through Title V Permit

29. Unit 600 (2nd/3rd fractionators) includes 2nd fractionator accumulator B-601, 3rd fractionator accumulator B-602, 2nd fractionator F-601, 3rd fractionator F-602, and kero stripper F-603. [District Rule 2010] Federally Enforceable Through Title V Permit

30. Unit 600 includes heavy solvent stripper F-604, 2nd fractionator reboiler H-601, 3rd fractionator reboiler H-602, compressors K-601 A/B, and vacuum pumps K-602 A/B. [District Rule 2010] Federally Enforceable Through Title V Permit

31. Sulfur recovery unit includes liquefied oxygen storage facility combustion oxygen enriched air blower 10-K-01A, spare combustion oxygen enriched air blower 10-K-01B, amine acid gas and NH3 gas KO drums 10-V-01/02, and converter 1/2/3-common shell with hydrogenation reactor 10-V-04/05/06. [District Rule 2010] Federally Enforceable Through Title V Permit

32. Sulfur recovery unit includes sulfur pit vent eductor 10-K-02 (venting to thermal oxidizer 10-F-02), reaction furnace 10-F-01, thermal oxidizer and stack 10-F-02, sulfur pit 10-T-01, K/O drum sour water pumps 10-P-01 A/B, sulfur pump 10-P-03, and boiler feedwater pumps 10-P-04 A/B. [District Rule 2010] Federally Enforceable Through Title V Permit

33. Tailgas unit includes reducing gas generator (RGG) 11-F-01, contact condenser pumps 11-P-01 A/B, rich amine pumps 11-P-02 A/B, regenerator reflux pumps 11-P-03 A/B, amine sump pump 11-P-04, and lean amine pump 11-P-05. [District Rule 2010] Federally Enforceable Through Title V Permit

34. Tail gas unit includes amine surge drum 11-T-01, hydrogenation reactor 11-V-01, contact condenser 11-V-02, amine absorber 11-V-03, amine regenerator 11-V-04, and regenerator reflux drum 11-V-05. [District Rule 2010] Federally Enforceable Through Title V Permit

35. The Claus sulfur recovery unit sulfur production shall not exceed six long tons per day. [District Rule 2201] Federally Enforceable Through Title V Permit

36. Fugitive emission rate from caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps P-970-A and P-970-B, calculated using the California Implementation Guideline for Estimating Mass Emissions of Fugitive Hydrocarbon leaks at Petroleum Facilities, Table IV-2a. 1995 EPA Protocol, Refinery Screening Value Range Emissions Factors, shall not exceed 1.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

37. Permittee shall maintain accurate fugitive emissions component counts and calculation of resulting emissions from caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps P-970-A and P-970-B using fugitive emissions factors described in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

38. Gas leaks exceeding 10,000 ppmv and liquid leaks exceeding 3 drops per minute from the caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps P-970-A and P-970-B are a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

39. Flare shall burn no more than 190,000 scf in any day of hydrogen plant gas, purchased natural gas, and all gases from diesel stripper, diesel hydrogenation flash drum, sour water stripper tank, vapors collected from S-36-104, and gases from heavy oil hydrofinisher processing unit on S-36-109. [District Rule 2010] Federally Enforceable Through Title V Permit

40. Upon recommencing operation, permittee shall demonstrate fuel limitation for heater H-501 by either a non-resettable fuel meter for each heater and daily records of fuel use, or provide District approved documentation demonstrating how the fuel flow is limited to the permitted rating. [District Rule 2201] Federally Enforceable Through Title V Permit

41. Permittee shall demonstrate fuel limitation for heater H-602 by either a non-resettable fuel meter for each heater and daily records of fuel use, or provide District approved documentation demonstrating how the fuel flow is limited to the permitted rating. [District Rule 2201] Federally Enforceable Through Title V Permit

42. All gases from diesel stripper, diesel hydrogenation flash drum, and sour water stripper tank shall be sent to MEA section for sulfur compound removal except during plant shutdown or breakdown conditions pursuant to Rule 1100 when it shall be burned in the flare. [District Rule 2201] Federally Enforceable Through Title V Permit

43. Flare equipped with flared gas flow meter serving hydrogen plant gas, purchased natural gas, and all gases from diesel stripper, diesel hydrogenation flash drum, sour water stripper tank, vapors collected from S-36-104, and gases from heavy oil hydrofinisher processing unit on S-36-109. These gases shall only be flared during breakdown conditions pursuant to Rule 1100 and during plant shutdowns. [District Rule 4001] Federally Enforceable Through Title V Permit

44. Hydrogen sulfide analyzer/recorder shall be located at exit of tail gas unit prior to thermal oxidizer 10-F-02 and shall be operational and utilized except during bypass of the tail gas treating unit during startup or shutdown. [District NSR Rule] Federally Enforceable Through Title V Permit

45. Bypass of the tailgas unit will occur only when natural gas is supplied to the main reactor furnace during startup or shutdown of the sulfur recovery unit or tail gas treating unit. [District NSR Rule] Federally Enforceable Through Title V Permit

46. Pressure in sour water tank and light naphtha tanks shall be maintained above 15 psig. Sour water tank pressure relief valve shall be set at 40 psig and the light naphtha pressure relief valves shall be set at 50 psig and shall vent to atmosphere. [District Rule 4001] Federally Enforceable Through Title V Permit

47. Light naphtha liquid from overhead accumulator shall be sent to light naphtha pressure storage vessels. [District NSR Rule] Federally Enforceable Through Title V Permit

48. Overhead accumulator offgas shall be sent to the fuel gas compressor for introduction into fuel gas system, or shall be flared under plant breakdown conditions pursuant to Rule 1100. [District NSR Rule] Federally Enforceable Through Title V Permit

49. All sour water must be treated in sour water stripper prior to being exposed to the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit

50. Sour water pressure tank shall vent to sulfur plant or shall vent to flare during breakdown conditions pursuant to Rule 1100. [District NSR Rule] Federally Enforceable Through Title V Permit

51. If thermal oxidizer 10-F-2 is inoperative, sour water shall not be pumped from sour water storage vessel and diesel hydrotreating unit and heavy oil hydrofinishing processing unit shall be shut down. [District NSR Rule] Federally Enforceable Through Title V Permit

52. Sulfur recovery unit and tailgas unit overall sulfur removal shall be no less than 99.8% by weight except during startup or shutdown conditions. [District NSR Rule] Federally Enforceable Through Title V Permit

53. The inlet gas stream to the thermal oxidizer shall not contain greater than 10 ppmv H2S on a three hour rolling average basis except during startup or shutdown conditions of the sulfur recovery unit or tail gas treating unit. [District NSR Rule] Federally Enforceable Through Title V Permit

54. Startup and shutdown conditions for the sulfur recovery unit and tail gas treating unit combined shall not occur for more than 12 hours in any day. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

55. Thermal oxidizer sulfur compound emissions during startup or shutdown conditions of the sulfur recovery unit or tail gas treating unit shall not exceed 2000 ppm as SO2. [District NSR Rule and 4801] Federally Enforceable Through Title V Permit

56. SOx emissions from the sulfur recovery unit and tail gas treating unit through the thermal oxidizer shall not exceed 109.6 pounds per day. [District NSR Rule] Federally Enforceable Through Title V Permit

57. Only natural gas consisting primarily of methane and less than 5% by weight hydrocarbons heavier than butane and PSA offgas shall be combusted in reformer furnace #H-101. [District Rule 2201] Federally Enforceable Through Title V Permit

58. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 27.99 lb per day. [District Rule 2201] Federally Enforceable Through Title V Permit

59. Emissions from process heater H-101 shall not exceed any of the following limits: 0.011 lb-NOx/MMBtu (9 ppmv @ 3% O2), 0.0034 lb-SOx/MMBtu, 0.0137 lb-PM10/MMBtu, 0.015 lb-CO/MMBtu (20 ppmv@ 3% O2), or 0.0040 lb-VOC/MMBtu (9.5 ppmv @ 3% O2). [District Rules 2201, 4305, 4306, 4320 and 4351] Federally Enforceable Through Title V Permit

60. Emissions from process heater H-201 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.0353 lb/MMBtu or 29.4 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

61. Upon recommencing operation, emissions from process heater H-501 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

62. Emissions from process heaters H-602 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

63. Emissions from process heater H-601 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 400 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

64. Emissions from flare shall not exceed any of the following: PM10: 2.7 lb/day, SOx: 104.9 lb/day, NOx: 6.8 lb/day, VOC: 7.4 lb/day, or CO: 70.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

65. Sulfur content of PSA offgas combusted in reformer furnace H-101 shall not exceed 0.0123 grains/dscf. Sampling of PSA offgas to determine compliance with sulfur content limit shall be conducted annually. [District Rule 2201] Federally Enforceable Through Title V Permit

66. Sulfur content of fuel gas combusted by 1st fractionator feed heater H-501 shall not exceed 0.10 grains/dscf as determined on a rolling three (3) hour average basis. [40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit

67. Sulfur content of fuel gas combusted by 2nd fractionator feed heater H-602 and heater H-201 shall not exceed 0.0553 grains/dscf as determined on a rolling three (3) hour average basis. [District NSR Rule and 40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit

68. Sulfur content of fuel gas combusted by 3rd fractionator feed heater H-601 shall not exceed 0.069 grains/dscf as determined on a rolling three (3) hour average basis. [District Rule 2201 and 40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit

69. Permittee shall maintain accurate records of number of fugitive emissions components and calculated emissions using Technical Guidance Document to AB2588 for refineries Tables D1-D3, AP-42 Table 9.1-2, or other District approved emission factors. [District Rules 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

70. Upon recommencing operation, heater H-501 shall be equipped with sampling facilities for source testing in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

71. All fired equipment, H-101, H-201, H-601, and H-602, shall be equipped with sampling facilities for source testing in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

72. Source testing to measure NOx and CO emissions from the 47.1 MMBtu/hr Heater #H-101 shall be conducted within 60 days of initial startup. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

73. Source testing to measure NOx and CO emissions from heaters H-101, H-201, H-501, H-601 and H-602 shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

74. 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

75. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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

77. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

78. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

79. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

80. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit

81. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

82. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

83. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 of the heaters 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 4320] Federally Enforceable Through Title V Permit

84. The permittee shall monitor and record the stack concentration of NH3 from the SCR unit at least once during each month. This monitoring shall be conducted utilizing Draeger tubes or a District-approved equivalent method at the time NOx, CO and O2 readings are taken. 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 one (1) day of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

85. In stack oxygen monitors are acceptable for O2 measurement. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

86. 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 performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

87. 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 4320] Federally Enforceable Through Title V Permit

88. 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 4320] Federally Enforceable Through Title V Permit

89. Permittee shall comply with all applicable notification, reporting, recordkeeping, testing, and maintenance requirements of Rule 4001 (40 CFR 60; subparts J, GGG, and QQQ). Heaters H-201, H-501, H-601, H-602, and the flare are subject to Subpart J. [District Rule 4001] Federally Enforceable Through Title V Permit

90. Equipment shall include monitoring system as required by 40 CFR 60, Subpart J for monitoring and recording of sulfur content (dry basis) of fuel gas (except PUC regulated natural gas, psa offgas, and combinations of only PUC gas and psa offgas) prior to combustion. [District Rule 4001] Federally Enforceable Through Title V Permit

91. The combustion in the thermal oxidizer, or other fuel gas combustion device of gases released as a result of start-up, shutdown, or malfunction is exempt from the 0.1 gr/dscf H2S requirement. The combustion in the flare of gases released as a result of start-up, shutdown, upset, malfunction, or the result of relief valve leakage is exempt from the 0.1 gr/dscf H2S requirement. [District Rule 4001, Subpart J] Federally Enforceable Through Title V Permit

92. Continuous emissions monitoring system 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 Rule 4001] Federally Enforceable Through Title V Permit

93. PSA gas monitoring shall be maintained pursuant to EPA approved alternate monitoring, one analysis for the sulfur content of the feedstock gas each reporting period and a statement confirming that the pipeline natural gas is the only feed to the hydrogen plant. [District Rule 4001] Federally Enforceable Through Title V Permit

94. Permittee shall maintain accurate daily records of amount of gas burned in the flare. [District Rule 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

95. Permittee shall sample flared gas for H2S content twice daily. [District Rule 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

96. Permittee shall maintain accurate records of fuel consumption data, operational data, startup and shutdown condition frequency and duration of the sulfur recovery unit, and gas sulfur content to verify daily emission limit compliance. [District NSR Rule and 1070] Federally Enforceable Through Title V Permit

97. All records required by this permit shall be made available for District inspection upon request for a period of five years. [District Rule 1070, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

98. Operator shall not burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H2S) in excess of 0.10 gr/dscf (230 mg/dscm). [40 CFR Part 60, subpart J, 60.104(a)(1)] Federally Enforceable Through Title V Permit

99. Operator shall report all rolling 3-hour periods during which the average concentration of H2S as measured by the H2S continuous monitoring system exceeds 0.10 gr/dscf (230 mg/dscm). [40 CFR Part 60, subpart J, 60.105(e)(3)(ii)] Federally Enforceable Through Title V Permit

100. Operator shall determine compliance with the H2S standard using EPA Method 11. [40 CFR Part 60, subpart J, 60.106(e)] Federally Enforceable Through Title V Permit

101. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

102. 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

103. Operator shall maintain all records for at least five years and conform to the recordkeeping requirements described in District Rule 2520. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

104. 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

105. Emissions of sulfur compounds from any of the following units, H-101, H-201, H-501, H-601, H-602 shall not exceed 200 lb per hour, calculated as SO2. [District Rule 4301] Federally Enforceable Through Title V Permit

106. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520] Federally Enforceable Through Title V Permit

107. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

108. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

109. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2.1; 4306, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

110. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. [District Rule 4801] Federally Enforceable Through Title V Permit

111. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

112. Flares shall only be used with the net heating value of the gas being combusted being 200 Btu/scf or greater if the flare is non-assisted; or with the net heating value of the gas being combusted being 300 Btu/scf or greater if the flare is air-assisted or steam-assisted. [40 CFR 60.18 (c)(3)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

113. The net heating value of the gas being combusted in a flare shall be calculated annually, pursuant to 40 CFR 60.18(f)(3) and using EPA Method 18, ASTM D1946, and ASTM D2382. [40 CFR 60.18 (f)(3-6)] Federally Enforceable Through Title V Permit

114. Air-assisted flares shall be operated with an exit velocity less than Vmax, as determined by the equation specified in paragraph 40 CFR 60.18 (f)(6). [40 CFR 60.18 (c)(5)] Federally Enforceable Through Title V Permit

115. Nonassisted and steam-assisted flares shall be operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18 (f)(4), less than 60 ft/sec, except as provided in 40 CFR 60.18 (c)(4)(ii) and (iii). [40 CFR 60.18 (c)(4)(i)] Federally Enforceable Through Title V Permit

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

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

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

119. Flares shall be operated with a flame present at all times, and kept in operation when emissions may be vented to them. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. [40 CFR 60.18 (c)(2), 60.18 (e), and 60.18 (f)(2)] Federally Enforceable Through Title V Permit

120. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

121. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of District Rule 4801, section 3.1 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

122. Heat exchangers 11-E-01A and 11-E-01B shall not operate concurrently. [District Rule 2010] Federally Enforceable Through Title V Permit

123. Permittee shall keep an accurate record of dates of inspection and monitoring, components inspected and monitored, and results of fugitive emissions calculations for compliance with the daily emission limit of the caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps P-970-A and P-970-B. Such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

124. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit

125. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit

126. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an alternative equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit

127. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

128. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere. [District Rule 5.8] Federally Enforceable Through Title V Permit

129. The operator shall minimize sulfur dioxide flare emissions to less than 1.50 tons per million barrels of crude processing capacity, calculated as an average over one calendar year. [District Rule 4311, 5.9.1] Federally Enforceable Through Title V Permit

130. The operator shall monitor the vent gas flow to the flare with a flow measuring device. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit

131. The operator shall maintain and retain on-site for a minimum of five years, and made available to the APCO, ARB, and EPA a copy of the approved flare minimization plan, a copy of annual reports submitted to the District, and all applicable flare monitoring data collected as required by this permit. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit

132. The operator of a flare subject to flare minimization shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, which ever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2] Federally Enforceable Through Title V Permit

133. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: the results of an investigation to determine the primary cause and contributing factors of the flaring event; any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; if appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and the date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit

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

135. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. [District Rule 4311, 6.3.4.1] Federally Enforceable Through Title V Permit

136. Vent gas flow shall be determined using a verification method recommended by the manufacturer of the flow monitoring equipment installed. [District Rule 4311, 6.3.5.2] Federally Enforceable Through Title V Permit

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

138. The operator shall provide the APCO with access to the flare monitoring system to collect the vent gas samples. [District Rule 4311, 6.6.7] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

140. The operator shall monitor and record the water level and pressure of the water seal that services the flare daily. [District Rule 4311, 6.8] Federally Enforceable Through Title V Permit

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

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

APPENDIX C

List of Requested Corrections to Permits

ATTACHMENT A

PROPOSED CHANGES

Proposed administrative changes are identified in *italics.*

PTO S-36-51-14

7. The duration of each startup and shutdown period for the 7.4 MMBtu/hr heater #H-602 shall not exceed 7.5 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3]

   Correct the listed rating of the 7.4 MMBtu/hr heater #H-602 to 8.0 MMBtu/hr. The correct rating is listed in the existing PTO S-36-51-14.

ATC S-36-51-19

12. Equipment includes caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps 970A and 970 B. [District Rule 2201]

    Vessels A and B should be changed to recirculation vessels 1 and 2 . This change reflects the current designation of these vessels.

15. Equipment includes draft fan C-101, reformer M-101, desulfur vessel V-101, shift convertor vessel V-102, process condenser drum V-103, and deaerator V-104. [District Rule 2010]

    Reformer M-101 should be changed to H-101. This change reflects the correct designation of the heater.

18. Unit 200 (HDS section) includes oil filter A-201, O/H stripper B-201, coke drum B-202, intermediate stripper F-201, and HDS reactor R-201. [District Rule 2010]

    The coke drum B-202 should be removed the coke drum was never constructed. This change corrects the equipment listed in the permit to the as-built condition.

21. Unit 400 includes sour water flash drum B-411, slop oil drum B-412, sour water stripper F-410, and sour water feed tank T-411 [District Rule 2010]

    Sour water feed tank T-411 should be changed to sour water feed drum B-413. This change more accurately describes the equipment and corrects the equipment number.

22. Unit 500 (1st fractionator) includes OH separator B-501, HDA feed surge drum B-502, OH separator for light ends stripper B-503, coke drum B-504, 1st fractionator F-501, light ends stripper F-502, and 1st fractionator feed heater H-

501. [District Rule 2010]

Coke drum B-504 should be removed. The coke drum was never constructed. This change corrects the equipment listed in the permit to the as-built condition.

30. Fugitive emission rate from caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps P-970-A and P-970-B, calculated using the California Implementation Guideline for Estimating Mass Emissions of Fugitive Hydrocarbon leaks at Petroleum Facilities, Table IV-2a. 1995 EPA Protocol, Refinery Screening Value Range Emissions Factors, shall not exceed 1.1 lb/day. [District Rule 2201]

Caustic recirculation vessels A and B should be changed to vessels 1 and 2.

31. Permittee shall maintain accurate fugitive emissions component counts and calculation of resulting emissions from caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps P-970-A and P-970-B using fugitive emissions factors described in this permit. [District Rule 2201]

Caustic recirculation vessels A and B should be changed to vessels 1 and 2.

32. Gas leaks exceeding 10,000 ppmv and liquid leaks exceeding 3 drops per minute from the caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps P-970-A and P-970-B are a violation of this permit and shall be reported as a deviation. [District Rule 2201]

Caustic recirculation vessels A and B should be changed to vessels 1 and 2.

33. Flare shall burn no more than 190,000 scf in any day of hydrogen plant gas, purchased natural gas, and all gases from diesel stripper, diesel hydrogenation flash drum, sour water stripper tank, vapors collected from S-36-104, and gases from heavy oil hydrofinisher processing unit on S-36-109. [District Rule 2010]

The portion of the condition stating vapors collected from S-36-104 should be removed. Permit S-36-104 was surrendered when tank was removed. Should add, vapors from light naphtha tanks, as previously, these vapors went to the vapor space of S-36-104 (Tank 37001). The facility has always been designed with a bypass of S-36-104 which allows the light naphtha tanks to vent directly to the flare.

Sour water stripper tank should be changed to sour water feed drum B-413.

36. All gases from diesel stripper, diesel hydrogenation flash drum, and sour water stripper tank shall be sent to MEA section for sulfur compound removal except

during plant shutdown or breakdown conditions pursuant to Rule 1100 when it shall be burned in the flare. [District Rule 2201]

Sour water stripper tank should be changed to sour water feed drum B-413.

Condition # 75 allows for the combustion in the flare of gases released as a result of start-up, shutdown, upset, malfunction, or the result of relief valve leakage and is exempt from the 0.1 gr/dscf H2S requirement. Yet Condition # 36 & 37 states that all gases can only be sent to the flare during breakdowns or shutdowns. A sentence needs to be added to allow for relief valve leakage to go to the flare at any time as this is a safety valve that would prevent an explosion and or fire. A relief valve leak may qualify as a breakdown in many situations, but not in every situation.

37. Flare equipped with flared gas flow meter serving hydrogen plant gas, purchased natural gas, and all gases from diesel stripper, diesel hydrogenation flash drum, sour water stripper tank, vapors collected from S-36-104, and gases from heavy oil hydrofinisher processing unit on S-36-109. These gases shall only be flared during breakdown conditions pursuant to Rule 1100 and during plant shutdowns. [District Rule 4001]

Sour water stripper tank should be changed to sour water feed drum B-413.

See above comments to condition 36 and relief valve leakage.

40. Pressure in sour water tank and light naphtha tanks shall be maintained above 15 psig. Sour water tank pressure relief valve shall be set at 40 psig and the light naphtha pressure relief valves shall be set at 50 psig and shall vent to atmosphere. [District Rule 4001]

Sour water tank should be changed to sour water feed drum B-413.

APPENDIX D

Draft Authority to Construct Documents
S-36-51-20 & S-36-51-21

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-36-51-20 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: SAN JOAQUIN REFINING COMPANY
MAILING ADDRESS: PO BOX 5576
BAKERSFIELD, CA 93388

LOCATION: STANDARD AND SHELL ST
BAKERSFIELD, CA 93308

SECTION: 23 **TOWNSHIP:** 29S **RANGE:** 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 103.4 MMBTU/HR DIESEL TREATING UNIT WITH SULFUR RECOVERY UNIT AND SAFETY FLARE: CORRECT LISTED RATINGS OF CERTAIN HEATERS, DESIGNATION AND/OR SERVICES OF CERTAIN VESSELS AND TANKS, AND OTHER ADMINISTRATIVE CORRECTIONS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. No modification to heater H-501 shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
4. When heater H-501 is not operated, the fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit
5. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant heater, at which time this permit will be administratively modified to remove DEU references. [District Rule 4306] Federally Enforceable Through Title V Permit
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of heater H-501. [District Rule 4306] Federally Enforceable Through Title V Permit

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

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services
S-36-51-20 : Oct 2 2014 1:56PM -- LEONARDS : Joint Inspection NOT Required

7. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

8. The duration of each startup and shutdown period for the 47.1 MMBtu/hr furnace #H-101 shall not exceed 12.0 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit

9. The duration of each startup and shutdown period for the 7.4 MMBtu/hr heater #H-201 shall not exceed 8.0 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit

10. The duration of each startup and shutdown period for the 17.0 MMBtu/hr heater #H-501 shall not exceed 7.25 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit

11. The duration of each startup and shutdown period for the 8.4 MMBtu/hr heater #H-601 shall not exceed 7.5 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit

12. The duration of each startup and shutdown period for the 8.0 MMBtu/hr heater H-602 shall not exceed 7.5 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit

13. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Equipment includes caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps 970A and 970 B. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Equipment includes: 47.1 MMBtu/hr natural gas-fired and PSA offgas fired reformer furnace #H-101; 30.0 MMBtu/hr (limited to 17.0 MMBtu/hr by fuel limit) refinery fuel gas-fired 1st fractionator heater #H-501; and 7.44 MMBtu/hr refinery fuel gas-fired heater for #H-201 HDS reactor. [District Rule 2010] Federally Enforceable Through Title V Permit

16. Equipment includes: 10.5 MMBtu/hr (limited to 8 MMBtu/hr by fuel limit) refinery fuel gas-fired heater H-602; and 8.4 MMBtu/hr refinery fuel gas-fired 2nd fractionator heater #H-601. [District Rule 2010] Federally Enforceable Through Title V Permit

17. Equipment includes draft fan C-101, reformer H-101, desulfur vessel V-101, shift convertor vessel V-102, process condenser drum V-103, and deaerator V-104. [District Rule 2010] Federally Enforceable Through Title V Permit

18. Equipment includes steam drum V-105, blowdown drum V-106, steam separator V-107, PSA adsorbers V-108 A,B,C & D, and offgas drum V-109. [District Rule 2010] Federally Enforceable Through Title V Permit

19. Equipment includes one 1275 bbl sour water pressure vessel, one 711 bbl, one 1275 bbl, and one 719 bbl light naphtha pressure vessels, and light naphtha loading rack with nitrogen purge system. [District Rule 2010] Federally Enforceable Through Title V Permit

20. Unit 200 (HDS section) includes oil filter A-201, O/H stripper B-201, intermediate stripper F-201, and HDS reactor R-201. [District Rule 2010] Federally Enforceable Through Title V Permit

21. Unit 300 (HDA section) includes hot separator B-301, recycle gas separator B-302, recycle gas compressor K/O drum B-310, hydrogen (H2) gas compressors K-301 A/B, and HDA reactor R-301. [District Rule 2010] Federally Enforceable Through Title V Permit

22. Unit 400 (amine wash & sour water stripper) includes amine solution filter A-401, OH separator B-401, amine K/O drum B-402, amine solution flash drum B-403, amine adsorber F-401, amine regenerator F-402, and amine storage tank T-401. [District Rule 2010] Federally Enforceable Through Title V Permit

23. Unit 400 includes sour water flash drum B-411, slop oil drum B-412, sour water stripper F-410, and sour water feed drum T-413. [District Rule 2010] Federally Enforceable Through Title V Permit

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24. Unit 500 (1st fractionator) includes OH separator B-501, HDA feed surge drum B-502, OH separator for light ends stripper B-503, 1st fractionator F-501, light ends stripper F-502, and 1st fractionator feed heater H-501. [District Rule 2010] Federally Enforceable Through Title V Permit

25. Unit 600 (2nd/3rd fractionators) includes 2nd fractionator accumulator B-601, 3rd fractionator accumulator B-602, 2nd fractionator F-601, 3rd fractionator F-602, and kero stripper F-603. [District Rule 2010] Federally Enforceable Through Title V Permit

26. Unit 600 includes heavy solvent stripper F-604, 2nd fractionator reboiler H-601, heater H-602, compressors K-601 A/B, and vacuum pumps K-602 A/B. [District Rule 2010] Federally Enforceable Through Title V Permit

27. Sulfur recovery unit includes liquefied oxygen storage facility combustion oxygen enriched air blower 10-K-01A, spare combustion oxygen enriched air blower 10-K-01B, amine acid gas and NH3 gas KO drums 10-V-01/02, and converter 1/2/3-common shell with hydrogenation reactor 10-V-04/05/06. [District Rule 2010] Federally Enforceable Through Title V Permit

28. Sulfur recovery unit includes sulfur pit vent eductor 10-K-02 (venting to thermal oxidizer 10-F-02), reaction furnace 10-F-01, thermal oxidizer and stack 10-F-02, sulfur pit 10-T-01, K/O drum sour water pumps 10-P-01 A/B, sulfur pump 10-P-03, and boiler feedwater pumps 10-P-04 A/B. [District Rule 2010] Federally Enforceable Through Title V Permit

29. Tail gas unit includes reducing gas generator (RGG) 11-F-01, contact condenser pumps 11-P-01 A/B, rich amine pumps 11-P-02 A/B, regenerator reflux pumps 11-P-03 A/B, amine sump pump 11-P-04, and lean amine pump 11-P-05. [District Rule 2010] Federally Enforceable Through Title V Permit

30. Tail gas unit includes amine surge drum 11-T-01, hydrogenation reactor 11-V-01, contact condenser 11-V-02, amine absorber 11-V-03, amine regenerator 11-V-04, and regenerator reflux drum 11-V-05. [District Rule 2010] Federally Enforceable Through Title V Permit

31. The Claus sulfur recovery unit sulfur production shall not exceed six long tons per day. [District Rule 2201] Federally Enforceable Through Title V Permit

32. Fugitive emission rate from caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps P-970-A and P-970-B, calculated using the California Implementation Guideline for Estimating Mass Emissions of Fugitive Hydrocarbon leaks at Petroleum Facilities, Table IV-2a. 1995 EPA Protocol, Refinery Screening Value Range Emissions Factors, shall not exceed 1.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

33. Permittee shall maintain accurate fugitive emissions component counts and calculation of resulting emissions from caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps P-970-A and P-970-B using fugitive emissions factors described in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

34. Gas leaks exceeding 10,000 ppmv and liquid leaks exceeding 3 drops per minute from the caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps P-970-A and P-970-B are a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Flare shall burn no more than 190,000 scf in any day of hydrogen plant gas, purchased natural gas, and all gases from diesel stripper, diesel hydrogenation flash drum, sour water feed drum B-413, and gases from heavy oil hydrofinisher processing unit on S-36-109. [Rule 2010] Federally Enforceable Through Title V Permit

36. Upon recommencing operation, permittee shall demonstrate fuel limitation for heater H-501 by either a non-resettable fuel meter for each heater and daily records of fuel use, or provide District approved documentation demonstrating how the fuel flow is limited to the permitted rating. [District Rule 2201] Federally Enforceable Through Title V Permit

37. Permittee shall demonstrate fuel limitation for heater H-602 by either a non-resettable fuel meter for each heater and daily records of fuel use, or provide District approved documentation demonstrating how the fuel flow is limited to the permitted rating. [District Rule 2201] Federally Enforceable Through Title V Permit

38. All gases from diesel stripper, diesel hydrogenation flash drum, and sour water feed drum B-413 stripper tank shall be sent to MEA section for sulfur compound removal except during plant shutdown or breakdown conditions pursuant to Rule 1100 when it shall be burned in the flare. [District Rule 2201] Federally Enforceable Through Title V Permit

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39. Flare equipped with flared gas flow meter serving hydrogen plant gas, purchased natural gas, and all gases from diesel stripper, diesel hydrogenation flash drum, sour water feed drum B-413, and gases from heavy oil hydrofinisher processing unit on S-36-109. These gases shall only be flared during breakdown conditions pursuant to Rule 1100 and during plant shutdowns. [District Rule 4001] Federally Enforceable Through Title V Permit

40. Hydrogen sulfide analyzer/recorder shall be located at exit of tail gas unit prior to thermal oxidizer 10-F-02 and shall be operational and utilized except during bypass of the tail gas treating unit during startup or shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit

41. Bypass of the tail gas unit will occur only when natural gas is supplied to the main reactor furnace during startup or shutdown of the sulfur recovery unit or tail gas treating unit. [District Rule 2201] Federally Enforceable Through Title V Permit

42. Pressure in sour water feed drum B-413 and light naphtha tanks shall be maintained above 15 psig. Sour water feed drum pressure relief valve shall be set at 40 psig and the light naphtha pressure relief valves shall be set at 50 psig and shall vent to atmosphere. [District Rule 4001] Federally Enforceable Through Title V Permit

43. Light naphtha liquid from overhead accumulator shall be sent to light naphtha pressure storage vessels. [District Rule 2201] Federally Enforceable Through Title V Permit

44. Overhead accumulator offgas shall be sent to the fuel gas compressor for introduction into fuel gas system, or shall be flared under plant breakdown conditions pursuant to Rule 1100. [District Rule 2201] Federally Enforceable Through Title V Permit

45. All sour water must be treated in sour water stripper prior to being exposed to the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

46. Sour water pressure tank shall vent to sulfur plant or shall vent to flare during breakdown conditions pursuant to Rule 1100. [District Rule 2201] Federally Enforceable Through Title V Permit

47. If thermal oxidizer 10-F-2 is inoperative, sour water shall not be pumped from sour water storage vessel and diesel hydrotreating unit and heavy oil hydrofinishing processing unit shall be shut down. [District Rule 2201] Federally Enforceable Through Title V Permit

48. Sulfur recovery unit and tail gas unit overall sulfur removal shall be no less than 99.8% by weight except during startup or shutdown conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

49. The inlet gas stream to the thermal oxidizer shall not contain greater than 10 ppmv H2S on a three hour rolling average basis except during startup or shutdown conditions of the sulfur recovery unit or tail gas treating unit. [District Rule 2201] Federally Enforceable Through Title V Permit

50. Startup and shutdown conditions for the sulfur recovery unit and tail gas treating unit combined shall not occur for more than 12 hours in any day. [District Rule 2201] Federally Enforceable Through Title V Permit

51. Thermal oxidizer sulfur compound emissions during startup or shutdown conditions of the sulfur recovery unit or tail gas treating unit shall not exceed 2000 ppm as SO2. [District Rule 2201 and 4801] Federally Enforceable Through Title V Permit

52. SOx emissions from the sulfur recovery unit and tail gas treating unit through the thermal oxidizer shall not exceed 109.6 pounds per day. [District Rule 2201] Federally Enforceable Through Title V Permit

53. Only natural gas consisting primarily of methane and less than 5% by weight hydrocarbons heavier than butane and PSA offgas shall be combusted in reformer furnace #H-101. [District Rule 2201] Federally Enforceable Through Title V Permit

54. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 27.99 lb per day. [District Rule 2201] Federally Enforceable Through Title V Permit

55. Emissions from process heater H-101 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 0.015 lb/MMBtu. [District Rule 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

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56. Emissions from process heater H-201 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.0353 lb/MMBtu or 29.4 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

57. Upon recommencing operation, emissions from process heater H-501 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O2. [District Rule 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

58. Emissions from process heaters H-602 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O2. [District Rule 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

59. Emissions from process heater H-601 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 400 ppmv @ 3% O2. [District Rule 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

60. Emissions from flare shall not exceed any of the following: PM10: 2.7 lb/day, SOx: 104.9 lb/day, NOx: 6.8 lb/day, VOC: 7.4 lb/day, or CO: 70.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

61. Sulfur content of PSA offgas combusted in reformer furnace H-101 shall not exceed 0.0123 grains/dscf. Sampling of PSA offgas to determine compliance with sulfur content limit shall be conducted annually. [District Rule 2201] Federally Enforceable Through Title V Permit

62. Upon recommencing operation, sulfur content of fuel gas combusted by 1st fractionator feed heater H-501 shall not exceed 0.10 grains/dscf as determined on a rolling three (3) hour average basis. [40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit

63. Sulfur content of fuel gas combusted by heater H-602 and heater H-201 shall not exceed 0.0553 grains/dscf as determined on a rolling three (3) hour average basis. [District Rule 2201 and 40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit

64. Sulfur content of fuel gas combusted by 3rd fractionator feed heater H-601 shall not exceed 0.069 grains/dscf as determined on a rolling three (3) hour average basis. [District Rule 2201 and 40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit

65. Permittee shall maintain accurate records of number of fugitive emissions components and calculated emissions using Technical Guidance Document to AB2588 for refineries Tables D1-D3, AP-42 Table 9.1-2, or other District approved emission factors. [District Rule 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

66. Upon recommencing operation, heater H-501 shall be equipped with sampling facilities for source testing in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

67. All fired equipment, H-101, H-201, H-601, and H-602, shall be equipped with sampling facilities for source testing in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

68. Source testing of heaters H-101, H-201, H-501, H-601 and H-602 to measure NOx and CO emissions 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

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

70. 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

71. 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

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72. 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

73. 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

74. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

75. Permittee shall comply with all applicable notification, reporting, recordkeeping, testing, and maintenance requirements of Rule 4001 (40 CFR 60; subparts J, GGG, and QQQ). Heaters H-201, H-501, H-601, H-602, and the flare are subject to Subpart J. [District Rule 4001] Federally Enforceable Through Title V Permit

76. Equipment shall include monitoring system as required by 40 CFR 60, Subpart J for monitoring and recording of sulfur content (dry basis) of fuel gas (except PUC regulated natural gas, psa offgas, and combinations of only PUC gas and psa offgas) prior to combustion. [District Rule 4001] Federally Enforceable Through Title V Permit

77. The combustion in the thermal oxidizer, or other fuel gas combustion device of gases released as a result of start-up, shutdown, or malfunction is exempt from the 0.1 gr/dscf H2S requirement. The combustion in the flare of gases released as a result of start-up, shutdown, upset, malfunction, or the result of relief valve leakage is exempt from the 0.1 gr/dscf H2S requirement. [District Rule 4001, Subpart J] Federally Enforceable Through Title V Permit

78. Continuous emissions monitoring system 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 Rule 4001] Federally Enforceable Through Title V Permit

79. PSA gas monitoring shall be maintained pursuant to EPA approved alternate monitoring, one analysis for the sulfur content of the feedstock gas each reporting period and a statement confirming that the pipeline natural gas is the only feed to the hydrogen plant. [District Rule 4001] Federally Enforceable Through Title V Permit

80. Permittee shall maintain accurate daily records of amount of gas burned in the flare. [District Rule 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

81. Permittee shall sample flared gas for H2S content twice daily. [District Rule 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

82. Permittee shall maintain accurate records of fuel consumption data, operational data, startup and shutdown condition frequency and duration of the sulfur recovery unit, and gas sulfur content to verify daily emission limit compliance. [District Rule 2201 and 1070] Federally Enforceable Through Title V Permit

83. All records required by this permit shall be made available for District inspection upon request for a period of five years. [District Rule 1070, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

84. Operator shall not burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H2S) in excess of 0.10 gr/dscf (230 mg/dscm). [40 CFR Part 60, subpart J, 60.104(a)(1)] Federally Enforceable Through Title V Permit

85. Operator shall report all rolling 3-hour periods during which the average concentration of H2S as measured by the H2S continuous monitoring system exceeds 0.10 gr/dscf (230 mg/dscm). [40 CFR Part 60, subpart J, 60.105(e)(3)(ii)] Federally Enforceable Through Title V Permit

86. Operator shall determine compliance with the H2S standard using EPA Method 11. [40 CFR Part 60, subpart J, 60.106(e)] Federally Enforceable Through Title V Permit

87. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

88. {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

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89. {2805} Operator shall maintain all records for at least five years and conform to the recordkeeping requirements described in District Rule 2520. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

90. {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

91. Emissions of sulfur compounds from any of the following units, H-101, H-201, H-501, H-601, H-602 shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit

92. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

93. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

94. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

95. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2.1; 4306, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

96. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period (Kern County Rule 407). To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.3.2 and 4801] Federally Enforceable Through Title V Permit

97. 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 Rules 4305, 5.0, 8.2; 4306, 8.1; and/or 4351, 8.1] Federally Enforceable Through Title V Permit

98. Emissions from H-101, H-201, H-501, H-601, and H-602 shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 forty-minute test runs for NOx and CO. [District Rule 1081] Federally Enforceable Through Title V Permit

99. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

100. {654} Flares shall only be used with the net heating value of the gas being combusted being 200 Btu/scf or greater if the flare is non-assisted; or with the net heating value of the gas being combusted being 300 Btu/scf or greater if the flare is air-assisted or steam-assisted. [40 CFR 60.18 (c)(3)] Federally Enforceable Through Title V Permit

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101. The net heating value of the gas being combusted in a flare shall be calculated annually, pursuant to 40 CFR 60.18(f)(3) and using EPA Method 18, ASTM D1946, and ASTM D2382. [40 CFR 60.18 (f)(3-6)] Federally Enforceable Through Title V Permit

102. {656} Air-assisted flares shall be operated with an exit velocity less than Vmax, as determined by the equation specified in paragraph 40 CFR 60.18 (f)(6). [40 CFR 60.18 (c)(5)] Federally Enforceable Through Title V Permit

103. {657} Nonassisted and steam-assisted flares shall be operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18 (f)(4), less than 60 ft/sec, except as provided in 40 CFR 60.18 (c)(4)(ii) and (iii). [40 CFR 60.18 (c)(4)(i)] Federally Enforceable Through Title V Permit

104. {658} Nonassisted and steam-assisted flares may be operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18 (f)(4), equal to or greater than 60 ft/sec, but less than 400 ft/sec if the net heating value of the gas being combusted is greater than 1,000 Btu/scf. [40 CFR 60.18 (c)(4)(ii)] Federally Enforceable Through Title V Permit

105. {659} Nonassisted and steam-assisted flares may be operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18 (f)(4), less than the velocity, Vmax, as determined by the equation specified in paragraph 40 CFR 60.18 (f)(5), and less than 400 ft/sec. [40 CFR 60.18 (c)(4)(iii)] Federally Enforceable Through Title V Permit

106. {660} The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip. [40 CFR 60.18 (f)(4)] Federally Enforceable Through Title V Permit

107. {661} Flares shall be operated with a flame present at all times, and kept in operation when emissions may be vented to them. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. [40 CFR 60.18 (c)(2), 60.18 (e), and 60.18 (f)(2)] Federally Enforceable Through Title V Permit

108. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

109. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of District Rule 4801, section 3.1 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

110. Heat exchangers 11-E-01A and 11-E-01B shall not operate concurrently. [District Rule 2010] Federally Enforceable Through Title V Permit

111. Permittee shall keep an accurate record of dates of inspection and monitoring, components inspected and monitored, and results of fugitive emissions calculations for compliance with the daily emission limit of the caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps P-970-A and P-970-B. Such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and District Rule 2201] Federally Enforceable Through Title V Permit

112. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit

113. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit

114. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an alternative equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit

115. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

116. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere. [District Rule 5.8] Federally Enforceable Through Title V Permit

117. The operator shall minimize sulfur dioxide flare emissions to less than 1.50 tons per million barrels of crude processing capacity, calculated as an average over one calendar year. [District Rule 4311, 5.9.1] Federally Enforceable Through Title V Permit

118. The operator shall monitor the vent gas flow to the flare with a flow measuring device. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit

119. The operator shall maintain and retain on-site for a minimum of five years, and made available to the APCO, ARB, and EPA a copy of the approved flare minimization plan, a copy of annual reports submitted to the District, and all applicable flare monitoring data collected as required by this permit. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit

120. The operator of a flare subject to flare minimization shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, which ever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2] Federally Enforceable Through Title V Permit

121. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: the results of an investigation to determine the primary cause and contributing factors of the flaring event; any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; if appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and the date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit

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

123. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. [District Rule 4311, 6.3.4.1] Federally Enforceable Through Title V Permit

124. Vent gas flow shall be determined using a verification method recommended by the manufacturer of the flow monitoring equipment installed. [District Rule 4311, 6.3.5.2] Federally Enforceable Through Title V Permit

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

126. The operator shall provide the APCO with access to the flare monitoring system to collect the vent gas samples. [District Rule 4311, 6.6.7] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

128. The operator shall monitor and record the water level and pressure of the water seal that services the flare daily. [District Rule 4311, 6.8] Federally Enforceable Through Title V Permit

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

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-36-51-21 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: SAN JOAQUIN REFINING COMPANY
MAILING ADDRESS: PO BOX 5576
BAKERSFIELD, CA 93388

LOCATION: STANDARD AND SHELL ST
BAKERSFIELD, CA 93308

SECTION: 23 **TOWNSHIP:** 29S **RANGE:** 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 103.4 MMBTU/HR DIESEL TREATING UNIT WITH SULFUR RECOVERY UNIT, CAUSTIC SCRUBBER, AND SAFETY FLARE: INSTALL SCR ON H-101 FOR RULE 4320 COMPLIANCE AND REMOVE OIL-FIRING PROVISIONS; ALSO CORRECT LISTED RATINGS OF CERTAIN HEATERS, DESIGNATION AND/OR SERVICES OF CERTAIN VESSELS AND TANKS, AND OTHER ADMINISTRATIVE CORRECTIONS

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. This Authority to Construct (ATC) to be implemented concurrently with S-36-51-19. [District Rule 2201] Federally Enforceable Through Title V Permit
4. No modification to heater H-501 shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
5. When heater H-501 is not operated, the fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services
S-36-51-21 Oct 6 2014 9:49AM -- LEONARDS Joint Inspection NOT Required

6. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant heater, at which time this permit will be administratively modified to remove DEU references. [District Rule 4306] Federally Enforceable Through Title V Permit

7. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of heater H-501. [District Rule 4306] Federally Enforceable Through Title V Permit

8. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

9. The duration of each startup and shutdown period for the 47.1 MMBtu/hr furnace #H-101 shall not exceed 12.0 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit

10. The duration of each startup and shutdown period for the 7.4 MMBtu/hr heater #H-201 shall not exceed 8.0 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit

11. The duration of each startup and shutdown period for the 17.0 MMBtu/hr heater #H-501 shall not exceed 7.25 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit

12. The duration of each startup and shutdown period for the 8.4 MMBtu/hr heater #H-601 shall not exceed 7.5 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit

13. The duration of each startup and shutdown period for the 8.0 MMBtu/hr heater H-602 shall not exceed 7.5 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit

14. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Equipment includes caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps 970A and 970 B. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Equipment includes: 47.1 MMBtu/hr natural gas-fired and PSA offgas fired reformer furnace #H-101; 30.0 MMBtu/hr (limited to 17.0 MMBtu/hr by fuel limit) refinery fuel gas-fired 1st fractionator heater #H-501; and 7.44 MMBtu/hr refinery fuel gas-fired heater for #H-201 HDS reactor. [District Rule 2010] Federally Enforceable Through Title V Permit

17. Heater H-101 shall be equipped with a SCR system. The heater shall not be operated unless the SCR system is operating. [District Rule 2201] Federally Enforceable Through Title V Permit

18. The exhaust stack from heater H-101 shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

19. Ammonia slip from the SCR unit shall not exceed 10 ppmv @ 3% O2. [District Rule 4102]

20. Monthly records of the total amount of ammonia used by the SCR system shall be maintained. [District Rules 1070 and 2520, 9.4.1] Federally Enforceable Through Title V Permit

21. Equipment includes: 10.5 MMBtu/hr (limited to 8 MMBtu/hr by fuel limit) refinery fuel gas-fired heater H-602; and 8.4 MMBtu/hr refinery fuel gas-fired 2nd fractionator heater #H-601. [District Rule 2010] Federally Enforceable Through Title V Permit

22. Equipment includes draft fan C-101, reformer H-101, desulfur vessel V-101, shift convertor vessel V-102, process condenser drum V-103, and deaerator V-104. [District Rule 2010] Federally Enforceable Through Title V Permit

23. Equipment includes steam drum V-105, blowdown drum V-106, steam separator V-107, PSA adsorbers V-108 A,B,C & D, and offgas drum V-109. [District Rule 2010] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

24. Equipment includes one 1,275 bbl sour water pressure vessel, one 711 bbl, one 1,275 bbl, and one 719 bbl light naphtha pressure vessels, and light naphtha loading rack with nitrogen purge system. [District Rule 2010] Federally Enforceable Through Title V Permit

25. Unit 200 (HDS section) includes oil filter A-201, O/H stripper B-201, intermediate stripper F-201, and HDS reactor R-201. [District Rule 2010] Federally Enforceable Through Title V Permit

26. Unit 300 (HDA section) includes hot separator B-301, recycle gas separator B-302, recycle gas compressor K/O drum B-310, hydrogen (H2) gas compressors K-301 A/B, and HDA reactor R-301. [District Rule 2010] Federally Enforceable Through Title V Permit

27. Unit 400 (amine wash & sour water stripper) includes amine solution filter A-401, OH separator B-401, amine K/O drum B-402, amine solution flash drum B-403, amine adsorber F-401, amine regenerator F-402, and amine storage tank T-401. [District Rule 2010] Federally Enforceable Through Title V Permit

28. Unit 400 includes sour water flash drum B-411, slop oil drum B-412, sour water stripper F-410, and sour water feed drum B-413. [District Rule 2010] Federally Enforceable Through Title V Permit

29. Unit 500 (1st fractionator) includes OH separator B-501, HDA feed surge drum B-502, OH separator for light ends stripper B-503, 1st fractionator F-501, light ends stripper F-502, and 1st fractionator feed heater H-501. [District Rule 2010] Federally Enforceable Through Title V Permit

30. Unit 600 (2nd/3rd fractionators) includes 2nd fractionator accumulator B-601, 3rd fractionator accumulator B-602, 2nd fractionator F-601, 3rd fractionator F-602, and kero stripper F-603. [District Rule 2010] Federally Enforceable Through Title V Permit

31. Unit 600 includes heavy solvent stripper F-604, 2nd fractionator reboiler H-601, heater H-602, compressors K-601 A/B, and vacuum pumps K-602 A/B. [District Rule 2010] Federally Enforceable Through Title V Permit

32. Sulfur recovery unit includes liquefied oxygen storage facility combustion oxygen enriched air blower 10-K-01A, spare combustion oxygen enriched air blower 10-K-01B, amine acid gas and NH3 gas KO drums 10-V-01/02, and converter 1/2/3-common shell with hydrogenation reactor 10-V-04/05/06. [District Rule 2010] Federally Enforceable Through Title V Permit

33. Sulfur recovery unit includes sulfur pit vent eductor 10-K-02 (venting to thermal oxidizer 10-F-02), reaction furnace 10-F-01, thermal oxidizer and stack 10-F-02, sulfur pit 10-T-01, K/O drum sour water pumps 10-P-01 A/B, sulfur pump 10-P-03, and boiler feedwater pumps 10-P-04 A/B. [District Rule 2010] Federally Enforceable Through Title V Permit

34. Tail gas unit includes reducing gas generator (RGG) 11-F-01, contact condenser pumps 11-P-01 A/B, rich amine pumps 11-P-02 A/B, regenerator reflux pumps 11-P-03 A/B, amine sump pump 11-P-04, and lean amine pump 11-P-05. [District Rule 2010] Federally Enforceable Through Title V Permit

35. Tail gas unit includes amine surge drum 11-T-01, hydrogenation reactor 11-V-01, contact condenser 11-V-02, amine absorber 11-V-03, amine regenerator 11-V-04, and regenerator reflux drum 11-V-05. [District Rule 2010] Federally Enforceable Through Title V Permit

36. The Claus sulfur recovery unit sulfur production shall not exceed six long tons per day. [District Rule 2201] Federally Enforceable Through Title V Permit

37. Fugitive emission rate from caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps P-970-A and P-970-B, calculated using the California Implementation Guideline for Estimating Mass Emissions of Fugitive Hydrocarbon leaks at Petroleum Facilities, Table IV-2a. 1995 EPA Protocol, Refinery Screening Value Range Emissions Factors, shall not exceed 1.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

38. Permittee shall maintain accurate fugitive emissions component counts and calculation of resulting emissions from caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps P-970-A and P-970-B using fugitive emissions factors described in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

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39. Gas leaks exceeding 10,000 ppmv and liquid leaks exceeding 3 drops per minute from the caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps P-970-A and P-970-B are a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

40. Flare shall burn no more than 190,000 scf in any day of hydrogen plant gas, purchased natural gas, and all gases from diesel stripper, diesel hydrogenation flash drum, sour water feed drum B-413, and gases from heavy oil hydrofinisher processing unit on S-36-109. [District Rule 2010] Federally Enforceable Through Title V Permit

41. Upon recommencing operation, permittee shall demonstrate fuel limitation for heater H-501 by either a non-resettable fuel meter for each heater and daily records of fuel use, or provide District approved documentation demonstrating how the fuel flow is limited to the permitted rating. [District Rule 2201] Federally Enforceable Through Title V Permit

42. Permittee shall demonstrate fuel limitation for heater H-602 by either a non-resettable fuel meter for each heater and daily records of fuel use, or provide District approved documentation demonstrating how the fuel flow is limited to the permitted rating. [District Rule 2201] Federally Enforceable Through Title V Permit

43. All gases from diesel stripper, diesel hydrogenation flash drum, and sour water feed drum B-413 shall be sent to MEA section for sulfur compound removal except during plant shutdown or breakdown conditions pursuant to Rule 1100 when it shall be burned in the flare. [District Rule 2201] Federally Enforceable Through Title V Permit

44. Flare equipped with flared gas flow meter serving hydrogen plant gas, purchased natural gas, and all gases from diesel stripper, diesel hydrogenation flash drum, sour water feed drum B-413, and gases from heavy oil hydrofinisher processing unit on S-36-109. These gases shall only be flared during breakdown conditions pursuant to Rule 1100 and during plant shutdowns. [District Rule 4001] Federally Enforceable Through Title V Permit

45. Hydrogen sulfide analyzer/recorder shall be located at exit of tail gas unit prior to thermal oxidizer 10-F-02 and shall be operational and utilized except during bypass of the tail gas treating unit during startup or shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit

46. Bypass of the tail gas unit will occur only when natural gas is supplied to the main reactor furnace during startup or shutdown of the sulfur recovery unit or tail gas treating unit. [District Rule 2201] Federally Enforceable Through Title V Permit

47. Pressure in sour water feed drum B-413 and light naphtha tanks shall be maintained above 15 psig. Sour water tank pressure relief valve shall be set at 40 psig and the light naphtha pressure relief valves shall be set at 50 psig and shall vent to atmosphere. [District Rule 4001] Federally Enforceable Through Title V Permit

48. Light naphtha liquid from overhead accumulator shall be sent to light naphtha pressure storage vessels. [District Rule 2201] Federally Enforceable Through Title V Permit

49. Overhead accumulator offgas shall be sent to the fuel gas compressor for introduction into fuel gas system, or shall be flared under plant breakdown conditions pursuant to Rule 1100. [District Rule 2201] Federally Enforceable Through Title V Permit

50. All sour water must be treated in sour water stripper prior to being exposed to the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

51. Sour water pressure tank shall vent to sulfur plant or shall vent to flare during breakdown conditions pursuant to Rule 1100. [District Rule 2201] Federally Enforceable Through Title V Permit

52. If thermal oxidizer 10-F-2 is inoperative, sour water shall not be pumped from sour water storage vessel and diesel hydrotreating unit and heavy oil hydrofinishing processing unit shall be shut down. [District Rule 2201] Federally Enforceable Through Title V Permit

53. Sulfur recovery unit and tail gas unit overall sulfur removal shall be no less than 99.8% by weight except during startup or shutdown conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

54. The inlet gas stream to the thermal oxidizer shall not contain greater than 10 ppmv H2S on a three hour rolling average basis except during startup or shutdown conditions of the sulfur recovery unit or tail gas treating unit. [District Rule 2201] Federally Enforceable Through Title V Permit

55. Startup and shutdown conditions for the sulfur recovery unit and tail gas treating unit combined shall not occur for more than 12 hours in any day. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

56. Thermal oxidizer sulfur compound emissions during startup or shutdown conditions of the sulfur recovery unit or tail gas treating unit shall not exceed 2000 ppm as SO2. [District Rule 2201 and 4801] Federally Enforceable Through Title V Permit

57. SOx emissions from the sulfur recovery unit and tail gas treating unit through the thermal oxidizer shall not exceed 109.6 pounds per day. [District Rule 2201] Federally Enforceable Through Title V Permit

58. Only natural gas consisting primarily of methane and less than 5% by weight hydrocarbons heavier than butane and PSA offgas shall be combusted in reformer furnace #H-101. [District Rule 2201] Federally Enforceable Through Title V Permit

59. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 27.99 lb per day. [District Rule 2201] Federally Enforceable Through Title V Permit

60. Emissions from process heater H-101 shall not exceed any of the following limits: 0.011 lb-NOx/MMBtu (9 ppmv @ 3% O2), 0.0034 lb-SOx/MMBtu, 0.0137 lb-PM10/MMBtu, 0.015 lb-CO/MMBtu (20 ppmv@ 3% O2), or 0.0040 lb-VOC/MMBtu (9.5 ppmv @ 3% O2). [District Rules 2201, 4305, 4306, 4320 and 4351] Federally Enforceable Through Title V Permit

61. Emissions from process heater H-201 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.0353 lb/MMBtu or 29.4 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

62. Upon recommencing operation, emissions from process heater H-501 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

63. Emissions from process heaters H-602 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

64. Emissions from process heater H-601 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 400 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

65. Emissions from flare shall not exceed any of the following: PM10: 2.7 lb/day, SOx: 104.9 lb/day, NOx: 6.8 lb/day, VOC: 7.4 lb/day, or CO: 70.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

66. Sulfur content of PSA offgas combusted in reformer furnace H-101 shall not exceed 0.0123 grains/dscf. Sampling of PSA offgas to determine compliance with sulfur content limit shall be conducted annually. [District Rule 2201] Federally Enforceable Through Title V Permit

67. Sulfur content of fuel gas combusted by 1st fractionator feed heater H-501 shall not exceed 0.10 grains/dscf as determined on a rolling three (3) hour average basis. [40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit

68. Sulfur content of fuel gas combusted by heater H-602 and heater H-201 shall not exceed 0.0553 grains/dscf as determined on a rolling three (3) hour average basis. [District Rule 2201 and 40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit

69. Sulfur content of fuel gas combusted by 3rd fractionator feed heater H-601 shall not exceed 0.069 grains/dscf as determined on a rolling three (3) hour average basis. [District Rule 2201 and 40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit

70. Permittee shall maintain accurate records of number of fugitive emissions components and calculated emissions using Technical Guidance Document to AB2588 for refineries Tables D1-D3, AP-42 Table 9.1-2, or other District approved emission factors. [District Rules 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

71. Upon recommencing operation, heater H-501 shall be equipped with sampling facilities for source testing in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

72. All fired equipment, H-101, H-201, H-601, and H-602, shall be equipped with sampling facilities for source testing in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

73. Source testing to measure NOx and CO emissions from the 47.1 MMBtu/hr Heater #H-101 shall be conducted within 60 days of initial startup. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

74. Source testing to measure NOx and CO emissions from heaters H-101, H-201, H-501, H-601 and H-602 shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

75. 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

76. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

77. 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

78. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

79. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

80. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

81. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit

82. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

83. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

84. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 of the heaters 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 4320] Federally Enforceable Through Title V Permit

85. The permittee shall monitor and record the stack concentration of NH3 from the SCR unit at least once during each month. This monitoring shall be conducted utilizing Draeger tubes or a District-approved equivalent method at the time NOx, CO and O2 readings are taken. 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 one (1) day of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

86. In stack oxygen monitors are acceptable for O2 measurement. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

87. 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 performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

88. 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 4320] Federally Enforceable Through Title V Permit

89. 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 4320] Federally Enforceable Through Title V Permit

90. Permittee shall comply with all applicable notification, reporting, recordkeeping, testing, and maintenance requirements of Rule 4001 (40 CFR 60; subparts J, GGG, and QQQ). Heaters H-201, H-501, H-601, H-602, and the flare are subject to Subpart J. [District Rule 4001] Federally Enforceable Through Title V Permit

91. Equipment shall include monitoring system as required by 40 CFR 60, Subpart J for monitoring and recording of sulfur content (dry basis) of fuel gas (except PUC regulated natural gas, psa offgas, and combinations of only PUC gas and psa offgas) prior to combustion. [District Rule 4001] Federally Enforceable Through Title V Permit

92. The combustion in the thermal oxidizer, or other fuel gas combustion device of gases released as a result of start-up, shutdown, or malfunction is exempt from the 0.1 gr/dscf H2S requirement. The combustion in the flare of gases released as a result of start-up, shutdown, upset, malfunction, or the result of relief valve leakage is exempt from the 0.1 gr/dscf H2S requirement. [District Rule 4001, Subpart J] Federally Enforceable Through Title V Permit

93. Continuous emissions monitoring system 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 Rule 4001] Federally Enforceable Through Title V Permit

94. PSA gas monitoring shall be maintained pursuant to EPA approved alternate monitoring, one analysis for the sulfur content of the feedstock gas each reporting period and a statement confirming that the pipeline natural gas is the only feed to the hydrogen plant. [District Rule 4001] Federally Enforceable Through Title V Permit

95. Permittee shall maintain accurate daily records of amount of gas burned in the flare. [District Rule 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

96. Permittee shall sample flared gas for H2S content twice daily. [District Rule 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

97. Permittee shall maintain accurate records of fuel consumption data, operational data, startup and shutdown condition frequency and duration of the sulfur recovery unit, and gas sulfur content to verify daily emission limit compliance. [District Rule 2201 and 1070] Federally Enforceable Through Title V Permit

98. All records required by this permit shall be made available for District inspection upon request for a period of five years. [District Rule 1070, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

99. Operator shall not burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H2S) in excess of 0.10 gr/dscf (230 mg/dscm). [40 CFR Part 60, subpart J, 60.104(a)(1)] Federally Enforceable Through Title V Permit

100. Operator shall report all rolling 3-hour periods during which the average concentration of H2S as measured by the H2S continuous monitoring system exceeds 0.10 gr/dscf (230 mg/dscm). [40 CFR Part 60, subpart J, 60.105(e)(3)(ii)] Federally Enforceable Through Title V Permit

101. Operator shall determine compliance with the H2S standard using EPA Method 11. [40 CFR Part 60, subpart J, 60.106(e)] Federally Enforceable Through Title V Permit

102. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

103. {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

104. {2805} Operator shall maintain all records for at least five years and conform to the recordkeeping requirements described in District Rule 2520. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

105. {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

106. Emissions of sulfur compounds from any of the following units, H-101, H-201, H-501, H-601, H-602 shall not exceed 200 lb per hour, calculated as SO2. [District Rule 4301] Federally Enforceable Through Title V Permit

107. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520] Federally Enforceable Through Title V Permit

108. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

109. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

110. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2.1; 4306, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

111. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. [District Rule 4801] Federally Enforceable Through Title V Permit

112. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

113. {654} Flares shall only be used with the net heating value of the gas being combusted being 200 Btu/scf or greater if the flare is non-assisted; or with the net heating value of the gas being combusted being 300 Btu/scf or greater if the flare is air-assisted or steam-assisted. [40 CFR 60.18 (c)(3)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

114. The net heating value of the gas being combusted in a flare shall be calculated annually, pursuant to 40 CFR 60.18(f)(3) and using EPA Method 18, ASTM D1946, and ASTM D2382. [40 CFR 60.18 (f)(3-6)] Federally Enforceable Through Title V Permit

115. {656} Air-assisted flares shall be operated with an exit velocity less than Vmax, as determined by the equation specified in paragraph 40 CFR 60.18 (f)(6). [40 CFR 60.18 (c)(5)] Federally Enforceable Through Title V Permit

116. {657} Nonassisted and steam-assisted flares shall be operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18 (f)(4), less than 60 ft/sec, except as provided in 40 CFR 60.18 (c)(4)(ii) and (iii). [40 CFR 60.18 (c)(4)(i)] Federally Enforceable Through Title V Permit

117. {658} Nonassisted and steam-assisted flares may be operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18 (f)(4), equal to or greater than 60 ft/sec, but less than 400 ft/sec if the net heating value of the gas being combusted is greater than 1,000 Btu/scf. [40 CFR 60.18 (c)(4)(ii)] Federally Enforceable Through Title V Permit

118. {659} Nonassisted and steam-assisted flares may be operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18 (f)(4), less than the velocity, Vmax, as determined by the equation specified in paragraph 40 CFR 60.18 (f)(5), and less than 400 ft/sec. [40 CFR 60.18 (c)(4)(iii)] Federally Enforceable Through Title V Permit

119. {660} The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip. [40 CFR 60.18 (f)(4)] Federally Enforceable Through Title V Permit

120. {661} Flares shall be operated with a flame present at all times, and kept in operation when emissions may be vented to them. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. [40 CFR 60.18 (c)(2), 60.18 (e), and 60.18 (f)(2)] Federally Enforceable Through Title V Permit

121. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

122. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of District Rule 4801, section 3.1 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

123. Heat exchangers 11-E-01A and 11-E-01B shall not operate concurrently. [District Rule 2010] Federally Enforceable Through Title V Permit

124. Permittee shall keep an accurate record of dates of inspection and monitoring, components inspected and monitored, and results of fugitive emissions calculations for compliance with the daily emission limit of the caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps P-970-A and P-970-B. Such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

125. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit

126. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit

127. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an alternative equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit

128. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

129. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere. [District Rule 5.8] Federally Enforceable Through Title V Permit

130. The operator shall minimize sulfur dioxide flare emissions to less than 1.50 tons per million barrels of crude processing capacity, calculated as an average over one calendar year. [District Rule 4311, 5.9.1] Federally Enforceable Through Title V Permit

131. The operator shall monitor the vent gas flow to the flare with a flow measuring device. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit

132. The operator shall maintain and retain on-site for a minimum of five years, and made available to the APCO, ARB, and EPA a copy of the approved flare minimization plan, a copy of annual reports submitted to the District, and all applicable flare monitoring data collected as required by this permit. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit

133. The operator of a flare subject to flare minimization shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, which ever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2] Federally Enforceable Through Title V Permit

134. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: the results of an investigation to determine the primary cause and contributing factors of the flaring event; any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; if appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and the date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit

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

136. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. [District Rule 4311, 6.3.4.1] Federally Enforceable Through Title V Permit

137. Vent gas flow shall be determined using a verification method recommended by the manufacturer of the flow monitoring equipment installed. [District Rule 4311, 6.3.5.2] Federally Enforceable Through Title V Permit

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

139. The operator shall provide the APCO with access to the flare monitoring system to collect the vent gas samples. [District Rule 4311, 6.6.7] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

141. The operator shall monitor and record the water level and pressure of the water seal that services the flare daily. [District Rule 4311, 6.8] Federally Enforceable Through Title V Permit

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

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

APPENDIX E

Title V Compliance Certification Form

San Joaquin Valley
Unified Air Pollution Control District

HEALTHY AIR LIVING

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

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

PROJ. # S-1142278

COMPANY NAME: SAN JOAQUIN REFINING	FACILITY ID: S-36
1. Type of Organization: [X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name: MAJID MOJIBI	
3. Agent to the Owner: PAT OVESON	

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

(PO) 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).

(PO) 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.

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

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

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

Pat Oveson — Signature of Responsible Official

6/24/14 — Date

PAT OVESON — Name of Responsible Official (please print)

REFINERY MANAGER — Title of Responsible Official (please print)