



SEP 28 2016

Mr. David Campbell
Tricor Refining LLC
1134 Manor Street
Bakersfield, CA 93308

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-44
Project # S-1161936**

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. The Authorities to Construct authorize removing conditions that limit concurrent operation of equipment with Oildale Energy's gas turbine (S-73-2).

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

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

Thank you for your cooperation in this matter.

Sincerely,



Arnaud Marjollet
Director of Permit Services

Enclosures

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

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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4800 Enterprise Way
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San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Refinery Units

Facility Name: Tricor Refining LLC
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Application #(s): S-44-1-19, '-2-26, '-3-21, '-4-21, '-5-12, '-6-14, and '-13-24
Project #: S-1161936
Deemed Complete: June 9, 2016

Date: September 7, 2016
Engineer: Steve Davidson
Lead Engineer: Rich Karrs

I. Proposal

The primary business of Tricor Refining LLC (Tricor) is refining crude oil. Tricor Refining LLC has submitted an Authority to Construct (ATC) applications for removing conditions that limit concurrent operation of equipment with Oildale energy's gas turbine (S-73-2). The turbine has been removed from service and the shared limiting condition is no longer applicable or required. The change in permit conditions can be found in Section IX, Recommendations, of this evaluation.

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

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (2/18/16)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
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 2 (8/21/03)
Rule 4306	Boilers, Steam Generators and Process Heaters - Phase 3 (10/16/08)
Rule 4307	Boilers, Steam Generators and Process Heaters 2.0 MMBtu/hr to 5.0 MMBtu/hr (10/16/08)

Rule 4320 Advanced Emission 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 1 (8/21/03)
Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

This facility is located at 1134 Manor St. in Bakersfield, CA. The facility 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

Oildale Energy, LLC (facility S-73) operated a gas turbine engine driven-cogeneration system which supplied electricity to Tricor and to the local power grid. The Tricor Refinery used recovered heat from the cogeneration system. The recovered heat was sent to the refinery processes via an enclosed system of fluid and heat exchangers. As a result, Tricor normally did not need to fire any of refinery process heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6, & -13. However, the gas turbine has been removed. Therefore, Tricor is requesting the District remove all Oildale Energy references from the referened permits.

The equipment authorized from these permits is listed below:

- Permit S-44-1 authorizes the crude oil fractionation plant, which includes four heaters with a total heat input of 61 MMBtu/hr.
- Permit S-44-2 authorizes the solvent extraction plant, which includes a 40 MMBtu/hr hot oil heater.
- Permit S-44-3 authorizes the lube oil finishing plant, which includes a charge heater with a heat input of 6 MMBtu/hr.
- PTO S-44-5 authorizes a 99.9 MMBtu/hr boiler.
- Permit S-44-6 authorizes the shipping and receiving operations of the refinery, which include a 45 MMBtu/hr asphalt shipping heater and a 20 MMBtu/hr circulating "retort" heater.
- Permit S-44-13 authorizes a 100 MMBtu/hr boiler.

V. Equipment Listing

Pre-Project Equipment Description:

S-44-1-17: DORMANT 61 MMBTU/HR CRUDE FRACTIONATION PLANT INCLUDING LIQUID RING STAGED VACUUM PUMP WITH SEPARATOR, FLAME ARRESTOR, EMERGENCY VENT STACK, GAS/LIQUID SEPARATOR, THREE VACUUM VESSELS, ONE ATMOSPHERIC VESSEL, AND FOUR HEATERS

- S-44-2-24: SOLVENT EXTRACTION PLANT INCLUDING AIR STRIPPER, TWO ROTATING DISC COLUMNS, AND 40 MMBTU/HR SOLVENT PLANT VERTICAL CYLINDRICAL TYPE HOT OIL HEATER WITH A ZEECO MODEL GLSF-16 LOW NOX BURNER

- S-44-3-18: DORMANT LUBE OIL FINISHING PLANT INCLUDING 6 MMBTU/HR CHARGE VERTICAL CYLINDRICAL HEATER, TWO HYDROGEN REACTORS, TWO COMPRESSORS, SEPARATORS, FLASH POT, AMINE TREATER WITH RECEIVER AND REGENERATOR, H₂S PRODUCT STRIPPER (3-D-51), STRIPPER ACCUMULATOR, UTILITY FRACTIONATOR COLUMN (D-11) (SHARED WITH S-44-4), AND H₂S SCRUBBER AND FLARE SERVING HYDROGEN RICH WASTE GAS STREAM

- S-44-4-16: DORMANT 4.5 MMBTU/HR LUBE OIL FINISHING PLANT - UTILITY FRACTIONATOR INCLUDING THREE ATMOSPHERIC COLUMN NOS. D-11, D-21, & D-31, STANDBY HEATER NOS. 11, 21, & 31, AND HEAT OIL EXCHANGER NOS. E 551, E-552, & E-553

- S-44-5-12: 99.9 MMBTU/HR NATURAL GAS-FIRED ZURN MODEL 15M KEYSTONE BOILER WITH COEN STAGED AIR BURNER AND FLUE GAS RECIRCULATION

- S-44-6-12: DORMANT 65 MMBTU/HR SHIPPING & RECEIVING OPERATION INCLUDING 45 MMBTU/HR ASPHALT SHIPPING FORCED DRAFT HEATER AND 20 MMBTU/HR CIRCULATING (RETORT) NATURAL DRAFT VERTICAL CYLINDRICAL HEATER

- S-44-13-19: DORMANT (COMPLIANT) 100 MMBTU/HR CLEAVER BROOKS BOILER INCLUDING JOHN ZINK LOW NOX BURNER, H₂S CAUSTIC SCRUBBER, CONTINUOUS H₂S MONITOR, & BACKUP H₂S REMOVAL SYSTEM WITH "SULFATREAT" ADSORBENT VERTICAL COLUMN FUEL GAS SCRUBBER WITH NOMINAL DIMENSIONS 18' LONG BY 4' DIAMETER

Proposed Modification:

Remove SLC conditions that reference Oildale Energy Turbine S-73-2. This turbine has been permanently removed from service.

- S-44-1-19: MODIFICATION OF DORMANT 61 MMBTU/HR CRUDE FRACTIONATION PLANT INCLUDING LIQUID RING STAGED VACUUM PUMP WITH SEPARATOR, FLAME ARRESTOR, EMERGENCY VENT STACK, GAS/LIQUID SEPARATOR, THREE VACUUM VESSELS, ONE ATMOSPHERIC VESSEL, AND FOUR HEATERS: REMOVE SLC SHARED WITH TURBINE S-73-2

- S-44-2-26: MODIFICATION OF SOLVENT EXTRACTION PLANT INCLUDING AIR STRIPPER, TWO ROTATING DISC COLUMNS, AND 40 MMBTU/HR SOLVENT PLANT VERTICAL CYLINDRICAL TYPE HOT OIL HEATER WITH A ZEECO

MODEL GLSF-16 LOW NOX BURNER: REMOVE SLC SHARED WITH TURBINE S-73-2

- S-44-3-21: MODIFICATION OF DORMANT LUBE OIL FINISHING PLANT INCLUDING 6 MMBTU/HR CHARGE VERTICAL CYLINDRICAL HEATER, TWO HYDROGEN REACTORS, TWO COMPRESSORS, SEPARATORS, FLASH POT, AMINE TREATER WITH RECEIVER AND REGENERATOR, H₂S PRODUCT STRIPPER (3-D-51), STRIPPER ACCUMULATOR, UTILITY FRACTIONATOR COLUMN (D-11) (SHARED WITH S-44-4), AND H₂S SCRUBBER AND FLARE SERVING HYDROGEN RICH WASTE GAS STREAM: REMOVE SLC SHARED WITH TURBINE S-73-2
- S-44-4-21: MODIFICATION OF DORMANT 4.5 MMBTU/HR LUBE OIL FINISHING PLANT - UTILITY FRACTIONATOR INCLUDING THREE ATMOSPHERIC COLUMN NOS. D-11, D-21, & D-31, STANDBY HEATER NOS. 11, 21, & 31, AND HEAT OIL EXCHANGER NOS. E 551, E-552, & E-553: REMOVE SLC SHARED WITH TURBINE S-73-2
- S-44-5-14: MODIFICATION OF 99.9 MMBTU/HR NATURAL GAS-FIRED ZURN MODEL 15M KEYSTONE BOILER WITH COEN STAGED AIR BURNER AND FLUE GAS RECIRCULATION: REMOVE SLC SHARED WITH TURBINE S-73-2
- S-44-6-14: MODIFICATION OF DORMANT 65 MMBTU/HR SHIPPING & RECEIVING OPERATION INCLUDING 45 MMBTU/HR ASPHALT SHIPPING FORCED DRAFT HEATER AND 20 MMBTU/HR CIRCULATING (RETORT) NATURAL DRAFT VERTICAL CYLINDRICAL HEATER: REMOVE SLC SHARED WITH TURBINE S-73-2
- S-44-13-24: MODIFICATION OF DORMANT (COMPLIANT) 100 MMBTU/HR CLEAVER BROOKS BOILER INCLUDING JOHN ZINK LOW NOX BURNER, H₂S CAUSTIC SCRUBBER, CONTINUOUS H₂S MONITOR, & BACKUP H₂S REMOVAL SYSTEM WITH "SULFATREAT" ADSORBENT VERTICAL COLUMN FUEL GAS SCRUBBER WITH NOMINAL DIMENSIONS 18' LONG BY 4' DIAMETER: REMOVE SLC SHARED WITH TURBINE S-73-2

Post Project Equipment Description:

- S-44-1-19: DORMANT 61 MMBTU/HR CRUDE FRACTIONATION PLANT INCLUDING LIQUID RING STAGED VACUUM PUMP WITH SEPARATOR, FLAME ARRESTOR, EMERGENCY VENT STACK, GAS/LIQUID SEPARATOR, THREE VACUUM VESSELS, ONE ATMOSPHERIC VESSEL, AND FOUR HEATERS
- S-44-2-26: SOLVENT EXTRACTION PLANT INCLUDING AIR STRIPPER, TWO ROTATING DISC COLUMNS, AND 40 MMBTU/HR SOLVENT PLANT VERTICAL CYLINDRICAL TYPE HOT OIL HEATER WITH A ZEECO MODEL GLSF-16 LOW NOX BURNER

- S-44-3-21: DORMANT LUBE OIL FINISHING PLANT INCLUDING 6 MMBTU/HR CHARGE VERTICAL CYLINDRICAL HEATER, TWO HYDROGEN REACTORS, TWO COMPRESSORS, SEPARATORS, FLASH POT, AMINE TREATER WITH RECEIVER AND REGENERATOR, H₂S PRODUCT STRIPPER (3-D-51), STRIPPER ACCUMULATOR, UTILITY FRACTIONATOR COLUMN (D-11) (SHARED WITH S-44-4), AND H₂S SCRUBBER AND FLARE SERVING HYDROGEN RICH WASTE GAS STREAM
- S-44-4-21: DORMANT 4.5 MMBTU/HR LUBE OIL FINISHING PLANT - UTILITY FRACTIONATOR INCLUDING THREE ATMOSPHERIC COLUMN NOS. D-11, D-21, & D-31, STANDBY HEATER NOS. 11, 21, & 31, AND HEAT OIL EXCHANGER NOS. E 551, E-552, & E-553
- S-44-5-14: 99.9 MMBTU/HR NATURAL GAS-FIRED ZURN MODEL 15M KEYSTONE BOILER WITH COEN STAGED AIR BURNER AND FLUE GAS RECIRCULATION
- S-44-6-14: DORMANT 65 MMBTU/HR SHIPPING & RECEIVING OPERATION INCLUDING 45 MMBTU/HR ASPHALT SHIPPING FORCED DRAFT HEATER AND 20 MMBTU/HR CIRCULATING (RETORT) NATURAL DRAFT VERTICAL CYLINDRICAL HEATER
- S-44-13-24: DORMANT (COMPLIANT) 100 MMBTU/HR CLEAVER BROOKS BOILER INCLUDING JOHN ZINK LOW NOX BURNER, H₂S CAUSTIC SCRUBBER, CONTINUOUS H₂S MONITOR, & BACKUP H₂S REMOVAL SYSTEM WITH "SULFATREAT" ADSORBENT VERTICAL COLUMN FUEL GAS SCRUBBER WITH NOMINAL DIMENSIONS 18' LONG BY 4' DIAMETER

VI. Emission Control Technology Evaluation

The applicant has not proposed any change to the equipment or the control technology. Therefore, an emissions control technology evaluation is not required.

VII. General Calculations

District Rule 2201 applies to all new stationary sources and all modifications to existing stationary sources which are subject to the District permit requirements and after construction emit or may emit one or more affected pollutant. Section 3.25.1 defines a modification as follows:

A modification is an action including at least one of the following items:

- Any change in hours of operation, production rate, or method of operation of an existing emissions unit, which would necessitate a change in permit conditions.
- Any structural change or addition to an existing emissions unit which would necessitate a change in permit conditions. A Replacement Emissions Unit shall not be considered to be a structural change.
- An increase in emissions from an emissions unit caused by a modification of the Stationary Source when the emissions unit is not subject to a daily emissions limitation.
- Addition of any new emissions unit which is subject to District permitting requirements.

- A change in a permit term or condition proposed by an applicant to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

The applicant's proposal is not a modification; therefore, calculations are not required. However, some calculations will be performed to document emissions for future permit and stationary source emissions references.

A. Assumptions

Removing turbine S-73-2 from the SLC will not affect the potential emission from the permit unit in this project.

PE2 = PE1 for all criteria pollutants associated with all permit units in this project.

All emissions factors and limiting factors are from current permits.

B. Emission Factors

All Permits Associated with this Project:

- Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the following: NOx - 94.95 tpy, CO - 154.66 tpy, VOC - 7.39 tpy, PM10 - 18.10 tpy or SOx - 30.70 tpy. [District Rule 2201] Y

S-44-1-17:

- Heater A shall operate as a replacement standby unit and shall not exceed a total heat input of 90 billion Btu/yr. [District Rule 4305] Y
- Gas-fired emission rates from heaters shall not exceed any of the following: NOx - 0.036 lb/MMBtu, CO - 0.0840, VOC - 0.0055, PM10 - 0.0076, or SOx - 0.0143 lb/MMBtu. [District NSR Rule] Y
- Oil-fired emission rates from heaters shall not exceed any of the following: NOx - 0.052 lb/MMBtu, CO - 0.0365, VOC - 0.0015, PM10 - 0.0241, or SOx - 0.0518 lb/MMBtu. [District NSR Rule] Y

S-44-2-24

- Solvent plant heater emission rates shall not exceed any of the following: NOx - 30 ppmv @ 3% O2 or 0.036 lb/MMBtu, CO - 400 ppmv @ 3% O2, VOC - 5.5 lb/MMscf of fuel gas, PM10 - 7.6 lb/MMscf of fuel gas, or SOx - 5 gr of total sulfur per 100 standard cubic feet of fuel gas. [District Rules 4306, 4320 and 4351] Y

S-44-3-18:

- Charge heater gas-fired emission rates shall not exceed any of the following limits: 0.1000 lb-NOx/MMBtu, 0.0840 lb-CO/MMBtu, 0.0055 lb-VOC/MMBtu, 0.0076 lb-PM10/MMBtu, or 0.0143 lb-SOx /MMBtu. [District NSR Rule] Y
- Charge heater oil-fired emission rates shall not exceed any of the following limits: 0.1460 lb-NOx/MMBtu, 0.0365 lb-CO/MMBtu, 0.0015 lb-VOC/MMBtu, 0.0241 lb-PM10/MMBtu, or 0.0518 lb-SOx/MMBtu. [District NSR Rule] Y

S-44-4-16:

- Heaters #11, #21, and #31 shall not be fired at greater than 4.5 MMBTU/hr for all three heaters. [District Rule 2201] Y
- Crude oil throughput for S-44-1 and S-44-4 combined shall not exceed 12,800 barrels per day. [District Rule 2201] Y
- Emissions from any of the standby heaters (#11, 21, 31) shall not exceed any of the following limits: 0.10 lb-NOx/MMBtu, 0.084 lb-CO/MMBtu, 0.0055 lb-VOC/MMBtu, 0.0076 PM10/MMBtu, or 0.00285 lb-SOx/MMBtu. [District Rule 2201] Y

S-44-5-12:

- Gas-firing rate shall not exceed 94,612 scf per hour. [District NSR Rule] Y
- Emission rates shall not exceed any of the following: NOx (as NO₂): 25 ppmv @3% O₂ or 0.031 lb/MMBtu, CO: 400 ppmv @ 3% O₂ or 0.30 lb/MMBtu. [District Rules 4305, 5.1.1, 4306, 5.1.1 and 4351] Y
- Emissions shall not exceed any of the following: 0.0056 lb-VOC/MMBtu, 0.0076 lb-PM10/MMBtu, or 0.0006 lb-SOx/MMBtu. [District NSR Rule] Y

S-44-6-12:

- Asphalt shipping heater shall operate as a replacement standby unit and shall not be fired for more than 90 billion Btu/year. [District Rule 4305] Y
- Gas fired emission rate from 45 MMBtu/hr forced draft asphalt shipping heater shall not exceed: NOx, 95 ppmv @3% O₂ or 0.10 lb/MMBtu, and CO, 400 ppmv @3% O₂. [District Rule 4351] Y
- Gas fired emission rate from 20 MMBtu/hr natural draft retort heater shall not exceed: NOx, 147 ppmv @3% O₂ or 0.18 lb/MMBtu, and CO, 400 ppmv @3% O₂. [District Rule 4305 and 4351] Y

S-44-13-19:

- Emission rates shall not exceed NO_x (as NO₂): 25 ppmvd @3% O₂ or 0.03 lb/MMBtu, and CO: 400 ppmvd @ 3% O₂. [District Rules 4301, 4305, 4306 and 4351] Y

C. Calculations

1. Pre-Project Potential to Emit (PE1)

S-44-1-17:

The potential to emit for the four vacuum heaters at the fractional plant are calculated as follows: EF x heat Input x Hours of Operation (Annual emissions limited 90,000 MMBtu/year)

Vacuum Heater A (21.0 MMBtu/hr)

S-44-1 Heater A						
	EF (lb/MMbtu)	Burner (MMBtu)	Daily Operation (hr)	Annual Operation (MMbtu)	Daily Emissions (lb)	Annual Emissions (lb)
NO _x	0.036	21	24	90,000	18.1	3,240
SO _x	0.0143	21	24	90,000	7.2	1,287
PM ₁₀	0.0241	21	24	90,000	12.1	2,169
CO	0.052	21	24	90,000	26.2	4,680
VOC	0.0055	21	24	90,000	2.8	495

Vacuum Heater B (15.0 MMBtu/hr)

S-44-1 Heater B						
	EF (lb/MMbtu)	Burner (MMBtu)	Daily Operation (hr)	Annual Operation (MMbtu)	Daily Emissions (lb)	Annual Emissions (lb)
NO _x	0.036	15	24	8760	13.0	4,730
SO _x	0.0143	15	24	8760	5.1	1,879
PM ₁₀	0.0241	15	24	8760	8.7	3,167
CO	0.052	15	24	8760	18.7	6,833
VOC	0.0055	15	24	8760	2.0	723

Vacuum Heater C (15.0 MMBtu/hr)

S-44-1 Heater C						
	EF (lb/MMbtu)	Burner (MMBtu)	Daily Operation (hr)	Annual Operation (MMbtu)	Daily Emissions (lb)	Annual Emissions (lb)
NO _x	0.036	15	24	8760	13.0	4,730
SO _x	0.0143	15	24	8760	5.1	1,879
PM ₁₀	0.0241	15	24	8760	8.7	3,167
CO	0.052	15	24	8760	18.7	6,833
VOC	0.0055	24	15	8760	2.0	723

Vacuum Heater D (10.0 MMBtu/hr)

S-44-1 Heater D						
	EF (lb/MMbtu)	Burner (MMBtu)	Daily Operation (hr)	Annual Operation (MMbtu)	Daily Emissions (lb)	Annual Emissions (lb)
NO _x	0.036	10	24	8760	8.6	3,154
SO _x	0.0143	10	24	8760	3.4	1,253
PM ₁₀	0.0241	10	24	8760	5.8	2,111
CO	0.052	10	24	8760	12.5	4,555
VOC	0.0055	10	24	8760	1.3	482

Total annual emissions all four heaters:

Total Potential Annual Emissions All Four Heaters					
	NO _x	SO _x	PM ₁₀	CO	VOC
Heater A	3240	1287	2169	4680	495
Heater B	4730	1879	3167	6833	723
Heater C	4730	1879	3167	6833	723
Heater D	3154	1253	2111	4555	482
Total PE	15,854	6,298	10,614	22,901	2,423

S-44-2-21:

The potential to emit for the 40 MMBtu/hr solvent plant heater is calculated as follows:
 EF x heat Input x Hours of Operation

S-44-2						
	EF (lb/MMbtu)	Burner (MMBtu)	Daily Operation (hr)	Annual Operation (hr)	Daily Emissions (lb)	Annual Emissions (lb)
NO _x	0.036	40	24	8760	34.6	12,614
SO _x	0.0143	40	24	8760	13.7	5011
PM ₁₀	0.0076	40	24	8760	7.3	2663
CO	0.3	40	24	8760	288.0	105,120
VOC	0.0055	40	24	8760	5.3	1927

S-44-3-18:

The potential to emit for the 6 MMBtu/hr vertical cylindrical heater is calculated as follows: EF x heat Input x Hours of Operation

S-44-3						
	EF (lb/MMbtu)	Burner (MMBtu)	Daily Operation (hr)	Annual Operation (hr)	Daily Emissions (lb)	Annual Emissions (lb)
NO _x	0.1	6	24	8760	14.4	5,256
SO _x	0.0518	6	24	8760	7.5	2,723
PM ₁₀	0.0241	6	24	8760	3.5	1,267
CO	0.0365	6	24	8760	5.3	1,918
VOC	0.0015	6	24	8760	0.2	79

S-44-4-16:

The potential to emit for the 4.5 MMBtu/hr H-11 Heater is calculated as follows: EF x heat Input x Hours of Operation

S-44-4 Heater H-11						
	EF (lb/MMbtu)	Burner (MMBtu)	Daily Operation (hr)	Annual Operation (hr)	Daily Emissions (lb)	Annual Emissions (lb)
NO _x	0.1	4.5	24	8760	10.8	3,942
SO _x	0.00285	4.5	24	8760	0.3	112
PM ₁₀	0.0076	4.5	24	8760	0.8	300
CO	0.084	4.5	24	8760	9.1	3,311
VOC	0.0055	4.5	24	8760	0.6	217

The potential to emit for the 4.5 MMBtu/hr H-21 Heater is calculated as follows: EF x heat Input x Hours of Operation

S-44-4 Heater H-21 ¹						
	EF (lb/MMBtu)	Burner (MMBtu)	Daily Operation (hr)	Annual Operation (hr)	Daily Emissions (lb)	Annual Emissions (lb)
NO _x	0.1	4.5	24	8760	10.8	3,942
SO _x	0.00285	4.5	24	8760	0.3	112
PM ₁₀	0.0076	4.5	24	8760	0.8	300
CO	0.084	4.5	24	8760	9.1	3,311
VOC	0.0055	4.5	24	8760	0.6	217

¹Please note the burner is 15.0 MMBtu/hr but it is limited to 4.5 MMBtu/hr by permit conditions

The potential to emit for the 4.5 MMBtu/hr H-31 Heater is calculated as follows: EF x heat Input x Hours of Operation

S-44-4 Heater H-31						
	EF (lb/MMBtu)	Burner (MMBtu)	Daily Operation (hr)	Annual Operation (hr)	Daily Emissions (lb)	Annual Emissions (lb)
NO _x	0.1	4.5	24	8760	10.8	3,942
SO _x	0.00285	4.5	24	8760	0.3	112
PM ₁₀	0.0076	4.5	24	8760	0.8	300
CO	0.084	4.5	24	8760	9.1	3,311
VOC	0.0055	4.5	24	8760	0.6	217

Total Potential Annual Emissions All Four Heaters					
	NO _x	SO _x	PM10	CO	VOC
Heater H-11	3942	112	300	3311	217
Heater H-21	3942	112	300	3311	217
Heater H-31	3942	112	300	3311	217
Total PE	11,826	336	900	9933	651

S-44-5-12:

The potential to emit for the 99.9 MMBtu/hr Keystone boiler is calculated as follows: EF x heat Input x Hours of Operation

The potential to emit for the 4.5 MMBtu/hr H-21 Heater is calculated as follows: EF x heat Input x Hours of Operation

S-44-4 Heater H-21 ¹						
	EF (lb/MMbtu)	Burner (MMBtu)	Daily Operation (hr)	Annual Operation (hr)	Daily Emissions (lb)	Annual Emissions (lb)
NO _x	0.1	4.5	24	8760	10.8	3,942
SO _x	0.00285	4.5	24	8760	0.3	112
PM ₁₀	0.0076	4.5	24	8760	0.8	300
CO	0.084	4.5	24	8760	9.1	3,311
VOC	0.0055	4.5	24	8760	0.6	217

¹Please note the burner is 15.0 MMBtu/hr but it is limited to 4.5 MMBtu/hr. by permit conditions

The potential to emit for the 4.5 MMBtu/hr H-31 Heater is calculated as follows: EF x heat Input x Hours of Operation

S-44-4 Heater H-31						
	EF (lb/MMbtu)	Burner (MMBtu)	Daily Operation (hr)	Annual Operation (hr)	Daily Emissions (lb)	Annual Emissions (lb)
NO _x	0.1	4.5	24	8760	10.8	3,942
SO _x	0.00285	4.5	24	8760	0.3	112
PM ₁₀	0.0076	4.5	24	8760	0.8	300
CO	0.084	4.5	24	8760	9.1	3,311
VOC	0.0055	4.5	24	8760	0.6	217

Total Potential Annual Emissions All Four Heaters					
	NO _x	SO _x	PM10	CO	VOC
Heater H-11	3942	112	300	3311	217
Heater H-21	3942	112	300	3311	217
Heater H-31	3942	112	300	3311	217
Total PE	11,826	336	900	9933	651

S-44-5-12:

The potential to emit for the 99.9 MMBtu/hr Keystone boiler is calculated as follows: EF x heat Input x Hours of Operation

S-44-5						
	EF (lb/MMbtu)	Burner (MMBtu)	Daily Operation (hr)	Annual Operation (hr)	Daily Emissions (lb)	Annual Emissions (lb)
NO _x	0.031	99.9	24	8760	74.3	27,129
SO _x	0.006	99.9	24	8760	14.4	5,251
PM ₁₀	0.0076	99.9	24	8760	18.2	6,651
CO	0.30	99.9	24	8760	7192.8	262,537
VOC	0.0056	99.9	24	8760	13.4	4,901

S-44-6:

The potential to emit for the 45.0 MMBtu/hr Asphalt heater is calculated as follows: EF x heat Input x Hours of Operation

S-44-6 Asphalt Heater						
	EF (lb/MMbtu)	Burner (MMBtu)	Daily Operation (hr)	Annual Operation (hr)	Daily Emissions (lb)	Annual Emissions (lb)
NO _x	0.1	45.0	24	90,000	108.0	9,000
SO _x	0.0143	45.0	24	90,000	15.4	1,287
PM ₁₀	0.0076	45.0	24	90,000	8.2	684
CO	0.30	45.0	24	90,000	324.0	27,000
VOC	0.0055	45.0	24	90,000	5.9	5495

The potential to emit for the 20.0 MMBtu/hr Retort heater is calculated as follows (EF x heat Input x Hrs of Operation):

S-44-6 Retort Heater						
	EF (lb/MMbtu)	Burner (MMBtu)	Daily Operation (hr)	Annual Operation (hr)	Daily Emissions (lb)	Annual Emissions (lb)
NO _x	0.18	20.0	24	8760	86.4	31,536
SO _x	0.0143	20.0	24	8760	6.9	2,505
PM ₁₀	0.0076	20.0	24	8760	3.6	1,332
CO	0.30	20.0	24	8760	144.0	52,560
VOC	0.0055	20.0	24	8760	2.6	964

Total Potential Annual Emissions S-44-6					
	NOx	SOx	PM10	CO	VOC
45 MMBtu Asphalt Heater	9000	1287	684	27,000	5495
20 MMBTU Retort Burner	31,513	2,505	1,332	52,560	964
Total PE	40,513	3792	2016	79,560	6459

S-44-13:

The potential to emit for the 100.0 MMBtu/hr Boiler #1 is calculated as follows: EF x heat Input x Hours of Operation

S-44-13 Boiler #1						
	EF (lb/MMbtu)	Burner (MMBtu)	Daily Operation (hr)	Annual Operation (hr)	Daily Emissions (lb)	Annual Emissions (lb)
NO _x	0.03	100	24	8760	72.0	26,280
SO _x	0.006	100	24	8760	14.4	5,256
PM ₁₀	0.014	100	24	8760	33.6	12,264
CO	0.30	100	24	8760	720.0	262,800
VOC	0.0058	100	24	8760	13.9	5,081

Total Potential Emissions from Units S-44-1, '-2, '-3, '-4, '-5, '-6, and '-13

Total Annual Emissions from S-44-1, '-2, '-3, '-4, '-5, '-6, and '-13 (lb)					
Permit	NOx	Sox	PM10	CO	VOC
S-44-1	15,854	6,298	10,614	22,901	2,423
S-44-2	12,614	5011	2663	105,120	1927
S-44-3	5,256	2,723	1,267	1,918	79
S-44-4	11,826	336	900	9933	651
S-44-5	27,129	5251	6651	262,537	4901
S-44-6	9000	1287	684	27,000	5495
S-44-13	40,513	3792	2016	79,560	6459
Total (lb)	122,192	24,698	24,795	508,969	21,935
Total (tons)	61.10	12.35	12.40	254.48	10.97
Current SLC (tons)	94.95	30.7	18.10	154.66	7.39

2. Post Project Potential to Emit (PE2)

Tricor is not proposing a change in combustion rate, emissions factors, emissions, or the emissions associated with the SLC. Therefore, PE2 = PE1 for all criteria pollutants associated with all emissions units on all permits within this project.

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

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for NO_x, CO, and VOC emissions; therefore, SSPE1 calculations are not necessary.

The SSPE1 for SO_x and PM₁₀ is calculated in Appendix B and presented in the following table.

SSPE1 (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	>20,000	52,546	36,630	>200,000	>20,000

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

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

The applicant is not proposing any change in the facility emissions. Therefore, SSPE2 = SSPE1 and is listed in the table below.

SSPE2 (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	>20,000	52,546	36,630	>200,000	>20,000

5. Major Source Determination

Rule 2201 Major Source Determination:

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

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)

- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)						
	NO_x	SO_x	PM₁₀	PM_{2.5}	CO	VOC
SSPE1	>20,000	52,546	36,630	36,630	>200,000	>20,000
SSPE2	>20,000	52,546	36,630	36,630	>200,000	>20,000
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	Y	No	No	No	Y	Y

Note: PM2.5 assumed to be equal to PM10

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

6. Rule 2410 Major Source Determination:

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

PSD Major Source Determination (tons/year)						
	NO₂	VOC	SO₂	CO	PM	PM₁₀
Estimated Facility PE before Project Increase	--	--	--	254	--	--
PSD Major Source Thresholds	100	100	100	100	100	100
PSD Major Source ? (Y/N)	--	--	--	Y	--	--

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

VIII. Compliance Determination

Rule 2201 New and Modified Stationary Source Review Rule

District Rule 2201 applies to all new stationary sources and all modifications to existing stationary sources which are subject to the District permit requirements and after construction emit or may emit one or more affected pollutant. Section 3.25.1 defines a modification as follows:

A modification is an action including at least one of the following items:

- Any change in hours of operation, production rate, or method of operation of an existing emissions unit, which would necessitate a change in permit conditions.
- Any structural change or addition to an existing emissions unit which would necessitate a change in permit conditions. A Replacement Emissions Unit shall not be considered to be a structural change.
- An increase in emissions from an emissions unit caused by a modification of the Stationary Source when the emissions unit is not subject to a daily emissions limitation.
- Addition of any new emissions unit which is subject to District permitting requirements.
- A change in a permit term or condition proposed by an applicant to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

The applicant's proposal is not a modification; therefore, calculations are not required. However, some calculations will be performed to document emissions for future permit and stationary source emissions reference.

Rule 2410 Prevention of Significant Deterioration

This project does not result in a new PSD major source or PSD major modification. Therefore, this rule does not apply to this project. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

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

Minor permit modifications do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions. Tricor has requested to remove recordkeeping and report requirements; therefore, this is a Significant Modification

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility shall not implement the changes requested until the final permit is issued.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60.

40 CFR Part 60, Subparts, K, Ka, and Kb could potentially apply to the storage tanks located at this facility. However, there are no tanks associated with this project. Therefore, this Rule does not apply.

40 CFR Part 60, Subpart UU, Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture applicability includes any asphalt storage tank or blowing still that processes and/or stores only nonroofing asphalts and that commences construction or modification after May 26, 1981, is subject to the requirements of this subpart. This project does not include any tanks or blowing stills. Therefore, this Rule does not apply

40 CFR Part 60, Subpart QQQ, Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems applies to individual drain systems, oil-water separators, and aggregate facilities located in petroleum refineries

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

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63.

40 CFR Part 63, Subpart UUU, National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units applies to process vent or group of process vents on fluidized catalytic cracking units, the process vent or group of process vents on catalytic reforming units, the process vent or group of process vents on Claus or other types of sulfur recovery plant units and each bypass line serving a new, existing, or reconstructed catalytic cracking unit, catalytic reforming unit, or sulfur recovery unit. This project does not include any of these affected sources; therefore this rule does not apply.

Rule 4101 Visible Emissions

Rule 4101 states that no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). As the heaters combust gas, visible emissions are not expected to exceed Ringelmann 1 or 20% opacity. Continued compliance is expected.

Rule 4102 Nuisance

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

As stated 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

This rule defines the maximum allowable concentration of particulates in the exhaust as 0.1 gr/dscf. Using the daily PM₁₀ emissions factor listed in Section VII.B:

$$\frac{0.0076 \text{ lb } PM_{10}}{\text{MMBtu heat input}} \times \frac{1 \text{ MMBtu heat input}}{8,578 \text{ dscf exhaust (at } 60^\circ \text{ F)}} \times \frac{7000 \text{ gr}}{1 \text{ lb}} = 0.0062 \frac{\text{gr } PM_{10}}{\text{dscf}}$$

0.0062 gr/dscf < 0.1 gr/dscf; therefore, continued compliance is expected.

Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO₂, NO₂, 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 combustion are less than 1 μm in diameter. The facility is currently in compliance with this rule and continued compliance is expected.

Rule 4305 Boilers, Steam Generators and Process Heaters - Phase 2 (8/21/03)

This rule applies to any gaseous fuel or liquid fuel fired boiler, steam generator, or process heater with a rated heat input greater than 5 million Btu per hour. Therefore, this Rule applies to the following units:

- A) four heaters listed on Permit S-44-1
- B) The solvent plant heater listed on Permit S-44-2
- C) Heaters #11 and #31 listed on permit S-44-4
- D) The keystone boiler listed on permit S-44-5
- E) The asphalt heater and the cylindrical circulation asphalt heater listed on permit S-44-6
- F) The Clever Brooks boiler listed on Permit S-44-13

Currently the (A) four heaters listed on Permit S-44-1, (C) heaters #11 and #31 listed on permit S-44-4, (E) the asphalt shipping heater and the cylindrical circulation asphalt heater listed on permit S-44-6 are currently non-compliant dormant for Rule 4306. The emission limits, monitoring provisions, and testing requirements of this rule will be satisfied when the emissions units are operated in compliance with Rule 4306.

Currently, (B) the solvent plant heater listed on Permit S-44-2 and (E) the Clever Brooks boiler listed on Permit S-44-13 are in compliance with all emission limits, monitoring, and record keeping requirements in Rule 4306. The requirements of Rule 4306 are equal to or more stringent than those specified in Rule 4305. Therefore, compliance with Rule 4306 will ensure compliance with Rule 4305.

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

This rule applies to any gaseous fuel or liquid fuel fired boiler, steam generator, or process heater with a total rated heat input greater than 5 million Btu per hour.

As stated above in the Rule 4305 discussion, the (A) four heaters listed on Permit S-44-1, (C) heaters #11 and #31 listed on permit S-44-4, (E) the asphalt shipping heater and the cylindrical circulation asphalt heater listed on permit S-44-6 are currently non-compliant dormant for Rule 4306. They will not be operated until they are issued an Authority to Construct to allow the units to come into compliance with this Rule.

Currently, the solvent plant heater listed on Permit S-44-2, and the Clever Brooks boiler listed on Permit S-44-13-19 are in compliance with all emission limits, monitoring, and record keeping requirements in Rule 4306. Continued compliance is expected.

Rule 4307 Boilers, Steam Generators and Process Heaters 2.0 MMBtu/hr to 5.0 MMBtu/hr

This rule applies to any gaseous fuel or liquid fuel fired boiler, steam generator, or process heater with a total rated heat input of 2.0 million Btu per hour (MMBtu/hr) up to and including 5.0 MMBtu/hr.

This rule applies to the 5 MMBtu/hr vertical cylindrical heater listed on permit S-44-3 and heater #21 listed on Permit to Operate S-44-4. Both heaters are dormant and are required to receive and Authority to Construct authorizing modifications to become compliant with Rule 4307 prior to operation. Compliance with this rule is expected

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

This rule applies to any gaseous fuel or liquid fuel fired boiler, steam generator, or process heater with a total rated heat input greater than 5 million Btu per hour.

As stated above in the Rule 4306 discussion, the (A) four heaters listed on Permit S-44-1, (C) heaters #11 and #31 listed on permit S-44-4, (E) the asphalt shipping heater and the cylindrical circulation asphalt heater listed on permit S-44-6 are currently non-compliant dormant for Rule 4306. They will not be operated until they are issued an Authority to Construct to allow the units to come into compliance with this Rule. At that time they will have to come into compliance with this rule also.

This rule also applies to the solvent plant heater listed on Permit S-44-2, and the Clever Brooks boiler listed on Permit S-44-13-19. These units comply with this Rule by being fee paying units. They also comply with all monitoring, testing and recordkeeping requirements of this Rule.

Continued compliance of this rule is expected.

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

This rule applies to any boiler, steam generator or process heater with a rated heat input greater than 5 million Btu per hour that is fired with gaseous and/or liquid fuels, and is included in a major NOx source. This Rule limits units located east of Interstate Highway 5 within Fresno, Kern, or Kings Counties. The emission limits, monitoring provisions, and testing requirements of this rule are satisfied when the units are operated in compliance with Rule 4306. Therefore, continued compliance with this rule is expected.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

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

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

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

IX. Recommendation

Condition to be edited as follows on the all the current permits in this project:

- Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the following: ~~NO_x - 94.95 tpy, CO - 154.66 tpy, VOC - 7.39 tpy, PM₁₀ - 18.10 tpy or SO_x - 30.70 tpy.~~ [District Rule 2201] Y

The NO_x, PM₁₀, and SO_x emissions were removed from this condition because the maximum PE of all the units is less than this limit.

Remove the current permits as follows:

S-44-1-17:

- Forced draft heater A, box type heater B, and vertical cylindrical heaters C and D, shall not be fired during operation of gas turbine engine (S-73-2) except as provided below. [District NSR Rule] Y
- Gas turbine engine may operate concurrently with heaters listed in any single permit S-44-1, -2, -3, -4, or -6 provided the cumulative concurrent operation of gas turbine engine with any heaters listed in any of permit units S-44-1, -2, -3, -4, and -6 does not exceed 360 hours per year. [District NSR Rule] Y
- Permittee shall notify the District in writing within 24 hours upon firing of heaters A, B, C, or D. [District NSR Rule] Y

S-44-2-24

- Except as provided below, heater shall not be fired during operation of gas turbine engine (S-73-2), other than natural gas-fired heater pilots (three pilots each rated at 65 scf/hr). [District Rule 2201] Y
- Waste gas/refinery produced fuel gas may be combusted by the main burner flame when cogeneration gas turbine engine (S-73-2) is not operating or during simultaneous operation of the solvent plant heater and S-73-2 (not to exceed 360 hr/yr as stated below). [District Rule 2201] Y
- Gas turbine engine (S-73-2) may operate concurrently with heaters listed in any single permit S-44-1, -2, -3, -4, or -6 provided the cumulative concurrent operation of gas turbine engine with any heaters listed in any of permit units S-44-1, -2, -3, -4, and -6 does not exceed 360 hours per year. [District Rule 2201] Y

S-44-3-18:

- The charge heater shall not be fired during operation of gas turbine engine (S-73-2) except as provided below. [District NSR Rule] Y

- Gas turbine engine may operate concurrently with heaters listed in any single permit S-44-1, -2, -3, -4, or -6 provided the cumulative concurrent operation of gas turbine engine with any heaters listed in any of permit units S-44-1, -2, -3, -4, and -6 does not exceed 360 hours per year. [District NSR Rule] Y
- Permittee shall maintain records of hours of concurrent operation of gas turbine engine S-73-2 with any heaters listed in permit units S-44-1, -2, -3, -4 & -6. [District NSR Rule] Y

S-44-4-16:

- Heaters shall not be fired during operation of gas turbine engine (S-73-2) except as provided below. [District Rule 2201] Y
- Gas turbine engine may operate concurrently with heaters listed in any single permit S-44-1, -2, -3, -4, or -6 provided the cumulative concurrent operation of gas turbine engine with any heaters listed in any of permit units S-44-1, -2, -3, -4, and -6 does not exceed 360 hours per year. [District Rule 2201] Y
- Permittee shall maintain records of hours of concurrent operation of gas turbine engine S-73-2 with any heaters listed in permit units S-44-1, -2, -3, -4 & -6. [District Rule 2201] Y

S-44-5-12:

- Boiler shall not be fired during operation of cogeneration facility (S-73-2). [District NSR Rule] Y

S-44-6-12:

- Heaters shall not be fired during operation of gas turbine engine (S-73-2) except as provided below. [District NSR Rule] Y
- Gas turbine engine may operate concurrently with heaters listed in any single permit S-44-1, -2, -3, -4, or -6 provided the cumulative concurrent operation of gas turbine engine with any heaters listed in any of permit units S-44-1, -2, -3, -4, and -6 does not exceed 360 hours per year. [District NSR Rule] Y
- Permittee shall notify the District in writing within 24 hours upon firing of heaters. [District NSR Rule] Y
- Permittee shall maintain records of hours of concurrent operation of gas turbine engine S-73-2 with any heaters listed in permit units S-44-1, -2, -3, -4 & -6. [District NSR Rule] Y

S-44-13-19:

- Boiler natural gas use shall not exceed 465.6 mmscf/day during operation of cogeneration facility (S-73-2). [District NSR Rule] Y
- On and after the date of startup or modification of the gas turbine or the other fired equipment, Tricor Refining LLC. shall not discharge, or cause the discharge into the atmosphere, nitrogen oxides, calculated as nitrogen dioxide, in excess of 1 lb/hr or average of 0.10 lb/MMBtu except during periods of startup, shutdown, or malfunction of the turbine or HTF heater. [PSD SJ 83-07] Y
- During normal turbine operation, the low-fire standby boiler shall only be operated at its minimum firing position (10 MMBtu/hr heat input). The boiler shall not be operated above this firing rate except firing periods of startup, shutdown, or malfunction of the turbine or HTF heater. [PSD SJ 83-07] Y
- Operation of the standby facility shall be expressly prohibited except during periods of startup, shutdown, or malfunction of the turbine or HTF heater. [PSD SJ 83-07] Y

Compliance with all applicable rules and regulations is expected. Issue ATCs S-44-1-19, '-2-26, '-3-21, '-4-21, '-6-14, '-13-24 subject to the permit conditions on the attached draft ATC in Appendix D.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-44-1-19	3020-02-H	61 MMBTU	\$1128
S-44-2-26	3020-02-H	40 MMBTU	\$1128
S-44-3-21	3020-02-G	5 MMBTU	\$893
S-44-4-21	3020-02-H	25 MMBTU	\$1128
S-44-5-14	3020-02-H	99.9 MMBTU	\$1128
S-44-6-14	3020-02-H	65 MMBTU	\$1128
S-44-13-24	3020-02-H	100 MMBTU	\$1128

Appendixes

- A: Current PTO(s)
- B: SSPE1 Calculations
- C: Compliance Certification
- D: Draft ATCs

APPENDIX A
Current PTOs

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-44-1-17

EXPIRATION DATE: 08/31/2016

SECTION: 07 TOWNSHIP: 29S RANGE: 28E

EQUIPMENT DESCRIPTION:

DORMANT 61 MMBTU/HR CRUDE FRACTIONATION PLANT INCLUDING LIQUID RING STAGED VACUUM PUMP WITH SEPARATOR, FLAME ARRESTOR, EMERGENCY VENT STACK, GAS/LIQUID SEPARATOR, THREE VACUUM VESSELS, ONE ATMOSPHERIC VESSEL, AND FOUR HEATERS

PERMIT UNIT REQUIREMENTS

1. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The fuel supply lines shall be physically disconnected from Heaters A, B, C, and D. [District Rule 4306] Federally Enforceable Through Title V Permit
3. Heaters A, B, C, and D shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit
4. Crude fractionation plant shall include Corona Cel liquid ring staged vacuum pump with separator, flame arrestor, emergency vent stack, gas/liquid separator, and three vacuum vessels and one atmospheric vessel. [District NSR Rule] Federally Enforceable Through Title V Permit
5. There shall be no detectable volatile organic compound (VOC) emissions from valves and flanges or from pressure relief valves during normal operation. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Forced draft heater A, box type heater B, and vertical cylindrical heaters C and D, shall not be fired during operation of gas turbine engine (S-73-2) except as provided below. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Gas turbine engine may operate concurrently with heaters listed in any single permit S-44-1, -2, -3, -4, or -6 provided the cumulative concurrent operation of gas turbine engine with any heaters listed in any of permit units S-44-1, -2, -3, -4, and -6 does not exceed 360 hours per year. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Permittee shall notify the District in writing within 24 hours upon firing of heaters A, B, C, or D. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Crude oil throughput for S-44-1 and S-44-4 combined shall not exceed 12,800 barrels per day. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Heater A shall operate as a replacement standby unit and shall not exceed a total heat input of 90 billion Btu/yr. [District Rule 4305] Federally Enforceable Through Title V Permit
11. Heater A shall be tuned at least once each calendar year in which it operates by a qualified technician in accordance with Rule 4304. [District Rule 4305] Federally Enforceable Through Title V Permit
12. Refinery produced fuel gas shall be treated in H2S scrubber listed in S-44-13. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

13. Refinery produced fuel gas shall be burned in C.B. boiler S-44-13 and/or solvent plant heater S-44-2. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Gas-fired emission rates from heaters shall not exceed any of the following: NOx - 0.036 lb/MMBtu, CO - 0.0840, VOC - 0.0055, PM10 - 0.0076, or SOx - 0.0143 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Oil-fired emission rates from heaters shall not exceed any of the following: NOx - 0.052 lb/MMBtu, CO - 0.0365, VOC - 0.0015, PM10 - 0.0241, or SOx - 0.0518 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
16. Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the the following: NOx - 94.95 tpy, CO - 154.66 tpy, VOC - 7.39 tpy, PM10 - 18.10 tpy or SOx - 30.70 tpy. [District NSR Rule] Federally Enforceable Through Title V Permit
17. The stack concentration of NOx (as NO2), CO, and O2, from heaters A, B, C, and D, shall be measured at least on a monthly basis, when operating, using District approved portable analyzers. [District Rule 4305] Federally Enforceable Through Title V Permit
18. Sampling facilities for source testing shall be provided for heaters A, B, C, and D in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit
19. Source testing to measure NOx and CO emissions shall be conducted for heaters A, B, C, and D not less than once every 12 months, except as provided below. [District Rules 4305, and 4351] Federally Enforceable Through Title V Permit
20. Source testing to measure NOx and CO emissions shall be conducted for heaters A, B, C, and D, not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, and 4351] Federally Enforceable Through Title V Permit
21. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, and 4351] Federally Enforceable Through Title V Permit
22. Source testing shall be performed to demonstrate compliance with NOx and CO emission limits within 60 days of introducing fuel for which the unit has not been source tested on in the previous 12 months. [District Rules 4305, and 4351] Federally Enforceable Through Title V Permit
23. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305, and 4351] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

28. If the NO_x or CO concentrations for heaters A, B, C or D, as measured by the portable analyzer, exceed the allowable emission rate, the permittee shall notify the District and take corrective action as soon as possible but no longer than one (1) hour after detection. If the portable analyzer readings continue to exceed for more than one hour the allowable emission rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emission limits. [District Rule 4305] Federally Enforceable Through Title V Permit
29. The permittee shall maintain records of the date and time of NO_x, CO, and O₂ measurements, the measured NO₂ and CO concentrations corrected to 3% O₂, and the O₂ concentration. The records shall also include a description of any corrective action taken to maintain the emissions in the acceptable range. These records shall be retained at the facility for a period of no less than five years and shall be made readily available for District inspection upon request. [District Rules 1070, 2520, 9.4.2, and 4305] Federally Enforceable Through Title V Permit
30. Permittee shall maintain records of hours of concurrent operation of gas turbine engine S-73-2 with any heaters listed in permit units S-44-1, -2, -3, -4 & -6. [District NSR Rule] Federally Enforceable Through Title V Permit
31. Permittee shall maintain accurate records of fuel type, heating value of fuel, fuel consumption, daily crude oil throughput, annual operating hours & heat input per heater, annual emissions for the heaters, and dates of tuning. [District NSR Rule] Federally Enforceable Through Title V Permit
32. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
33. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. The portable analyzer shall be calibrated each day of use with a two-point calibration method (zero and span) at beginning of the day. Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (amended December 19, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
36. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results 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, 9.3.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
37. Particulate matter emissions shall not exceed 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
38. Source testing shall be performed using EPA Method 5 while firing on residual oil (including crude or topped crude) to demonstrate compliance with PM emission limits. Source testing shall be performed within 60 days of firing on residual oil unless such testing has been performed within the 12 month period prior to firing on said oil and the test results showed compliance with PM emission limits of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated 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
40. 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 quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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41. When complying with SO_x 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 EPA Method 6; or CARB Method 1-100; 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
42. If the unit is fired on noncertified gaseous fuel and compliance with SO_x 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
43. If the unit is fired on noncertified liquid fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the liquid fuel being fired in the unit shall be determined using ASTM D 2880. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 240 or D 2382 for liquid hydrocarbon fuels; ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
45. 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 test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels or 3.0% by weight for residual oil (including crude or topped crude); 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 Rule 4801] Federally Enforceable Through Title V Permit
46. Nitrogen oxide (NO_x) 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 lb/MMBtu rates shall be calculated as lb NO₂/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit
47. Nitrogen oxide (NO_x) emissions from each heater shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2] Federally Enforceable Through Title V Permit
48. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO_x and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit
49. The following conditions must be met for representative unit(s) to be used to test for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit
50. All units in a group for which representative units are source for NO_x and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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51. All units in a group for which representative units are source tested to for NO_x and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit
52. The number of representative units source tested for NO_x and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-44-2-24

EXPIRATION DATE: 08/31/2016

SECTION: 06 TOWNSHIP: 29S RANGE: 28E

EQUIPMENT DESCRIPTION:

SOLVENT EXTRACTION PLANT INCLUDING AIR STRIPPER, TWO ROTATING DISC COLUMNS, AND 40 MMBTU/HR SOLVENT PLANT VERTICAL CYLINDRICAL TYPE HOT OIL HEATER WITH A ZEECO MODEL GLSF-16 LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. Solvent plant vertical cylindrical-type heater fuel gas use (not including pilot gas and waste gas) shall not exceed 36,800 scf/hr on a daily average basis. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The heater unit shall be fired exclusively on PUC-quality natural gas and waste gas/refinery produced fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. Except as provided below, heater shall not be fired during operation of gas turbine engine (S-73-2), other than natural gas-fired heater pilots (three pilots each rated at 65 scf/hr). [District Rule 2201] Federally Enforceable Through Title V Permit
5. Maximum heat input of waste gas/refinery produced fuel gas waste gas to solvent plant heater, calculated as product of flow rate (scf/day) and higher heating value (MMBtu/scf), shall not exceed 72 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Waste gas/refinery produced fuel gas may be combusted in the solvent plant heater by the pilot gas flame at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Waste gas/refinery produced fuel gas may be combusted by the main burner flame when cogeneration gas turbine engine (S-73-2) is not operating or during simultaneous operation of the solvent plant heater and S-73-2 (not to exceed 360 hr/yr as stated below). [District Rule 2201] Federally Enforceable Through Title V Permit
8. Gas turbine engine (S-73-2) may operate concurrently with heaters listed in any single permit S-44-1, -2, -3, -4, or -6 provided the cumulative concurrent operation of gas turbine engine with any heaters listed in any of permit units S-44-1, -2, -3, -4, and -6 does not exceed 360 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Waste gas/refinery produced fuel gas shall be burned in C.B. boiler S-44-13 and/or solvent plant heater S-44-2. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Refinery produced gas shall be treated in H2S scrubber listed in S-44-13. [District Rule 2201] Federally Enforceable Through Title V Permit
11. H2S content of gas burned shall not exceed 0.1 gr/dscf (161 ppmv) based on a three hour rolling average. [40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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12. Solvent plant heater emission rates shall not exceed any of the following: NO_x - 30 ppmv @ 3% O₂ or 0.036 lb/MMBtu, CO - 400 ppmv @ 3% O₂, VOC - 5.5 lb/MMscf of fuel gas, PM₁₀ - 7.6 lb/MMscf of fuel gas, or SO_x - 5 gr of total sulfur per 100 standard cubic feet of fuel gas. [District Rules 4306, 4320 and 4351] Federally Enforceable Through Title V Permit
13. Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the the following: NO_x - 94.95 tpy, CO - 154.66 tpy, VOC - 7.39 tpy, PM₁₀ - 18.10 tpy or SO_x - 30.70 tpy. [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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
15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
16. Source testing to measure NO_x and CO emissions from this unit 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 and 4306] Federally Enforceable Through Title V Permit
17. 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 and 4306] Federally Enforceable Through Title V Permit
18. 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
19. NO_x 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 and 4306] Federally Enforceable Through Title V Permit
20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the stack concentration of NO_x, 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 and 4306] Federally Enforceable Through Title V Permit
23. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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24. 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 and 4306] Federally Enforceable Through Title V Permit
25. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 and 4306] Federally Enforceable Through Title V Permit
26. Permittee shall maintain accurate records of fuel type and heating value, daily and annual fuel consumption, and annual emissions from heaters. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Permittee shall maintain records of hours of concurrent operation of gas turbine engine S-73-2 with any heaters listed in permit units S-44-1, -2, -3, -4 & -6. [District Rule 2201] Federally Enforceable Through Title V Permit
28. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
29. Permittee shall maintain records of the occurrence of and duration of any startup, shutdown, or malfunction in the operation of the solvent plant heater, or any malfunction of the air pollution control equipment. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. The portable analyzer shall be calibrated each day of use with a two-point calibration method (zero and span) at beginning of the day. Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 19, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
32. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results 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. [District Rule 2520, 9.3.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
33. Particulate matter emissions shall not exceed 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
34. If the unit is fired on noncertified gaseous fuel and compliance with SO_x 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
35. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 240 or D 2382 for liquid hydrocarbon fuels; ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
36. Nitrogen oxide (NO_x) 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 lb/MMBtu rates shall be calculated as lb NO₂/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit
37. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

38. The owner or operator shall install an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in fuel gases before being burned in any fuel gas combustion device. The span value for this instrument is 425 mg/dscm H₂S. The performance evaluations for this H₂S monitor shall use Performance Specification 7. Method 11 shall be used for conducting the relative accuracy evaluations. [40 CFR Part 60, Subpart J, 60.105(a)(4)(i)(iii)] Federally Enforceable Through Title V Permit
39. Continuous emissions monitoring (CEM) results shall be calculated on a rolling three (3) hour average. [40 CFR 60.105(e)] Federally Enforceable Through Title V Permit
40. The owner or 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 or 161 ppmv). [40 CFR 60.105(e)(3)(ii)] Federally Enforceable Through Title V Permit
41. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
42. Pursuant to Rule 4320, the operator shall pay an annual emission fee to the District for NO_x 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 NO_x emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
43. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit
44. The permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-44-3-18

EXPIRATION DATE: 08/31/2016

SECTION: 07 TOWNSHIP: 29S RANGE: 28E

EQUIPMENT DESCRIPTION:

DORMANT LUBE OIL FINISHING PLANT INCLUDING 6 MMBTU/HR CHARGE VERTICAL CYLINDRICAL HEATER, TWO HYDROGEN REACTORS, TWO COMPRESSORS, SEPARATORS, FLASH POT, AMINE TREATER WITH RECEIVER AND REGENERATOR, H₂S PRODUCT STRIPPER (3-D-51), STRIPPER ACCUMULATOR, UTILITY FRACTIONATOR COLUMN (D-11) (SHARED WITH S-44-4), AND H₂S SCRUBBER AND FLARE SERVING HYDROGEN RICH WASTE GAS STREAM

PERMIT UNIT REQUIREMENTS

1. The fuel supply line shall be physically disconnected from the 5 MMBtu/hr vertical cylindrical heater [District Rule 4307]
2. The 5 MMBtu/hr vertical cylindrical heater shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4307 and all other applicable District regulations. [District Rule 4307]
3. In the natural gas line to the charge heater, the permittee shall permanently install a calibrated orifice plate having a diameter not exceeding 0.3501 inches. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The diameter of natural gas fuel line orifice shall be permanently stamped on the orifice plate and shall be readily accessible and viewable by District inspection staff. A copy of the orifice sizing calculations shall be made available to District inspection staff upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The charge heater shall be fired solely on PUC regulated natural gas or fuel oil. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Simultaneous firing of natural gas and fuel oil in the charge heater is prohibited. [District NSR Rule] Federally Enforceable Through Title V Permit
7. In the fuel oil line to the charge heater, the permittee shall permanently install a calibrated orifice plate having a diameter not exceeding 0.0581 inches. [District NSR Rule] Federally Enforceable Through Title V Permit
8. The diameter of the fuel oil line orifice shall be permanently stamped on the orifice plate and shall be readily accessible and viewable by District inspection staff. A copy of the orifice sizing calculations shall be made available to District inspection staff upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
9. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
10. H₂S product stripper column includes vapor piping to H₂S scrubber and flare serving hydrogen rich waste gas stream and to refinery waste gas system listed in S-44-13, and liquid piping to tank S-44-157. [District NSR Rule] Federally Enforceable Through Title V Permit
11. There shall be no detectable volatile organic compound (VOC) emissions from valves and flanges or from pressure relief valves during normal operation. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Hydrogen reactors may be used in parallel configuration (one at a time) or in series configuration (concurrently). [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

13. Hydrogen rich waste gas stream shall be equipped with continuously recording flowrate meter. [District NSR Rule] Federally Enforceable Through Title V Permit
14. H2S scrubber serving hydrogen rich waste gas shall be equipped with continuous operation H2S monitor on outlet of H2S scrubber. [District Rule 4801] Federally Enforceable Through Title V Permit
15. Excess sour gas from flash pot, stripper accumulator and amine regenerator shall discharge only to hydrogen rich waste gas stream H2S scrubber. [District NSR Rule] Federally Enforceable Through Title V Permit
16. VOC emissions from fugitive components associated with H2S product stripper column shall not exceed 1.0 lb/day. VOC emissions from fugitive components installed after April 2000 on utility fractionator column shall not exceed 1.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
17. Fugitive emission calculations shall be performed using API Publication 4322 for emission factors and control efficiencies for inspection and maintenance program established in EPA Publication 450/3-83-007. [District NSR Rule] Federally Enforceable Through Title V Permit
18. Hydrogen rich waste gas flowrate to H2S scrubber and flare shall not exceed 50,400 dscf/day. Flowrate (dscf/day) may be calculated using wet gas mass flowrate measurement corrected for water content. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Refinery produced fuel gas, except hydrogen rich waste gas stream, shall be treated in H2S scrubber listed in S-44-13 and burned in boiler S-44-13 or solvent plant heater S-44-2. [District NSR Rule] Federally Enforceable Through Title V Permit
20. The charge heater shall not be fired during operation of gas turbine engine (S-73-2) except as provided below. [District NSR Rule] Federally Enforceable Through Title V Permit
21. Gas turbine engine may operate concurrently with heaters listed in any single permit S-44-1, -2, -3, -4, or -6 provided the cumulative concurrent operation of gas turbine engine with any heaters listed in any of permit units S-44-1, -2, -3, -4, and -6 does not exceed 360 hours per year. [District NSR Rule] Federally Enforceable Through Title V Permit
22. Permittee shall notify the District in writing within 24 hours upon firing the charge heater. [District NSR Rule] Federally Enforceable Through Title V Permit
23. Charge heater gas-fired emission rates shall not exceed any of the following limits: 0.1000 lb-NO_x/MMBtu, 0.0840 lb-CO/MMBtu, 0.0055 lb-VOC/MMBtu, 0.0076 lb-PM₁₀/MMBtu, or 0.0143 lb-SO_x/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
24. Charge heater oil-fired emission rates shall not exceed any of the following limits: 0.1460 lb-NO_x/MMBtu, 0.0365 lb-CO/MMBtu, 0.0015 lb-VOC/MMBtu, 0.0241 lb-PM₁₀/MMBtu, or 0.0518 lb-SO_x/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
25. Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the the following: NO_x - 94.95 tpy, CO - 154.66 tpy, VOC - 7.39 tpy, PM₁₀ - 18.10 tpy or SO_x - 30.70 tpy. [District NSR Rule] Federally Enforceable Through Title V Permit
26. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas and fuel oil combusted in the unit shall be installed, utilized and maintained. [District NSR Rule] Federally Enforceable Through Title V Permit
27. Permittee shall maintain records of hours of concurrent operation of gas turbine engine S-73-2 with any heaters listed in permit units S-44-1, -2, -3, -4 & -6. [District NSR Rule] Federally Enforceable Through Title V Permit
28. Permittee shall maintain accurate records of hydrogen rich waste gas (off gas) produced (dscf/day), charge heater fuel type, daily and annual charge heater fuel consumption, and annual emissions from charge heater. [District NSR Rule] Federally Enforceable Through Title V Permit
29. Permittee shall maintain annual records of fugitive component count and corresponding emission calculations for components installed in conjunction with the H2S product stripper column and components installed after April 2000 for the utility fractionator. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
31. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16,1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
32. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results 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, 9.3.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
33. Particulate matter emissions shall not exceed 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

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-44-4-16

EXPIRATION DATE: 08/31/2016

SECTION: 07 TOWNSHIP: 29S RANGE: 28E

EQUIPMENT DESCRIPTION:

DORMANT 4.5 MMBTU/HR LUBE OIL FINISHING PLANT - UTILITY FRACTIONATOR INCLUDING THREE ATMOSPHERIC COLUMN NOS. D-11, D-21, & D-31, STANDBY HEATER NOS. 11, 21, & 31, AND HEAT OIL EXCHANGER NOS. E 551, E-552, & E-553

PERMIT UNIT REQUIREMENTS

1. No modification to heaters #11, #21, and #31 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. The fuel supply line shall be physically disconnected from heaters #11, #21, and #31 while dormant. [District Rules 2201, 4306, 4307] Federally Enforceable Through Title V Permit
3. Heaters #11, #21, and #31 shall not be operated for any reason until Authority to Construct permits are issued approving all necessary retrofits required to comply with the applicable requirements of either Rule 4306 or 4307 and all other applicable District regulations. [District Rules 4306, 4307] Federally Enforceable Through Title V Permit
4. In the fuel line to standby heater #21, the permittee shall permanently install a calibrated orifice plate having a diameter not exceeding 0.3501 inches. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The diameter of the orifice shall be permanently stamped on the orifice plate of standby heater #21, and shall be readily accessible and viewable by District inspection staff. A copy of the orifice sizing calculations shall be made available to District inspection staff upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The standby heaters shall be fired solely on PUC regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
7. No modifications to heaters #11 and #31 shall be performed without an Authority to Construct for that modification, except for changes specified in the following condition. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Heaters #11 and #31 shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Heaters shall not be fired during operation of gas turbine engine (S-73-2) except as provided below. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Gas turbine engine may operate concurrently with heaters listed in any single permit S-44-1, -2, -3, -4, or -6 provided the cumulative concurrent operation of gas turbine engine with any heaters listed in any of permit units S-44-1, -2, -3, -4, and -6 does not exceed 360 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Permittee shall notify the District in writing within 24 hours upon firing of heaters. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Refinery produced fuel gas shall be treated in H2S scrubber listed in S-44-13. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

13. Refinery produced fuel gas shall be burned in C.B. boiler S-44-13 and/or solvent plant heater S-44-2. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Heaters #11, #21, and #31 shall not be fired at greater than 4.5 MMBTU/hr for all three heaters. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Crude oil throughput for S-44-1 and S-44-4 combined shall not exceed 12,800 barrels per day. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Emissions from any of the standby heaters (#11, 21, 31) shall not exceed any of the following limits: 0.10 lb-NOx/MMBtu, 0.084 lb-CO/MMBtu, 0.0055 lb-VOC/MMBtu, 0.0076 PM10/MMBtu, or 0.00285 lb-SOx/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the the following: NOx - 94.95 tpy, CO - 154.66 tpy, VOC - 7.39 tpy, PM10 - 18.10 tpy or SOx - 30.70 tpy. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Upon resuming operation of heater #21, the heater shall be tuned at least twice per calendar year (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate during a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. If the unit does not operate during a calendar year, no tune-up is required for that calendar year. [District Rule 4307] Federally Enforceable Through Title V Permit
19. Upon resuming operation of heater #21, the heater may be test-fired to verify availability for its intended use. Such test-firing is not considered operation for the purpose of requiring a tune-up provided the heater is shutdown once test firing is complete. [District Rule 4307] Federally Enforceable Through Title V Permit
20. Upon resuming operation of heaters #11 and #31, the stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. [District Rule 4305] Federally Enforceable Through Title V Permit
21. Sampling facilities for source testing shall be provided in accordance with the provisions of District Rule 1081 (amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
22. Upon resuming operation of heaters #11 and #31, source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305, and 4351] Federally Enforceable Through Title V Permit
23. Upon resuming operation of heaters #11 and #31, 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, and 4351] Federally Enforceable Through Title V Permit
24. Upon resuming operation of heaters #11 and #31, 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, and 4351] Federally Enforceable Through Title V Permit
25. Upon resuming operation of heaters #11 and #31, source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305, and 4351] Federally Enforceable Through Title V Permit
26. Upon resuming operation of heaters #11 and #31, compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
27. Upon resuming operation of heaters #11 and #31, source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

28. Upon resuming operation of heaters #11 and #31, 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
29. Upon resuming operation of heaters #11 and #31, 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, and 4351] Federally Enforceable Through Title V Permit
30. Upon resuming operation of heaters #11 and #31, if the NOx or CO concentrations, as measured by the portable analyzer, exceed the allowable emission rate, the permittee shall notify the District and take corrective action as soon as possible but no longer than one (1) hour after detection. If the portable analyzer readings continue to exceed for more than one hour the allowable emission rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emission limits. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit
31. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records shall also include a description of any corrective action taken to maintain the emissions in the acceptable range. These records shall be retained at the facility for a period of no less than five years and shall be made readily available for District inspection upon request. [District Rules 1070, 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit
32. Permittee shall maintain accurate records of fuel type, annual fuel consumption, annual emissions from the heaters, and daily crude oil throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
33. Permittee shall maintain records of hours of concurrent operation of gas turbine engine S-73-2 with any heaters listed in permit units S-44-1, -2, -3, -4 & -6. [District Rule 2201] Federally Enforceable Through Title V Permit
34. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
35. Upon resuming operation of heaters #11 and #31, the portable analyzer shall be calibrated each day of use with a two-point calibration method (zero and span) at beginning of the day. Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16,1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
37. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type of fuel combusted. [District Rule 2520, 9.3.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
38. Particulate matter emissions shall not exceed 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
39. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by maintaining copies of fuel invoices, gas purchase contracts, or supplier certifications. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
40. 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). Compliance with this requirement may be demonstrated by maintaining copies of fuel invoices, gas purchase contracts, or supplier certifications. [District Rule 4801] Federally Enforceable Through Title V Permit
41. 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 lb/MMBtu rates shall be calculated as lb NO2/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit
42. Nitrogen oxide (NOx) emissions from each heater shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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43. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. Upon resuming operation of heaters #11 and #31, annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit
45. Upon resuming operation of heaters #11 and #31, the following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit
46. Upon resuming operation of heaters #11 and #31, all units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit
47. Upon resuming operation of heaters #11 and #31, all units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit
48. Upon resuming operation of heaters #11 and #31, the number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-44-5-12

EXPIRATION DATE: 08/31/2016

SECTION: 07 TOWNSHIP: 29S RANGE: 27E

EQUIPMENT DESCRIPTION:

99.9 MMBTU/HR NATURAL GAS-FIRED ZURN MODEL 15M KEYSTONE BOILER WITH COEN STAGED AIR BURNER AND FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. Burner shall be fired exclusively on PUC-regulated natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Gas-firing rate shall not exceed 94,612 scf per hour. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Boiler shall not be fired during operation of cogeneration facility (S-73-2). [District NSR Rule] Federally Enforceable Through Title V Permit
4. Emission rates shall not exceed any of the following: NO_x (as NO₂): 25 ppmv @3% O₂ or 0.031 lb/MMBtu, CO: 400 ppmv @ 3% O₂ or 0.30 lb/MMBtu. [District Rules 4305, 5.1.1, 4306, 5.1.1 and 4351] Federally Enforceable Through Title V Permit
5. Emissions shall not exceed any of the following: 0.0056 lb-VOC/MMBtu, 0.0076 lb-PM₁₀/MMBtu, or 0.0006 lb-SO_x/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the the following: NO_x - 94.95 tpy, CO - 154.66 tpy, VOC - 7.39 tpy, PM₁₀ - 18.10 tpy or SO_x - 30.70 tpy. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
8. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
9. Source testing to measure NO_x and CO emissions from this unit 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 and 4306] Federally Enforceable Through Title V Permit
10. 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 and 4306] Federally Enforceable Through Title V Permit
11. NO_x 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 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

12. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
13. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
14. 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
15. 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
16. 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
17. The permittee shall monitor and record the stack concentration of NO_x, 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 and 4306] Federally Enforceable Through Title V Permit
18. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
19. 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 and 4306] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 and 4306] Federally Enforceable Through Title V Permit
21. Permittee shall maintain accurate records of fuel type, daily fuel consumption, annual fuel consumption and annual emissions from the boiler, and shall make such records available for District inspection for five years. [District NSR Rule and 2520, 9.4.2] Federally Enforceable Through Title V Permit
22. The portable analyzer shall be calibrated each day of use with a two-point calibration method (zero and span) at beginning of the day. Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
23. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16,1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

24. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results 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, 9.3.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
25. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
26. Particulate matter emissions shall not exceed 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
27. Emissions of sulfur compounds from this unit 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
28. 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 quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. When complying with SO_x 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 EPA Method 6; or CARB Method 1-100; 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 calculate 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
30. If the unit is fired on noncertified gaseous fuel and compliance with SO_x 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
31. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305 and 4306, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
32. 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 Rule 4801] Federally Enforceable Through Title V Permit
33. Nitrogen oxide (NO_x) 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 lb/MMBtu rates shall be calculated as lb NO₂/MMBtu of heat input (hhv). [District Rules 4305 and 4306, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit
34. Nitrogen oxide (NO_x) emissions shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2] Federally Enforceable Through Title V Permit
35. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081(amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

36. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO_x and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305 and 4306, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit
37. The following conditions must be met for representative unit(s) to be used to test for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305 and 4306, 6.3.2] Federally Enforceable Through Title V Permit
38. All units in a group for which representative units are source for NO_x and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305 and 4306, 6.3.2] Federally Enforceable Through Title V Permit
39. All units in a group for which representative units are source tested to for NO_x and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305 and 4306, 6.3.2] Federally Enforceable Through Title V Permit
40. The number of representative units source tested for NO_x and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. Pursuant to Rule 4320, the operator shall pay an annual emission fee to the District for NO_x 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 NO_x emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
42. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit
43. The permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-44-6-12

EXPIRATION DATE: 08/31/2016

SECTION: 07 TOWNSHIP: 29S RANGE: 28E

EQUIPMENT DESCRIPTION:

DORMANT 65 MMBTU/HR SHIPPING & RECEIVING OPERATION INCLUDING 45 MMBTU/HR ASPHALT SHIPPING FORCED DRAFT HEATER AND 20 MMBTU/HR CIRCULATING (RETORT) NATURAL DRAFT VERTICAL CYLINDRICAL HEATER

PERMIT UNIT REQUIREMENTS

1. No modification to the 45 MMBtu/hr asphalt shipping heater 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. The fuel supply line of the 45 MMBtu/hr asphalt shipping heater shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit
3. This 45 MMBtu/hr asphalt shipping heater shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit
4. If continuous operation oxygen analyzer/controller is utilized, excess O₂ shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Asphalt shipping heater (forced draft) shall be fired on oil or natural gas. Retort heater (natural draft) shall be fired on natural gas. Neither heater shall incinerate refinery produced gas. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Heaters shall not be fired during operation of gas turbine engine (S-73-2) except as provided below. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Gas turbine engine may operate concurrently with heaters listed in any single permit S-44-1, -2, -3, -4, or -6 provided the cumulative concurrent operation of gas turbine engine with any heaters listed in any of permit units S-44-1, -2, -3, -4, and -6 does not exceed 360 hours per year. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Permittee shall notify the District in writing within 24 hours upon firing of heaters. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Asphalt shipping heater and retort heater shall each be equipped with recording fuel flow meter. [District Rule 4305 and 4351] Federally Enforceable Through Title V Permit
10. Asphalt shipping heater shall operate as a replacement standby unit and shall not be fired for more than 90 billion Btu/year. [District Rule 4305] Federally Enforceable Through Title V Permit
11. Asphalt shipping heater shall only fire on oil during periods of involuntary natural gas curtailment. Heater shall not be fired on oil for more than 336 hours per year, except for 48 hours per year for maintenance and testing. [District Rule 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

12. Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the the following: NOx - 94.95 tpy, CO - 154.66 tpy, VOC - 7.39 tpy, PM10 - 18.10 tpy or SOx - 30.70 tpy. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Gas fired emission rate from 45 MMBtu/hr forced draft asphalt shipping heater shall not exceed: NOx, 95 ppmv @3% O2 or 0.10 lb/MMBtu, and CO, 400 ppmv @3% O2. [District Rule 4351] Federally Enforceable Through Title V Permit
14. Gas fired emission rate from 20 MMBtu/hr natural draft retort heater shall not exceed: NOx, 147 ppmv @3% O2 or 0.18 lb/MMBtu, and CO, 400 ppmv @3% O2. [District Rule 4305 and 4351] Federally Enforceable Through Title V Permit
15. The retort heater stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers. [District Rule 4305] Federally Enforceable Through Title V Permit
16. Source testing of retort heater to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4351] Federally Enforceable Through Title V Permit
17. Source testing of the retort heater 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 Rule 4351] Federally Enforceable Through Title V Permit
18. If permittee fails any compliance demonstration for NOx and CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits for the retort heater shall be demonstrated not less than once every 12 months. [District Rule 4351] Federally Enforceable Through Title V Permit
19. Source testing shall be performed to demonstrate compliance with NOx and CO emission limits within 60 days of introducing fuel for which the unit has not been source tested on in the previous 12 months. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit
20. 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
21. 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
22. 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, and 4351] Federally Enforceable Through Title V Permit
23. If the retort heater NOx or CO concentrations, as measured by the portable analyzer, exceed the allowable emission rate, the permittee shall notify the District and take corrective action as soon as possible but no longer than one (1) hour after detection. If the portable analyzer readings continue to exceed for more than one hour the allowable emission rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emission limits. [District Rule 4305] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of the date and time of retort heater NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records shall also include a description of any corrective action taken to maintain the emissions in the acceptable range. These records shall be retained at the facility for a period of no less than five years and shall be made readily available for District inspection upon request. [District Rules 1070, 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit
25. Asphalt heater and heater A shall be either tuned at least once each calendar year in which it operates by a qualified technician in accordance with Rule 4304, or operated with exhaust oxygen concentration no greater than 3.00% by volume on a dry basis. [District Rule 4305] Federally Enforceable Through Title V Permit
26. Asphalt heater shall be operated in accordance with the manufacturer's recommendations. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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27. Permittee shall maintain records of monthly and annual fuel consumption for each heater, and annual emissions from heaters. [District NSR Rule, 4305, and 4351] Federally Enforceable Through Title V Permit
28. Permittee shall maintain records of hours of concurrent operation of gas turbine engine S-73-2 with any heaters listed in permit units S-44-1, -2, -3, -4 & -6. [District NSR Rule] Federally Enforceable Through Title V Permit
29. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
30. The portable analyzer shall be calibrated each day of use with a two-point calibration method (zero and span) at beginning of the day. Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16,1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
32. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results 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, 9.3.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
33. Particulate matter emissions shall not exceed 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
34. Source testing shall be performed using EPA Method 5 while firing on residual oil (including crude or topped crude) to demonstrate compliance with PM emission limits. Source testing shall be performed within 60 days of firing on residual oil unless such testing has been performed within the 12 month period prior to firing on said oil and the test results showed compliance with PM emission limits of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated 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
36. 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 quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. When complying with SO_x 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 EPA Method 6; or CARB Method 1-100; 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
38. If the unit is fired on noncertified gaseous fuel and compliance with SO_x 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
39. If the unit is fired on noncertified liquid fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the liquid fuel being fired in the unit shall be determined using ASTM D 2880. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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40. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 240 or D 2382 for liquid hydrocarbon fuels; ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. 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 test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels or 3.0% by weight for residual oil (including crude or topped crude); 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 Rule 4801] Federally Enforceable Through Title V Permit
42. 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 lb/MMBtu rates shall be calculated as lb NO₂/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit
43. Nitrogen oxide (NOx) emissions from each heater shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2] Federally Enforceable Through Title V Permit
44. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081(amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-44-13-19

EXPIRATION DATE: 08/31/2016

SECTION: 07 TOWNSHIP: 29S RANGE: 28E

EQUIPMENT DESCRIPTION:

DORMANT (COMPLIANT) 100 MMBTU/HR CLEAVER BROOKS BOILER INCLUDING JOHN ZINK LOW NOX BURNER, H₂S CAUSTIC SCRUBBER, CONTINUOUS H₂S MONITOR, & BACKUP H₂S REMOVAL SYSTEM WITH "SULFATREAT" ADSORBENT VERTICAL COLUMN FUEL GAS SCRUBBER WITH NOMINAL DIMENSIONS 18' LONG BY 4' DIAMETER

PERMIT UNIT REQUIREMENTS

1. No modification to this unit 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. The fuel supply line shall be physically disconnected from this unit when dormant. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
3. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
4. Operators shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
5. Boiler natural gas use shall not exceed 465.6 mmscf/day during operation of cogeneration facility (S-73-2). [District NSR Rule] Federally Enforceable Through Title V Permit
6. H₂S removal system includes two H₂S scrubbers, waste gas knockout pot, fresh and spent caustic storage tanks, and various liquid pumps. [District NSR Rule] Federally Enforceable Through Title V Permit
7. H₂S content of refinery fuel gas burned shall not exceed 0.1 gr/dscf (161 ppmv) based on a three hour rolling average. [40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit
8. Refinery produced fuel gas burned shall be from crude fractionation plant S-44-1, solvent extraction plant S-44-2, lube oil hydrotreater S-44-3 (except hydrogen stream), and lube oil fractionator S-44-4. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Refinery produced fuel gas shall be burned in C.B. boiler S-44-13 and/or solvent plant heater S-44-2. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Emission rates shall not exceed NO_x (as NO₂): 25 ppmvd @3% O₂ or 0.03 lb/MMBtu, and CO: 400 ppmvd @ 3% O₂. [District Rules 4301, 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
11. Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the the following: NO_x - 94.95 tpy, CO - 154.66 tpy, VOC - 7.39 tpy, PM₁₀ - 18.10 tpy or SO_x - 30.70 tpy. [District NSR Rule] Federally Enforceable Through Title V Permit
12. The permittee shall monitor and record the stack concentration of NO_x, 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 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
14. 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 and 4306] Federally Enforceable Through Title V Permit
15. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 and 4306] Federally Enforceable Through Title V Permit
16. 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 and 4306] Federally Enforceable Through Title V Permit
17. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit 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, 4351] Federally Enforceable Through Title V Permit
18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, 4351] Federally Enforceable Through Title V Permit
19. 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
20. NO_x 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, 4351] Federally Enforceable Through Title V Permit
21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, 4351] Federally Enforceable Through Title V Permit
22. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, 4351] Federally Enforceable Through Title V Permit
23. 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 and 4306] Federally Enforceable Through Title V Permit
24. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

25. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2.1; 4306, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit
26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
27. 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
28. Permittee shall maintain accurate records of fuel type, fuel consumption, boiler feedwater/produced steam rate, and annual emissions from the boiler, and shall make such records available for District inspection for five years. [District NSR Rule and 2520, 9.4.2] Federally Enforceable Through Title V Permit
29. Permittee shall maintain records of the occurrence of and duration of any startup, shutdown, or malfunction in the operation of the C.B. boiler, or any malfunction of the air pollution control equipment. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. The portable analyzer shall be calibrated each day of use with a two-point calibration method (zero and span) at beginning of the day. Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16,1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
32. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results 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, 9.3.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
33. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
34. Particulate matter emissions shall not exceed 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
35. Emissions of sulfur compounds from this unit 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 4301, 5.2.1] Federally Enforceable Through Title V Permit
36. 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 quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. When complying with SO_x 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 EPA Method 6; or CARB Method 1-100; 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

38. If the unit is fired on noncertified gaseous fuel and compliance with SO_x 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
39. 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 Rule 4801] Federally Enforceable Through Title V Permit
40. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. The owner or operator shall install an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in fuel gases before being burned in any fuel gas combustion device. The span value for this instrument is 425 mg/dscm H₂S. The performance evaluations for this H₂S monitor shall use Performance Specification 7. Method 11 shall be used for conducting the relative accuracy evaluations. [40 CFR Part 60, Subpart J, 60.105(a)(4)(i)(iii)] Federally Enforceable Through Title V Permit
42. Continuous emissions monitoring (CEM) results shall be calculated on a rolling three (3) hour average. [40 CFR 60.105(e)] Federally Enforceable Through Title V Permit
43. The owner or 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 or 161 ppmv). [40 CFR 60.105(e)(3)(ii)] Federally Enforceable Through Title V Permit
44. On and after the date of startup or modification of the gas turbine or the other fired equipment, Tricor Refining LLC, shall not discharge, or cause the discharge into the atmosphere, nitrogen oxides, calculated as nitrogen dioxide, in excess of 1 lb/hr or average of 0.10 lb/MMBtu except during periods of startup, shutdown, or malfunction of the turbine or HTF heater. [PSD SJ 83-07] Federally Enforceable Through Title V Permit
45. During normal turbine operation, the low-fire standby boiler shall only be operated at its minimum firing position (10 MMBtu/hr heat input). the boiler shall not be operated above this firing rate except firing periods of startup, shutdown, or malfunction of the turbine or HTF heater. [PSD SJ 83-07] Federally Enforceable Through Title V Permit
46. Operation of the standby facility shall be expressly prohibited except during periods of startup, shutdown, or malfunction of the turbine or HTF heater. [PSD SJ 83-07] Federally Enforceable Through Title V Permit
47. Pursuant to Rule 4320, the operator shall pay an annual emission fee to the District for NO_x 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 NO_x emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
48. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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

APPENDIX B
SSPE1 Calculations

Detailed SSPE Report

Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	44	0	2						0
S	44	1	17	5255	1866	867	1866	242	0
S	44	2	24	12614	5011	2663	105120	1927	0
S	44	3	18	0	0	0	0	0	0
S	44	4	16	14467	112	3666	1301	87	1
S	44	5	12	27120	526	12264	29784	5081	0
S	44	6	12	36625	1594	2114	78398	1380	0
S	44	7	4		0	0	0	30660	0
S	44	8	2		0	0	0		0
S	44	9	2		0	0	0		0
S	44	10	2		0	0	0		0
S	44	11	2		0	0	0		0
S	44	12	2		0	0	0		0
S	44	13	19	0	0	0	0	0	0
S	44	14	2	ICE	1	3			0
S	44	15	2	ICE	2	4			0
S	44	16	4	VOC ONLY	0	0		730	0
S	44	17	2						0
S	44	18	2						0
S	44	19	2						0
S	44	20	2						0
S	44	21	2	TANKS					0
S	44	22	2	VOC ONLY					0
S	44	25	2						0
S	44	26	2						0
S	44	27	3						0

SUM OF
 VOC - 21,988
 SO_x - 24,698
 PM₁₀ - 24,795

Wednesday, August 3, 2016

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Notes:

Blank values for a particular permit unit do not necessarily reflect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	44	28	2						0
S	44	29	2						0
S	44	30	2	TANKS VOC ONLY					0
S	44	31	2						0
S	44	34	2						0
S	44	35	4		0	0			0
S	44	36	2						0
S	44	37	2	TANKS VOC ONLY					0
S	44	41	2						0
S	44	42	2						0
S	44	44	2					COOLING TOWER	0
S	44	45	2					COOLING TOWER	0
S	44	46	2		0	0		GDP	0
S	44	47	4						0
S	44	48	4						0
S	44	49	2						0
S	44	52	2					TANKS	0
S	44	79	2						0
S	44	133	2						0
S	44	134	2						0
S	44	135	2						0
S	44	141	3	ICG					0
S	44	142	3	107	0	0	176	0	0
S	44	143	2					TANK	0
S	44	144	2					TANK	0
S	44	145	8	20550	43434	15031	8265	19436	0
S	44	146	6	0	0	0	0	0	0
S	44	148	4	0	0	0	0	5841	0
S	44	149	4					TANK	0

Wednesday, August 3, 2016

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Notes:

Blank values for a particular permit unit do not necessarily reflect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	44	150	3				}		0
S	44	152	2						0
S	44	153	2					TANKS	0
S	44	154	2						0
S	44	155	2						0
S	44	156	2					0	
S	44	157	2		0	0	ASSESSMENT ON 1-145	0	
S	44	158	2				}		0
S	44	160	2					TANK	0
S	44	161	2					0	
S	44	165	2	109	0	9	32	7	0
S	44	166	2	109	0	9	32	7	0
SSPE (lbs)				116956	52543 52546	36623 36630	224974	65398	

Wednesday, August 3, 2016

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Notes:

Blank values for a particular permit unit do not necessarily reflect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

APPENDIX C
Compliance Certification

San Joaquin Valley
Unified Air Pollution Control District

RECEIVED
MAY 10 2016
SJVAPCD
Southern Region

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

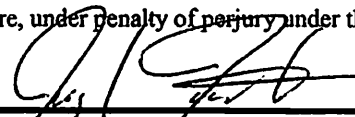
- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

COMPANY NAME: TRICOR REFINING, LLC	FACILITY ID: S - 44
1. Type of Organization: <input type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input checked="" type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: SAN JOAQUIN REFINING COMPANY, INC. & ERGON, INC.	
3. Agent to the Owner: JOSEPH FRANK	

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

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

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



Signature of Responsible Official

May 10, 2016

Date

JOSEPH FRANK

Name of Responsible Official (please print)

GENERAL MANAGER

Title of Responsible Official (please print)

APPENDIX D
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-44-1-19

LEGAL OWNER OR OPERATOR: TRICOR REFINING, LLC
MAILING ADDRESS: PO BOX 5877
BAKERSFIELD, CA 93308

LOCATION: 1134 MANOR STREET
BAKERSFIELD, CA

SECTION: 07 TOWNSHIP: 29S RANGE: 28E

EQUIPMENT DESCRIPTION:

MODIFICATION OF DORMANT 61 MMBTU/HR CRUDE FRACTIONATION PLANT INCLUDING LIQUID RING STAGED VACUUM PUMP WITH SEPARATOR, FLAME ARRESTOR, EMERGENCY VENT STACK, GAS/LIQUID SEPARATOR, THREE VACUUM VESSELS, ONE ATMOSPHERIC VESSEL, AND FOUR HEATERS: REMOVE SLC SHARED WITH FACILITY 73

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 this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The fuel supply lines shall be physically disconnected from Heaters A, B, C, and D. [District Rule 4306] Federally Enforceable Through Title V Permit
5. Heaters A, B, C, and D shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [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

DRAFT

Arnaud Marjolle, Director of Permit Services

S-44-1-19 - Sep 7 2016 8:55AM - DAVOSOS - Joint Inspection NOT Required

6. Crude fractionation plant shall include Corona Cel liquid ring staged vacuum pump with separator, flame arrestor, emergency vent stack, gas/liquid separator, and three vacuum vessels and one atmospheric vessel. [District NSR Rule] Federally Enforceable Through Title V Permit
7. There shall be no detectable volatile organic compound (VOC) emissions from valves and flanges or from pressure relief valves during normal operation. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Crude oil throughput for S-44-1 and S-44-4 combined shall not exceed 12,800 barrels per day. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Heater A shall operate as a replacement standby unit and shall not exceed a total heat input of 90 billion Btu/yr. [District Rule 4305] Federally Enforceable Through Title V Permit
10. Heater A shall be tuned at least once each calendar year in which it operates by a qualified technician in accordance with Rule 4304. [District Rule 4305] Federally Enforceable Through Title V Permit
11. Refinery produced fuel gas shall be treated in H₂S scrubber listed in S-44-13. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Refinery produced fuel gas shall be burned in C.B. boiler S-44-13 and/or solvent plant heater S-44-2. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Gas-fired emission rates from heaters shall not exceed any of the following: NO_x - 0.036 lb/MMBtu, CO - 0.0840, VOC - 0.0055, PM₁₀ - 0.0076, or SO_x - 0.0143 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Oil-fired emission rates from heaters shall not exceed any of the following: NO_x - 0.052 lb/MMBtu, CO - 0.0365, VOC - 0.0015, PM₁₀ - 0.0241, or SO_x - 0.0518 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the following: CO - 154.66 tpy, VOC - 7.39 tpy. [District NSR Rule] Federally Enforceable Through Title V Permit
16. The stack concentration of NO_x (as NO₂), CO, and O₂, from heaters A, B, C, and D, shall be measured at least on a monthly basis, when operating, using District approved portable analyzers. [District Rule 4305] Federally Enforceable Through Title V Permit
17. Sampling facilities for source testing shall be provided for heaters A, B, C, and D in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit
18. Source testing to measure NO_x and CO emissions shall be conducted for heaters A, B, C, and D not less than once every 12 months, except as provided below. [District Rules 4305, and 4351] Federally Enforceable Through Title V Permit
19. Source testing to measure NO_x and CO emissions shall be conducted for heaters A, B, C, and D, not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, and 4351] Federally Enforceable Through Title V Permit
20. If permittee fails any compliance demonstration for NO_x or CO emission limits when testing not less than once every 36 months, compliance with NO_x and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, and 4351] Federally Enforceable Through Title V Permit
21. Source testing shall be performed to demonstrate compliance with NO_x and CO emission limits within 60 days of introducing fuel for which the unit has not been source tested on in the previous 12 months. [District Rules 4305, and 4351] Federally Enforceable Through Title V Permit
22. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NO_x and CO source testing requirement. [District Rules 4305, and 4351] Federally Enforceable Through Title V Permit
23. 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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CONDITIONS CONTINUE ON NEXT PAGE

24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (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, and 4351] Federally Enforceable Through Title V Permit
27. If the NO_x or CO concentrations for heaters A, B, C or D, as measured by the portable analyzer, exceed the allowable emission rate, the permittee shall notify the District and take corrective action as soon as possible but no longer than one (1) hour after detection. If the portable analyzer readings continue to exceed for more than one hour the allowable emission rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emission limits. [District Rule 4305] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of the date and time of NO_x, CO, and O₂ measurements, the measured NO₂ and CO concentrations corrected to 3% O₂, and the O₂ concentration. The records shall also include a description of any corrective action taken to maintain the emissions in the acceptable range. These records shall be retained at the facility for a period of no less than five years and shall be made readily available for District inspection upon request. [District Rules 1070, 2520, 9.4.2, and 4305] Federally Enforceable Through Title V Permit
29. Permittee shall maintain records of hours of concurrent operation of gas turbine engine S-73-2 with any heaters listed in permit units S-44-1, -2, -3, -4 & -6. [District NSR Rule] Federally Enforceable Through Title V Permit
30. Permittee shall maintain accurate records of fuel type, heating value of fuel, fuel consumption, daily crude oil throughput, annual operating hours & heat input per heater, annual emissions for the heaters, and dates of tuning. [District NSR Rule] Federally Enforceable Through Title V Permit
31. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
32. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081(amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. The portable analyzer shall be calibrated each day of use with a two-point calibration method (zero and span) at beginning of the day. Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 19,1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
35. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results 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, 9.3.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
36. Particulate matter emissions shall not exceed 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
37. Source testing shall be performed using EPA Method 5 while firing on residual oil (including crude or topped crude) to demonstrate compliance with PM emission limits. Source testing shall be performed within 60 days of firing on residual oil unless such testing has been performed within the 12 month period prior to firing on said oil and the test results showed compliance with PM emission limits of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

38. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated 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
39. 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 quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. When complying with SO_x 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 EPA Method 6; or CARB Method 1-100; 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
41. If the unit is fired on noncertified gaseous fuel and compliance with SO_x 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
42. If the unit is fired on noncertified liquid fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the liquid fuel being fired in the unit shall be determined using ASTM D 2880. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 240 or D 2382 for liquid hydrocarbon fuels; ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
44. 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 test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels or 3.0% by weight for residual oil (including crude or topped crude); 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 Rule 4801] Federally Enforceable Through Title V Permit
45. Nitrogen oxide (NO_x) 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 lb/MMBtu rates shall be calculated as lb NO₂/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit
46. Nitrogen oxide (NO_x) emissions from each heater shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2] Federally Enforceable Through Title V Permit
47. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO_x and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit
48. The following conditions must be met for representative unit(s) to be used to test for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

49. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit
50. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit
51. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-44-2-26

LEGAL OWNER OR OPERATOR: TRICOR REFINING, LLC
MAILING ADDRESS: PO BOX 5877
BAKERSFIELD, CA 93308

LOCATION: 1134 MANOR STREET
BAKERSFIELD, CA

SECTION: 06 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:

MODIFICATION OF SOLVENT EXTRACTION PLANT INCLUDING AIR STRIPPER, TWO ROTATING DISC COLUMNS, AND 40 MMBTU/HR SOLVENT PLANT VERTICAL CYLINDRICAL TYPE HOT OIL HEATER WITH A ZEECO MODEL GLSF-16 LOW NOX BURNER: REMOVE SLC SHARED WITH FACILITY 73

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. Solvent plant vertical cylindrical-type heater fuel gas use (not including pilot gas and waste gas) shall not exceed 36,800 scf/hr on a daily average basis. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The heater unit shall be fired exclusively on PUC-quality natural gas and waste gas/refinery produced fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Maximum heat input of waste gas/refinery produced fuel gas waste gas to solvent plant heater, calculated as product of flow rate (scf/day) and higher heating value (MMBtu/scf), shall not exceed 72 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

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Arnaud Marjolle, Director of Permit Services
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7. Waste gas/refinery produced fuel gas may be combusted in the solvent plant heater by the pilot gas flame at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Waste gas/refinery produced fuel gas shall be burned in C.B. boiler S-44-13 and/or solvent plant heater S-44-2. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Refinery produced gas shall be treated in H2S scrubber listed in S-44-13. [District Rule 2201] Federally Enforceable Through Title V Permit
10. H2S content of gas burned shall not exceed 0.1 gr/dscf (161 ppmv) based on a three hour rolling average. [40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit
11. Solvent plant heater emission rates shall not exceed any of the following: NOx - 30 ppmv @ 3% O2 or 0.036 lb/MMBtu, CO - 400 ppmv @ 3% O2, VOC - 5.5 lb/MMscf of fuel gas, PM10 - 7.6 lb/MMscf of fuel gas, or SOx - 5 gr of total sulfur per 100 standard cubic feet of fuel gas. [District Rules 4306, 4320 and 4351] Federally Enforceable Through Title V Permit
12. Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the following: CO - 154.66 tpy, VOC - 7.39 tpy. [District NSR Rule] Federally Enforceable Through Title V Permit
13. 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
14. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
15. Source testing to measure NOx and CO emissions from this unit 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 and 4306] Federally Enforceable Through Title V Permit
16. 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 and 4306] Federally Enforceable Through Title V Permit
17. 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
18. 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 and 4306] Federally Enforceable Through Title V Permit
19. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
20. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. 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 and 4306] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

22. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
23. 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 and 4306] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 and 4306] Federally Enforceable Through Title V Permit
25. Permittee shall maintain accurate records of fuel type and heating value, daily and annual fuel consumption, and annual emissions from heaters. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Permittee shall maintain records of hours of concurrent operation of gas turbine engine S-73-2 with any heaters listed in permit units S-44-1, -2, -3, -4 & -6. [District Rule 2201] Federally Enforceable Through Title V Permit
27. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
28. Permittee shall maintain records of the occurrence of and duration of any startup, shutdown, or malfunction in the operation of the solvent plant heater, or any malfunction of the air pollution control equipment. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. The portable analyzer shall be calibrated each day of use with a two-point calibration method (zero and span) at beginning of the day. Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 19, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
31. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results 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. [District Rule 2520, 9.3.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
32. Particulate matter emissions shall not exceed 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
33. If the unit is fired on noncertified gaseous fuel and compliance with SO_x 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
34. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 240 or D 2382 for liquid hydrocarbon fuels; ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

35. Nitrogen oxide (NO_x) 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 lb/MMBtu rates shall be calculated as lb NO₂/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit
36. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081(amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. The owner or operator shall install an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in fuel gases before being burned in any fuel gas combustion device. The span value for this instrument is 425 mg/dscm H₂S. The performance evaluations for this H₂S monitor shall use Performance Specification 7. Method 11 shall be used for conducting the relative accuracy evaluations. [40 CFR Part 60, Subpart J, 60.105(a)(4)(i)(iii)] Federally Enforceable Through Title V Permit
38. Continuous emissions monitoring (CEM) results shall be calculated on a rolling three (3) hour average. [40 CFR 60.105(e)] Federally Enforceable Through Title V Permit
39. The owner or 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 or 161 ppmv). [40 CFR 60.105(e)(3)(ii)] Federally Enforceable Through Title V Permit
40. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
41. Pursuant to Rule 4320, the operator shall pay an annual emission fee to the District for NO_x 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 NO_x emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
42. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit
43. The permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-44-3-21

LEGAL OWNER OR OPERATOR: TRICOR REFINING, LLC
MAILING ADDRESS: PO BOX 5877
BAKERSFIELD, CA 93308

LOCATION: 1134 MANOR STREET
BAKERSFIELD, CA

SECTION: 07 TOWNSHIP: 29S RANGE: 28E

EQUIPMENT DESCRIPTION:

MODIFICATION OF DORMANT LUBE OIL FINISHING PLANT INCLUDING 6 MMBTU/HR CHARGE VERTICAL CYLINDRICAL HEATER, TWO HYDROGEN REACTORS, TWO COMPRESSORS, SEPARATORS, FLASH POT, AMINE TREATER WITH RECEIVER AND REGENERATOR, H₂S PRODUCT STRIPPER (3-D-51), STRIPPER ACCUMULATOR, UTILITY FRACTIONATOR COLUMN (D-11) (SHARED WITH S-44-4), AND H₂S SCRUBBER AND FLARE SERVING HYDROGEN RICH WASTE GAS STREAM: REMOVE SLC SHARED WITH FACILITY 73

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The fuel supply line shall be physically disconnected from the 5 MMBtu/hr vertical cylindrical heater [District Rule 4307]
4. The 5 MMBtu/hr vertical cylindrical heater shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4307 and all other applicable District regulations. [District Rule 4307]
5. In the natural gas line to the charge heater, the permittee shall permanently install a calibrated orifice plate having a diameter not exceeding 0.3501 inches. [District NSR Rule] 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 Marjolle, Director of Permit Services
S-44-3-21 Sep 7 2016 8:55AM - DAVIDSOS - Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

6. The diameter of natural gas fuel line orifice shall be permanently stamped on the orifice plate and shall be readily accessible and viewable by District inspection staff. A copy of the orifice sizing calculations shall be made available to District inspection staff upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The charge heater shall be fired solely on PUC regulated natural gas or fuel oil. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Simultaneous firing of natural gas and fuel oil in the charge heater is prohibited. [District NSR Rule] Federally Enforceable Through Title V Permit
9. In the fuel oil line to the charge heater, the permittee shall permanently install a calibrated orifice plate having a diameter not exceeding 0.0581 inches. [District NSR Rule] Federally Enforceable Through Title V Permit
10. The diameter of the fuel oil line orifice shall be permanently stamped on the orifice plate and shall be readily accessible and viewable by District inspection staff. A copy of the orifice sizing calculations shall be made available to District inspection staff upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
11. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
12. H2S product stripper column includes vapor piping to H2S scrubber and flare serving hydrogen rich waste gas stream and to refinery waste gas system listed in S-44-13, and liquid piping to tank S-44-157. [District NSR Rule] Federally Enforceable Through Title V Permit
13. There shall be no detectable volatile organic compound (VOC) emissions from valves and flanges or from pressure relief valves during normal operation. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Hydrogen reactors may be used in parallel configuration (one at a time) or in series configuration (concurrently). [District NSR Rule] Federally Enforceable Through Title V Permit
15. Hydrogen rich waste gas stream shall be equipped with continuously recording flowrate meter. [District NSR Rule] Federally Enforceable Through Title V Permit
16. H2S scrubber serving hydrogen rich waste gas shall be equipped with continuous operation H2S monitor on outlet of H2S scrubber. [District Rule 4801] Federally Enforceable Through Title V Permit
17. Excess sour gas from flash pot, stripper accumulator and amine regenerator shall discharge only to hydrogen rich waste gas stream H2S scrubber. [District NSR Rule] Federally Enforceable Through Title V Permit
18. VOC emissions from fugitive components associated with H2S product stripper column shall not exceed 1.0 lb/day. VOC emissions from fugitive components installed after April 2000 on utility fractionator column shall not exceed 1.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Fugitive emission calculations shall be performed using API Publication 4322 for emission factors and control efficiencies for inspection and maintenance program established in EPA Publication 450/3-83-007. [District NSR Rule] Federally Enforceable Through Title V Permit
20. Hydrogen rich waste gas flowrate to H2S scrubber and flare shall not exceed 50,400 dscf/day. Flowrate (dscf/day) may be calculated using wet gas mass flowrate measurement corrected for water content. [District NSR Rule] Federally Enforceable Through Title V Permit
21. Refinery produced fuel gas, except hydrogen rich waste gas stream, shall be treated in H2S scrubber listed in S-44-13 and burned in boiler S-44-13 or solvent plant heater S-44-2. [District NSR Rule] Federally Enforceable Through Title V Permit
22. Charge heater gas-fired emission rates shall not exceed any of the following limits: 0.1000 lb-NO_x/MMBtu, 0.0840 lb-CO/MMBtu, 0.0055 lb-VOC/MMBtu, 0.0076 lb-PM₁₀/MMBtu, or 0.0143 lb-SO_x/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
23. Charge heater oil-fired emission rates shall not exceed any of the following limits: 0.1460 lb-NO_x/MMBtu, 0.0365 lb-CO/MMBtu, 0.0015 lb-VOC/MMBtu, 0.0241 lb-PM₁₀/MMBtu, or 0.0518 lb-SO_x/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

24. Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the following: CO - 154.66 tpy, VOC - 7.39 tpy. [District NSR Rule] Federally Enforceable Through Title V Permit
25. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas and fuel oil combusted in the unit shall be installed, utilized and maintained. [District NSR Rule] Federally Enforceable Through Title V Permit
26. Permittee shall maintain records of hours of concurrent operation of gas turbine engine S-73-2 with any heaters listed in permit units S-44-1, -2, -3, -4 & -6. [District NSR Rule] Federally Enforceable Through Title V Permit
27. Permittee shall maintain accurate records of hydrogen rich waste gas (off gas) produced (dscf/day), charge heater fuel type, daily and annual charge heater fuel consumption, and annual emissions from charge heater. [District NSR Rule] Federally Enforceable Through Title V Permit
28. Permittee shall maintain annual records of fugitive component count and corresponding emission calculations for components installed in conjunction with the H₂S product stripper column and components installed after April 2000 for the utility fractionator. [District NSR Rule] Federally Enforceable Through Title V Permit
29. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
30. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16,1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
31. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results 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, 9.3.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
32. Particulate matter emissions shall not exceed 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

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-44-4-21

LEGAL OWNER OR OPERATOR: TRICOR REFINING, LLC
MAILING ADDRESS: PO BOX 5877
BAKERSFIELD, CA 93308

LOCATION: 1134 MANOR STREET
BAKERSFIELD, CA

SECTION: 07 TOWNSHIP: 29S RANGE: 28E

EQUIPMENT DESCRIPTION:

MODIFICATION OF DORMANT 4.5 MMBTU/HR LUBE OIL FINISHING PLANT - UTILITY FRACTIONATOR INCLUDING THREE ATMOSPHERIC COLUMN NOS. D-11, D-21, & D-31, STANDBY HEATER NOS. 11, 21, & 31, AND HEAT OIL EXCHANGER NOS. E 551, E-552, & E-553: REMOVE SLC SHARED WITH FACILITY 73

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 heaters #11, #21, and #31 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. The fuel supply line shall be physically disconnected from heaters #11, #21, and #31 while dormant. [District Rules 2201, 4306, 4307] Federally Enforceable Through Title V Permit
5. Heaters #11, #21, and #31 shall not be operated for any reason until Authority to Construct permits are issued approving all necessary retrofits required to comply with the applicable requirements of either Rule 4306 or 4307 and all other applicable District regulations. [District Rules 4306, 4307] 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

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Arnaud Marjolle, Director of Permit Services

S-44-4-21 : Sep 7 2010 8:55AM - DAVISOS : Joint Inspection NOT Required

6. In the fuel line to standby heater #21, the permittee shall permanently install a calibrated orifice plate having a diameter not exceeding 0.3501 inches. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The diameter of the orifice shall be permanently stamped on the orifice plate of standby heater #21, and shall be readily accessible and viewable by District inspection staff. A copy of the orifice sizing calculations shall be made available to District inspection staff upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The standby heaters shall be fired solely on PUC regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
9. No modifications to heaters #11 and #31 shall be performed without an Authority to Construct for that modification, except for changes specified in the following condition. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Heaters #11 and #31 shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Refinery produced fuel gas shall be treated in H₂S scrubber listed in S-44-13. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Refinery produced fuel gas shall be burned in C.B. boiler S-44-13 and/or solvent plant heater S-44-2. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Heaters #11, #21, and #31 shall not be fired at greater than 4.5 MMBTU/hr for all three heaters. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Crude oil throughput for S-44-1 and S-44-4 combined shall not exceed 12,800 barrels per day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Emissions from any of the standby heaters (#11, 21, 31) shall not exceed any of the following limits: 0.10 lb-NO_x/MMBtu, 0.084 lb-CO/MMBtu, 0.0055 lb-VOC/MMBtu, 0.0076 PM₁₀/MMBtu, or 0.00285 lb-SO_x/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the following: CO - 154.66 tpy, VOC - 7.39 tpy. [District NSR Rule] Federally Enforceable Through Title V Permit
17. Upon resuming operation of heater #21, the heater shall be tuned at least twice per calendar year (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate during a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. If the unit does not operate during a calendar year, no tune-up is required for that calendar year. [District Rule 4307] Federally Enforceable Through Title V Permit
18. Upon resuming operation of heater #21, the heater may be test-fired to verify availability for its intended use. Such test-firing is not considered operation for the purpose of requiring a tune-up provided the heater is shutdown once test firing is complete. [District Rule 4307] Federally Enforceable Through Title V Permit
19. Upon resuming operation of heaters #11 and #31, the stack concentration of NO_x (as NO₂), CO, and O₂ shall be measured at least on a monthly basis using District approved portable analyzers. [District Rule 4305] Federally Enforceable Through Title V Permit
20. Sampling facilities for source testing shall be provided in accordance with the provisions of District Rule 1081 (amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
21. Upon resuming operation of heaters #11 and #31, source testing to measure NO_x and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305, and 4351] Federally Enforceable Through Title V Permit
22. Upon resuming operation of heaters #11 and #31, source testing to measure NO_x 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, and 4351] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. Upon resuming operation of heaters #11 and #31, if permittee fails any compliance demonstration for NO_x or CO emission limits when testing not less than once every 36 months, compliance with NO_x and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, and 4351] Federally Enforceable Through Title V Permit
24. Upon resuming operation of heaters #11 and #31, source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NO_x and CO source testing requirement. [District Rules 4305, and 4351] Federally Enforceable Through Title V Permit
25. Upon resuming operation of heaters #11 and #31, 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
26. Upon resuming operation of heaters #11 and #31, source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
27. Upon resuming operation of heaters #11 and #31, 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
28. Upon resuming operation of heaters #11 and #31, the following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (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, and 4351] Federally Enforceable Through Title V Permit
29. Upon resuming operation of heaters #11 and #31, if the NO_x or CO concentrations, as measured by the portable analyzer, exceed the allowable emission rate, the permittee shall notify the District and take corrective action as soon as possible but no longer than one (1) hour after detection. If the portable analyzer readings continue to exceed for more than one hour the allowable emission rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emission limits. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit
30. The permittee shall maintain records of the date and time of NO_x, CO, and O₂ measurements, the measured NO₂ and CO concentrations corrected to 3% O₂, and the O₂ concentration. The records shall also include a description of any corrective action taken to maintain the emissions in the acceptable range. These records shall be retained at the facility for a period of no less than five years and shall be made readily available for District inspection upon request. [District Rules 1070, 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit
31. Permittee shall maintain accurate records of fuel type, annual fuel consumption, annual emissions from the heaters, and daily crude oil throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
32. Permittee shall maintain records of hours of concurrent operation of gas turbine engine S-73-2 with any heaters listed in permit units S-44-1, -2, -3, -4 & -6. [District Rule 2201] Federally Enforceable Through Title V Permit
33. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
34. Upon resuming operation of heaters #11 and #31, the portable analyzer shall be calibrated each day of use with a two-point calibration method (zero and span) at beginning of the day. Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16,1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
36. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type of fuel combusted. [District Rule 2520, 9.3.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit

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37. Particulate matter emissions shall not exceed 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
38. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by maintaining copies of fuel invoices, gas purchase contracts, or supplier certifications. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
39. 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). Compliance with this requirement may be demonstrated by maintaining copies of fuel invoices, gas purchase contracts, or supplier certifications. [District Rule 4801] Federally Enforceable Through Title V Permit
40. Nitrogen oxide (NO_x) 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 lb/MMBtu rates shall be calculated as lb NO₂/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit
41. Nitrogen oxide (NO_x) emissions from each heater shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2] Federally Enforceable Through Title V Permit
42. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081(amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. Upon resuming operation of heaters #11 and #31, annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO_x and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit
44. Upon resuming operation of heaters #11 and #31, the following conditions must be met for representative unit(s) to be used to test for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit
45. Upon resuming operation of heaters #11 and #31, all units in a group for which representative units are source for NO_x and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit
46. Upon resuming operation of heaters #11 and #31, all units in a group for which representative units are source tested to for NO_x and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit
47. Upon resuming operation of heaters #11 and #31, the number of representative units source tested for NO_x and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-44-5-14

LEGAL OWNER OR OPERATOR: TRICOR REFINING, LLC
MAILING ADDRESS: PO BOX 5877
BAKERSFIELD, CA 93308

LOCATION: 1134 MANOR STREET
BAKERSFIELD, CA

SECTION: 07 **TOWNSHIP:** 29S **RANGE:** 27E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 99.9 MMBTU/HR NATURAL GAS-FIRED ZURN MODEL 15M KEYSTONE BOILER WITH COEN STAGED AIR BURNER AND FLUE GAS RECIRCULATION: REMOVE SLC SHARED WITH FACILITY 73

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. Burner shall be fired exclusively on PUC-regulated natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Gas-firing rate shall not exceed 94,612 scf per hour. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Emission rates shall not exceed any of the following: NOx (as NO2): 25 ppmv @3% O2 or 0.031 lb/MMBtu, CO: 400 ppmv @ 3% O2 or 0.30 lb/MMBtu. [District Rules 4305, 5.1.1, 4306, 5.1.1 and 4351] Federally Enforceable Through Title V Permit
6. Emissions shall not exceed any of the following: 0.0056 lb-VOC/MMBtu, 0.0076 lb-PM10/MMBtu, or 0.0006 lb-SOx/MMBtu. [District NSR Rule] 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

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Arnaud Marjolle, Director of Permit Services

S-44-5-14 Sep 7 2010 8:55AM - DAVIDSOS - Joint Inspection NOT Required

7. Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the following: CO - 154.66 tpy, VOC - 7.39 tpy. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
9. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
10. Source testing to measure NO_x and CO emissions from this unit 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 and 4306] Federally Enforceable Through Title V Permit
11. 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 and 4306] Federally Enforceable Through Title V Permit
12. NO_x 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 and 4306] Federally Enforceable Through Title V Permit
13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
14. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
15. 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
16. 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
17. 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
18. The permittee shall monitor and record the stack concentration of NO_x, 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 and 4306] Federally Enforceable Through Title V Permit
19. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 and 4306] Federally Enforceable Through Title V Permit
22. Permittee shall maintain accurate records of fuel type, daily fuel consumption, annual fuel consumption and annual emissions from the boiler, and shall make such records available for District inspection for five years. [District NSR Rule and 2520, 9.4.2] Federally Enforceable Through Title V Permit
23. The portable analyzer shall be calibrated each day of use with a two-point calibration method (zero and span) at beginning of the day. Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
24. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16,1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
25. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results 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, 9.3.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
27. Particulate matter emissions shall not exceed 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
28. Emissions of sulfur compounds from this unit 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
29. 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 quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. When complying with SO_x 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 EPA Method 6; or CARB Method 1-100; 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
31. If the unit is fired on noncertified gaseous fuel and compliance with SO_x 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

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32. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305 and 4306, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
33. 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 Rule 4801] Federally Enforceable Through Title V Permit
34. Nitrogen oxide (NO_x) 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 lb/MMBtu rates shall be calculated as lb NO₂/MMBtu of heat input (hhv). [District Rules 4305 and 4306, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit
35. Nitrogen oxide (NO_x) emissions shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2] Federally Enforceable Through Title V Permit
36. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081(amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO_x and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305 and 4306, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit
38. The following conditions must be met for representative unit(s) to be used to test for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305 and 4306, 6.3.2] Federally Enforceable Through Title V Permit
39. All units in a group for which representative units are source for NO_x and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305 and 4306, 6.3.2] Federally Enforceable Through Title V Permit
40. All units in a group for which representative units are source tested to for NO_x and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305 and 4306, 6.3.2] Federally Enforceable Through Title V Permit
41. The number of representative units source tested for NO_x and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. Pursuant to Rule 4320, the operator shall pay an annual emission fee to the District for NO_x 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 NO_x emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

43. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit
44. The permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-44-6-14

LEGAL OWNER OR OPERATOR: TRICOR REFINING, LLC
MAILING ADDRESS: PO BOX 5877
BAKERSFIELD, CA 93308

LOCATION: 1134 MANOR STREET
BAKERSFIELD, CA

SECTION: 07 TOWNSHIP: 29S RANGE: 28E

EQUIPMENT DESCRIPTION:

MODIFICATION OF DORMANT 65 MMBTU/HR SHIPPING & RECEIVING OPERATION INCLUDING 45 MMBTU/HR ASPHALT SHIPPING FORCED DRAFT HEATER AND 20 MMBTU/HR CIRCULATING (RETORT) NATURAL DRAFT VERTICAL CYLINDRICAL HEATER: REMOVE SLC SHARED WITH FACILITY 73

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 the 45 MMBtu/hr asphalt shipping heater 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. The fuel supply line of the 45 MMBtu/hr asphalt shipping heater shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit
5. This 45 MMBtu/hr asphalt shipping heater shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [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

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Arnaud Marjolle, Director of Permit Services

S-44-6-14 - Sep 7 2016 8:55AM - DAVIDSOS - Joint Inspection NOT Required

6. If continuous operation oxygen analyzer/controller is utilized, excess O₂ shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Asphalt shipping heater (forced draft) shall be fired on oil or natural gas. Retort heater (natural draft) shall be fired on natural gas. Neither heater shall incinerate refinery produced gas. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Asphalt shipping heater and retort heater shall each be equipped with recording fuel flow meter. [District Rule 4305 and 4351] Federally Enforceable Through Title V Permit
9. Asphalt shipping heater shall operate as a replacement standby unit and shall not be fired for more than 90 billion Btu/year. [District Rule 4305] Federally Enforceable Through Title V Permit
10. Asphalt shipping heater shall only fire on oil during periods of involuntary natural gas curtailment. Heater shall not be fired on oil for more than 336 hours per year, except for 48 hours per year for maintenance and testing. [District Rule 4351] Federally Enforceable Through Title V Permit
11. Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the following: CO - 154.66 tpy, VOC - 7.39 tpy. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Gas fired emission rate from 45 MMBtu/hr forced draft asphalt shipping heater shall not exceed: NO_x, 95 ppmv @3% O₂ or 0.10 lb/MMBtu, and CO, 400 ppmv @3% O₂. [District Rule 4351] Federally Enforceable Through Title V Permit
13. Gas fired emission rate from 20 MMBtu/hr natural draft retort heater shall not exceed: NO_x, 147 ppmv @3% O₂ or 0.18 lb/MMBtu, and CO, 400 ppmv @3% O₂. [District Rule 4305 and 4351] Federally Enforceable Through Title V Permit
14. The retort heater stack concentration of NO_x (as NO₂), CO, and O₂ shall be measured at least on a monthly basis using District approved portable analyzers. [District Rule 4305] Federally Enforceable Through Title V Permit
15. Source testing of retort heater to measure NO_x and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4351] Federally Enforceable Through Title V Permit
16. Source testing of the retort heater to measure NO_x and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4351] Federally Enforceable Through Title V Permit
17. If permittee fails any compliance demonstration for NO_x and CO emission limits when testing not less than once every 36 months, compliance with NO_x and CO emission limits for the retort heater shall be demonstrated not less than once every 12 months. [District Rule 4351] Federally Enforceable Through Title V Permit
18. Source testing shall be performed to demonstrate compliance with NO_x and CO emission limits within 60 days of introducing fuel for which the unit has not been source tested on in the previous 12 months. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit
19. 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
20. 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
21. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (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, and 4351] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

22. If the retort heater NO_x or CO concentrations, as measured by the portable analyzer, exceed the allowable emission rate, the permittee shall notify the District and take corrective action as soon as possible but no longer than one (1) hour after detection. If the portable analyzer readings continue to exceed for more than one hour the allowable emission rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emission limits. [District Rule 4305] Federally Enforceable Through Title V Permit
23. The permittee shall maintain records of the date and time of retort heater NO_x, CO, and O₂ measurements, the measured NO₂ and CO concentrations corrected to 3% O₂, and the O₂ concentration. The records shall also include a description of any corrective action taken to maintain the emissions in the acceptable range. These records shall be retained at the facility for a period of no less than five years and shall be made readily available for District inspection upon request. [District Rules 1070, 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit
24. Asphalt heater and heater A shall be either tuned at least once each calendar year in which it operates by a qualified technician in accordance with Rule 4304, or operated with exhaust oxygen concentration no greater than 3.00% by volume on a dry basis. [District Rule 4305] Federally Enforceable Through Title V Permit
25. Asphalt heater shall be operated in accordance with the manufacturer's recommendations. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit
26. Permittee shall maintain records of monthly and annual fuel consumption for each heater, and annual emissions from heaters. [District NSR Rule, 4305, and 4351] Federally Enforceable Through Title V Permit
27. Permittee shall maintain records of hours of concurrent operation of gas turbine engine S-73-2 with any heaters listed in permit units S-44-1, -2, -3, -4 & -6. [District NSR Rule] Federally Enforceable Through Title V Permit
28. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
29. The portable analyzer shall be calibrated each day of use with a two-point calibration method (zero and span) at beginning of the day. Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16,1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
31. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results 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, 9.3.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
32. Particulate matter emissions shall not exceed 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
33. Source testing shall be performed using EPA Method 5 while firing on residual oil (including crude or topped crude) to demonstrate compliance with PM emission limits. Source testing shall be performed within 60 days of firing on residual oil unless such testing has been performed within the 12 month period prior to firing on said oil and the test results showed compliance with PM emission limits of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated 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
35. 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 quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

36. When complying with SO_x 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 EPA Method 6; or CARB Method 1-100; 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
37. If the unit is fired on noncertified gaseous fuel and compliance with SO_x 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
38. If the unit is fired on noncertified liquid fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the liquid fuel being fired in the unit shall be determined using ASTM D 2880. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 240 or D 2382 for liquid hydrocarbon fuels; ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. 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 test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels or 3.0% by weight for residual oil (including crude or topped crude); 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 Rule 4801] Federally Enforceable Through Title V Permit
41. Nitrogen oxide (NO_x) 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 lb/MMBtu rates shall be calculated as lb NO₂/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit
42. Nitrogen oxide (NO_x) emissions from each heater shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2] Federally Enforceable Through Title V Permit
43. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081(amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-44-13-24

LEGAL OWNER OR OPERATOR: TRICOR REFINING, LLC
MAILING ADDRESS: PO BOX 5877
BAKERSFIELD, CA 93308

LOCATION: 1134 MANOR STREET
BAKERSFIELD, CA

SECTION: 07 TOWNSHIP: 29S RANGE: 28E

EQUIPMENT DESCRIPTION:

MODIFICATION OF DORMANT (COMPLIANT) 100 MMBTU/HR CLEAVER BROOKS BOILER INCLUDING JOHN ZINK LOW NOX BURNER, H2S CAUSTIC SCRUBBER, CONTINUOUS H2S MONITOR, & BACKUP H2S REMOVAL SYSTEM WITH "SULFATREAT" ADSORBENT VERTICAL COLUMN FUEL GAS SCRUBBER WITH NOMINAL DIMENSIONS 18' LONG BY 4' DIAMETER: REMOVE SLC SHARED WITH FACILITY 73 AND FEDERAL PSD CONDITIONS

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 this unit 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. The fuel supply line shall be physically disconnected from this unit when dormant. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
5. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
6. Operators shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit. [District Rules 4305 and 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

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Arnaud Marjolle, Director of Permit Services

S-44-13-24 Sep 7 2010 8:55AM - DAVIDSOS - Joint Inspection NOT Required

7. H₂S removal system includes two H₂S scrubbers, waste gas knockout pot, fresh and spent caustic storage tanks, and various liquid pumps. [District NSR Rule] Federally Enforceable Through Title V Permit
8. H₂S content of refinery fuel gas burned shall not exceed 0.1 gr/dscf (161 ppmv) based on a three hour rolling average. [40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit
9. Refinery produced fuel gas burned shall be from crude fractionation plant S-44-1, solvent extraction plant S-44-2, lube oil hydrotreater S-44-3 (except hydrogen stream), and lube oil fractionator S-44-4. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Refinery produced fuel gas shall be burned in C.B. boiler S-44-13 and/or solvent plant heater S-44-2. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Emission rates shall not exceed NO_x (as NO₂): 25 ppmvd @3% O₂ or 0.03 lb/MMBtu, and CO: 400 ppmvd @ 3% O₂. [District Rules 4301, 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
12. Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the following: CO - 154.66 tpy, VOC - 7.39 tpy. [District NSR Rule] Federally Enforceable Through Title V Permit
13. The permittee shall monitor and record the stack concentration of NO_x, 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 and 4306] Federally Enforceable Through Title V Permit
14. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
15. 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 and 4306] Federally Enforceable Through Title V Permit
16. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 and 4306] Federally Enforceable Through Title V Permit
17. 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 and 4306] Federally Enforceable Through Title V Permit
18. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit 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, 4351] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, 4351] Federally Enforceable Through Title V Permit
20. 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
21. 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, 4351] Federally Enforceable Through Title V Permit
22. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, 4351] Federally Enforceable Through Title V Permit
23. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, 4351] Federally Enforceable Through Title V Permit
24. 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 and 4306] Federally Enforceable Through Title V Permit
25. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
26. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2.1; 4306, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit
27. 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
28. 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
29. Permittee shall maintain accurate records of fuel type, fuel consumption, boiler feedwater/produced steam rate, and annual emissions from the boiler, and shall make such records available for District inspection for five years. [District NSR Rule and 2520, 9.4.2] Federally Enforceable Through Title V Permit
30. Permittee shall maintain records of the occurrence of and duration of any startup, shutdown, or malfunction in the operation of the C.B. boiler, or any malfunction of the air pollution control equipment. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. The portable analyzer shall be calibrated each day of use with a two-point calibration method (zero and span) at beginning of the day. Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16,1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
33. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results 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, 9.3.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
34. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
35. Particulate matter emissions shall not exceed 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

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CONDITIONS CONTINUE ON NEXT PAGE

36. Emissions of sulfur compounds from this unit 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 4301, 5.2.1] Federally Enforceable Through Title V Permit
37. 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 quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When complying with SO_x 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 EPA Method 6; or CARB Method 1-100; 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
39. If the unit is fired on noncertified gaseous fuel and compliance with SO_x 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
40. 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 Rule 4801] Federally Enforceable Through Title V Permit
41. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081(amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. The owner or operator shall install an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in fuel gases before being burned in any fuel gas combustion device. The span value for this instrument is 425 mg/dscm H₂S. The performance evaluations for this H₂S monitor shall use Performance Specification 7. Method 11 shall be used for conducting the relative accuracy evaluations. [40 CFR Part 60, Subpart J, 60.105(a)(4)(i)(iii)] Federally Enforceable Through Title V Permit
43. Continuous emissions monitoring (CEM) results shall be calculated on a rolling three (3) hour average. [40 CFR 60.105(e)] Federally Enforceable Through Title V Permit
44. The owner or 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 or 161 ppmv). [40 CFR 60.105(e)(3)(ii)] Federally Enforceable Through Title V Permit
45. Pursuant to Rule 4320, the operator shall pay an annual emission fee to the District for NO_x 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 NO_x emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
46. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

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