



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

JUL 09 2012

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

**Re: Revised Final Decision – Authority to Construct/Certificate of Conformity (Minor Mod)  
Project # 1120576**

Dear Mr. Rios:

The Air Pollution Control Officer has issued revised Authority to Construct (S-44-2-24) with a Certificate of Conformity to Tricor Refining LLC, located at 1134 Manor St., Bakersfield, CA. Tricor Refining LLC (Tricor) recently received ATC S-44-2-24 to authorize combustion of waste gas/refinery fuel gas in the heater pilots. The ATC has been revised to reflect comments received by the applicant after the final decision (May 15, 2012). As per the applicants request, authorization to combust waste gas/refinery fuel gas in the solvent plant heater by the pilot(s) flame at all times and/or by the main burner flame under the special conditions, is reinstated.

Enclosed are copies of the Authority to Construct and revised engineering evaluation with attachments. The application and proposal were sent to US EPA Region IX on April 16, 2012. All comments received have been addressed by the District. A summary of the comments and the District's response to each comment is included in the attached amended engineering evaluation.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Sincerely,

David Warner  
Director of Permit Services

Enclosures  
rue

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

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061  
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**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: (661) 392-5500 FAX: (661) 392-5585



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

JUL 09 2012

Mr. Jeffrey Beecher  
Tricor Refining LLC  
PO Box 5877  
Bakersfield, CA 93308

**Re: Revised Final Decision – Authority to Construct/Certificate of Conformity (Minor Mod)  
Project # 1120576**

Dear Mr. Beecher:

The Air Pollution Control Officer has issued revised Authority to Construct (S-44-2-24) with a Certificate of Conformity to Tricor Refining LLC, located at 1134 Manor St., Bakersfield, CA. Tricor Refining LLC (Tricor) recently received ATC S-44-2-24 to authorize combustion of waste gas/refinery fuel gas in the heater pilots. The ATC has been revised to reflect comments received by the applicant after the final decision (May 15, 2012). As per the applicants request, authorization to combust waste gas/refinery fuel gas in the solvent plant heater by the pilot(s) flame at all times and/or by the main burner flame, under the special conditions, is reinstated.

Enclosed is the Authority to Construct, invoice, and revised engineering evaluation with attachments. The application and proposal were sent to US EPA Region IX on April 16, 2012. All comments received have been addressed by the District. A summary of the comments and the District's response to each comment is included in the attached amended engineering evaluation.

Prior to operating with modifications authorized by the Authority to Construct, you must submit an application to modify the Title V permit as an administrative amendment in accordance with District Rule 2520, Section 11.5.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Sincerely,

David Warner  
Director of Permit Services

Enclosures  
rue

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## AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-44-2-24

**ISSUANCE DATE:** 05/14/2012

**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: REINSTATE INCINERATION OF REFINERY WASTE GAS IN HEATER AND NATURAL GAS IN HEATER PILOTS (REVISED 7/9/12)

## CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

S-44-2-24 : Jul 10 2012 10:07AM -- SCANDURL : Joint Inspection NOT Required

6. 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
7. 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
8. 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
9. 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
10. 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
11. 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
12. Refinery produced gas shall be treated in H<sub>2</sub>S scrubber listed in S-44-13. [District Rule 2201] Federally Enforceable Through Title V Permit
13. H<sub>2</sub>S 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)]
14. Solvent plant heater emission rates shall not exceed any of the following: NO<sub>x</sub> - 30 ppmv @ 3% O<sub>2</sub> or 0.036 lb/MMBtu, CO - 400 ppmv @ 3% O<sub>2</sub>, VOC - 5.5 lb/MMscf of fuel gas, PM<sub>10</sub> - 7.6 lb/MMscf of fuel gas, or SO<sub>x</sub> - 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
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 the following: NO<sub>x</sub> - 94.95 tpy, CO - 154.66 tpy, VOC - 7.39 tpy, PM<sub>10</sub> - 18.10 tpy or SO<sub>x</sub> - 30.70 tpy. [District Rule 2201] 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 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
17. 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
18. Source testing to measure NO<sub>x</sub> 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
19. 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
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. NO<sub>x</sub> 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

CONDITIONS CONTINUE ON NEXT PAGE

22. 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
23. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> 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
25. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, 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
26. 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
27. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (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
28. 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
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 Rule 2201] Federally Enforceable Through Title V Permit
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. 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
32. 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
33. 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
34. 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

CONDITIONS CONTINUE ON NEXT PAGE

35. Particulate matter emissions shall not exceed 0.1 grain/dscf calculated to 12% CO<sub>2</sub>, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
36. If the unit is fired on noncertified gaseous fuel and compliance with SO<sub>x</sub> 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
37. 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
38. Nitrogen oxide (NO<sub>x</sub>) 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 NO<sub>2</sub>/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit
39. 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<sub>x</sub> and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. The owner or operator shall install an instrument for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in fuel gases before being burned in any fuel gas combustion device. The span value for this instrument is 425 mg/dscm H<sub>2</sub>S. The performance evaluations for this H<sub>2</sub>S 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
41. 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
42. The owner or operator shall report all rolling 3-hour periods during which the average concentration of H<sub>2</sub>S as measured by the H<sub>2</sub>S 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
43. 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
44. Pursuant to Rule 4320, the operator shall pay an annual emission fee to the District for NO<sub>x</sub> 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<sub>x</sub> emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
45. 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
46. 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
47. ATC shall be implemented concurrently with ATC S-44-2-21. [District Rule 2201] Federally Enforceable Through Title V Permit

# San Joaquin Valley Air Pollution Control District

## Authority to Construct Amended Application Review

Facility Name: Tricor Refining, LLC  
Mailing Address: P.O. Box 5877  
Bakersfield, CA 93308

Date: July 3, 2012  
Engineer: Richard Edgehill  
Lead Engineer: Allan Phillips

Contact Person: Jeffrey Beecher  
Telephone: (661) 393-7110  
Application #(s): S-44-2-24  
Project #: S1120576

Deemed Complete: March 19, 2012

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### REVISED ATC

Tricor Refining LLC (Tricor) recently received ATC S-44-2-24 to authorize combustion of waste gas/refinery fuel gas in the heater pilots. The ATC has been revised to reflect comments received by the applicant after the final decision (May 15, 2012). As per the applicants request, authorization to combust waste gas/refinery fuel gas in the solvent plant heater by the pilot(s) flame at all times and/or by the main burner flame, under the special conditions described in the revised proposal below, is reinstated.

#### I. Revised Proposal

Tricor Refining LLC (Tricor) operates a solvent plant heater S-44-2 which was previously authorized to combust waste gas in the heater and natural gas in the three 65 scf/hr heater pilots when cogeneration facility (cogen) S-73-2 is in operation. Condition #6 of Permit to Operate (PTO) S-44-2-9 issued in 1994 states:

"Heaters shall not be fired during operation of cogeneration facility S-73-2 except solvent plant heater pilots (three 65 scf/hr pilots) on natural gas. Waste gas may be incinerated."

Condition # 5 of ATC S-44-2-10, issued for project S-940718, which authorized addition of H<sub>2</sub>S scrubbing for waste gas, stated

"Heaters shall not be fired during operation of cogeneration facility S-73-2 except for solvent plant heater pilots (three 65 scf/hr pilots) on natural gas and waste gas."

This wording (or in slightly revised form) has remained on subsequent permits and implies that natural gas and waste gas may be combusted only in the heater pilots when cogen S-73-2 is in operation.

Applicant has stated (May 31, 2012 correspondence and June 27 telephone conversation) that the heater pilots are not “plumbed” to receive waste gas. The waste gas enters as a separate stream and is combusted either by the pilot flame at any time and/or by the main burner flame when cogen S-73-2 is not operating and/or by the main burner flame during simultaneous operation of the solvent plant heater and cogen S-73-2 which is restricted by permit condition not to exceed 360 hr/yr.

The current permit does not include a restriction on the amount of waste gas that can be incinerated by the heater. The District expressed concern that the three 65 scf/hr heater pilots may not be capable (as auxiliary fuel) of combusting high volumes of waste gas whose higher heating may be too low to sustain combustion (District EE project 980803). In response to this concern, applicant has stated (July 2, 2012 email) that up to 3 MMBtu/hr of the gas has been incinerated effectively (“with no issues”) in the past.

Therefore, to provide additional clarity, 3 new conditions have been added to the ATC. New and existing pertinent conditions are listed below.

New- 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] Y

New - 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] Y

New - 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

Existing - 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

Existing - Permittee shall maintain accurate records of fuel type and heating value, daily and annual fuel consumption, and annual emissions from heaters. [District Rule 2201] Y

Existing - 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

Applicant is also proposing to restate the sulfur emissions limit authorized by previous PTO S-44-2-21 (overwritten by current PTO '-2-22) from 0.0143 lb SOx/MMBtu to 5 gr S/100scf, the Rule 4320 limit, and to restate PM10 and VOC emissions factors from lb/MMBtu to lb/MMscf to allow for variable gas heating value. Additional clarification of gas type (waste gas/refinery fuel gas) and minor changes to PTO S-44-2-21 conditions are also proposed.

Note that the proposed clarification of authorized incineration of waste/refinery fuel gas, inclusion of a waste gas/refinery fuel gas heat input limit erroneously excluded from past permits, restatement of emissions factors, and clarification with minor wording changes does not represent a change to the method of operation and therefore the project is not a NSR modification

### Disposition of Outstanding ATCs

Current PTO S-44-2-22 reflects the changes authorized by Authority to Construct (ATC) S-44-2-23 (project 1120513), deletion of oil firing and firing of the heater and pilots exclusively on PUC-quality natural to meet the PM10 control requirements of Rule 4320. ATC S-44-2-23 will be canceled by this project. PTO S-44-2-21 is the base document.

PTOs S-44-2-22 and '2-21 and ATC S-44-2-24 (original version) are included in **Attachment I**.

Tricor Refining received their Title V Permit on December 31, 2002. This modification can be classified as a Title V Minor Modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Tricor Refining must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC issued with this project.

## **II. Applicable Rules**

Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)  
Rule 2520 Federally Mandated Operating Permits (6/21/01)  
Rule 4101 Visible Emissions (2/17/05)  
Rule 4102 Nuisance (12/17/92)  
Rule 4201 Particulate Matter Concentration (12/17/92)  
Rule 4301 Fuel Burning Equipment (12/17/92)  
Rule 4305 Boilers, Steam Generators and Process Heaters - Phase 2 (8/21/03)  
Rule 4306 Boilers, Steam Generators and Process Heaters - Phase 3 (10/16/08)  
Rule 4351 Boilers, Steam Generators and Process Heaters - Phase 1 (8/21/03)  
Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)  
Rule 4801 Sulfur Compounds (12/17/92)  
CH&SC 41700 Health Risk Assessment  
CH&SC 42301.6 School Notice  
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)  
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

## **III. Project Location**

The facility is located at 1134 Manor St., Bakersfield, CA. There is no increase in emissions of any hazardous air pollutants with this project; therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

#### IV. Process Description

Tricor refines feed stock crude oils into various products including lubricating oils and asphalt. The 40 MMBtu/hr hot oil heater is part of the solvent extraction plant section of the refinery. The heater is currently restricted by permit condition (condition #5 of PTO S-44-2-22) to combust only PUC-quality natural gas in the main burner and three 67 scf/hr pilots. In this project, applicant has requested reauthorization to combust waste gas in the solvent plant heater by either the main burner flame (under conditions described above) or by the pilot(s) flame (at all times).

#### V. Equipment Listing

##### Pre-Project Equipment Description:

PTO S-44-2-22: SOLVENT EXTRACTION PLANT INCLUDING AIR STRIPPER, TWO ROTATING DISC COLUMNS, AND 40 MMBTU/HR SOLVENT PLANT VERTICAL CYLINDRICAL TYPE HOT OIL HEATER

PTO S-44-2-21: SOLVENT EXTRACTION PLANT INCLUDING AIR STRIPPER, TWO ROTATING DISC COLUMNS, AND 40 MMBTU/HR SOLVENT PLANT VERTICAL CYLINDRICAL TYPE HOT OIL HEATER

~~ATC S-44-2-23: 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: DELETE OIL FIRING CAPABILITY FOR HOT OIL HEATER AND FIRE EXCLUSIVELY PUC QUALITY NATURAL GAS FOR RULE 4320 PARTICULATE MATTER COMPLIANCE (TO BE CANCELED)~~

##### Proposed Modification:

ATC S-44-2-24: 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: REINSTATE INCINERATION OF REFINERY WASTE GAS IN HEATER AND NATURAL GAS IN HEATER PILOTS

##### Post Project Equipment Description:

PTO 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\*

\* ZEECO MODEL GLSF-16 LOW NOX BURNER erroneously missing from current PTO equipment description

## VI. Emission Control Technology Evaluation

There are no proposed changes to the emission unit; therefore, there is no need to evaluate the emission controls.

## VII. General Calculations

### A. Assumptions

- Operation 8,760 hrs/yr
- Pilot emissions (three 67 scf/hr pilots) are insignificant in comparison to those from combustion of natural gas and waste gas in main burner (36,800 scf/h) and are therefore neglected.
- The project is not a NSR modification (please see compliance section) and therefore calculations are not required. Only PE2 will be calculated for inclusion in the PAS emissions profile. The requirements of BACT, offsets, and public notice do not need to be considered.

### B. Emission Factors

Gas-fired Emission Factors		
	Lb/MMBtu (except where indicated)	Source
NO <sub>x</sub>	0.036	ATC S-44-2-21
SO <sub>x</sub>	0.0143*	"
PM <sub>10</sub>	0.0076	"
CO	400 ppmv @ 3% O <sub>2</sub>	"
VOC	0.0055	"

\*5 gr S/100 scf x scf/0.001 MMBtu x lb/7000 gr x 2 lb SO<sub>2</sub>/lb S = 0.0143 lb/MMBtu

### C. Calculations

#### Post Project Potential to Emit (PE2)

#### 2. Post-Project Potential to Emit (PE2)

The PE2 for each pollutant is calculated with the following equation:

- $PE2 = EF \text{ (lb/MMBtu)} \times \text{Heat Input (MMBtu/hr)} \times \text{Op. Sched. (hr/day or hr/year)}$

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO <sub>x</sub>	0.0360	40	24	34.6
SO <sub>x</sub>	0.01430	40	24	13.7
PM <sub>10</sub>	0.0076	40	24	7.3
CO	0.300	40	24	288.0
VOC	0.0055	40	24	5.3

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO <sub>x</sub>	0.036	40	8,760	12,614
SO <sub>x</sub>	0.01430	40	8,760	5,011
PM <sub>10</sub>	0.0076	40	8,760	2,663
CO	0.300	40	8,760	105,120
VOC	0.0055	40	8,760	1,927

Post Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO <sub>x</sub>	34.6	12,614
SO <sub>x</sub>	13.7	5,011
PM <sub>10</sub>	7.3	2,663
CO	288.0	105,120
VOC	5.3	1,927

The emissions profile is included in **Attachment II**.

### VIII. Compliance

#### Rule 2201 New and Modified Stationary Source Review Rule

Reinstatement of authorization to combust refinery waste gas in the heater pilots does not meet the following criteria for a Modification, as defined in Section 3.26, and is therefore not subject to this rule.

- 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. Routine replacement 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.

Compliance with this rule is expected.

### **Rule 2520 Federally Mandated Operating Permits**

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit pursuant to Section 3.20 of this rule:

In accordance with Rule 2520, 3.20, these modifications:

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

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 may construct/operate under the ATC upon submittal of the Title V administrative amendment/minor modification application. The Title V Compliance Certification form is included in **Attachment III**.

The following conditions are added to the issued ATC:

- {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 NSR Rule]
- {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]

### **Rule 4102 Nuisance**

Section 4.0 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of this unit 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 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. 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 specifies the maximum allowable concentration of particulates in the exhaust as 0.1 gr/dscf. Gas fired equipment readily complies with this requirement. Continued compliance is expected

### **Rule 4301 Fuel Burning Equipment**

This rule specifies maximum emission rates in lb/hr for SO<sub>2</sub>, NO<sub>2</sub>, and combustion contaminants. This rule also limits combustion contaminant concentration to  $\leq 0.1$  gr/dscf.

This unit currently complies with this requirement. Continued compliance is expected.

### **Rule 4305 Boilers, Steam Generators, and Process Steam Generators – Phase 2**

This rule limits NO<sub>x</sub> and CO emissions from boilers, steam generators, and process heaters rated greater than 5 MMBtu/hr.

All emission limits, monitoring, and record keeping requirements in 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.

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

This rule limits NO<sub>x</sub> and CO emissions from boilers, steam generators, and process heaters rated greater than 5 MMBtu/hr.

The subject process heater is currently in compliance with all applicable requirements of Rule 4306 and is expected to remain in compliance with this rule.

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

This rule limits NO<sub>x</sub> and CO emissions from boilers, steam generators, and process heaters rated greater than 5 MMBtu/hr. The subject process heater is subject to the rule and is an Emissions Fee Unit with payment pursuant to Sections 5.1 and 5.3. Combustion of natural/waste gas with a sulfur content not exceeding 5 gr S/100 scf satisfies the Particulate Matter Control requirements of the rule pursuant to Section 5.4.

The project is expected to have no effect on rule compliance status. Continued compliance is expected.

**Rule 4351 Boilers, Steam Generators, and Process Steam Generators – Phase I**

This rule applies to boilers, steam generators, and process heaters at NO<sub>x</sub> Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. The emission limits, monitoring provisions, and testing requirements of this rule are satisfied when the unit is operated in compliance with Rules 4306 and 4320. Therefore, compliance with this rule is expected.

**Rule 4801 Sulfur Compounds**

This rule specifies the maximum allowable concentration of SO<sub>2</sub> in the exhaust as 2,000 ppmv. The heater is currently in compliance with the rule and the project is not expected to affect compliance status. Continued compliance is expected

**California Health & Safety Code 42301.6 (School Notice)**

The unit is not located within 1,000 feet of a school, there is not an increase in emissions of any hazardous air pollutants with this project. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable.

**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) are exempt from Best Available Control Technology (BACT) requirements. Furthermore, the District conducted a Risk Management Review and concludes that potential health impacts are less than significant.

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

**IX. Recommendation**

Compliance with all applicable rules and regulations is expected. Compliance with all applicable rules and regulations is expected. Pending a successful COC review period, issue ATC S-44-2-24 subject to the permit conditions on the attached draft ATC (**Attachment IV**).

**X. Billing Information**

No change in annual fees will result with this project.

<b>Annual Permit Fees</b>			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-44-2-24	3020-02-H	40 MMBtu/hr Heater	\$1,030.00

**Attachments**

- I: PTOs S-44-2-21 and '-2-22 and ATC S-44-2-24 (original version)
- II: Emission Profiles
- III: Title V Compliance Certification Form
- IV: Revised Draft Authority to Construct (ATC)

## **Attachment I**

**PTOs S-44-2-21 and '-2-22 and ATC S-44-2-24 (original  
version)**

Original Copy



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT



**HEALTHY AIR LIVING™**

## AUTHORITY TO CONSTRUCT

PERMIT NO: S-44-2-24

ISSUANCE DATE: 05/14/2012

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; REINSTATE INCINERATION OF REFINERY WASTE GAS IN HEATER PILOTS

## CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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) 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. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Heater 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

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

  
DAVID WARNER, Director of Permit Services

S-44-2-24 : May 14 2012 1:24PM - EDGEHILL : Joint Inspection NOT Required

7. Heater pilots (three pilots each rated at 65 scf/hr) may be fired on natural gas and waste gas when gas turbine engine (S-73-2) is operating. [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. 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 - 0.0055 lb/MMBtu, PM10 - 0.0076 lb/MMBtu, or SOx - 0.00285 lb/MMBtu. [District Rules 4306 and 4351] Federally Enforceable Through Title V Permit
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. 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
18. 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
19. 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

CONDITIONS CONTINUE ON NEXT PAGE

20. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, 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
21. 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
22. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (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
23. 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
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. Particulate matter emissions shall not exceed 0.1 grain/dscf calculated to 12% CO<sub>2</sub>, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
31. If the unit is fired on noncertified gaseous fuel and compliance with SO<sub>x</sub> 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,
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 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

33. Nitrogen oxide (NO<sub>x</sub>) 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 NO<sub>2</sub>/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit
34. 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<sub>x</sub> and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. 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
36. Pursuant to Rule 4320, the operator shall pay an annual emission fee to the District for NO<sub>x</sub> 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<sub>x</sub> emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
37. 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
38. 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
39. ATC shall be implemented concurrently with ATC S-44-2-23. [District Rule 2201] Federally Enforceable Through Title V Permit

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-44-2-21

EXPIRATION DATE: 08/31/2007

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

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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] 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  
Heater shall only be fired on natural gas or fuel oil. [District Rules 2201 and 4306] Federally Enforceable Through Title V Permit
5. Sulfur content of fuel oil used shall not exceed 0.05% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Solvent plant vertical cylindrical-type heater fuel gas use (not including pilot and waste gas) shall not exceed 36,800 scf/hr on a daily average basis. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit
7. 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
8. Heater pilots (three pilots each rated at 65 scf/hr) may be fired on natural gas and waste gas when gas turbine engine (S-73-2) is operating. [District NSR Rule] Federally Enforceable Through Title V Permit
9. 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 NSR Rule] Federally Enforceable Through Title V Permit
10. Permittee shall notify the District in writing within 24 hours upon firing of heaters. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Refinery produced gas shall be treated in H2S scrubber listed in S-44-13. [District NSR Rule] Federally Enforceable Through Title V Permit
12. 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
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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

14. Refinery produced 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
15. Solvent plant heater (vertical cylindrical type) gas-fired emission rates shall not exceed any of the following: NO<sub>x</sub> - 30 ppmv @ 3% O<sub>2</sub> or 0.036 lb/MMBtu, CO - 400 ppmv @ 3% O<sub>2</sub>, VOC - 0.0055 lb/MMBtu, PM<sub>10</sub> - 0.0076 lb/MMBtu, or SO<sub>x</sub> - 0.0143 lb/MMBtu. [District Rules 4306 and 4351] Federally Enforceable Through Title V Permit
16. Solvent plant heater oil-fired emission rates shall not exceed any of the following: NO<sub>x</sub> - 0.1460 lb/MMBtu, CO - 0.0365 lb/MMBtu, VOC - 0.0015 lb/MMBtu, PM<sub>10</sub> - 0.0241 lb/MMBtu, or SO<sub>x</sub> - 0.0518 lb/MMBtu. [District NSR Rule and District Rules 4306 and 4351] 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: NO<sub>x</sub> - 94.95 tpy, CO - 154.66 tpy, VOC - 7.39 tpy, PM<sub>10</sub> - 18.10 tpy or SO<sub>x</sub> - 30.70 tpy. [District NSR Rule] Federally Enforceable Through Title V Permit
18. Solvent plant heater shall only fire on oil during periods of involuntary natural gas curtailment. Heater shall not be fired on oil for more than 166 hours per year plus 48 hours per year for maintenance and testing. [District NSR Rule and District Rules 4305 and 4351] Federally Enforceable Through Title V Permit
19. Source testing to measure NO<sub>x</sub> and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
20. Source testing shall be performed to demonstrate compliance with NO<sub>x</sub> 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  

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
22. 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
23. 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
24. 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
25. NO<sub>x</sub> 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
26. 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
27. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
28. If the unit is fired on oil as backup fuel for a period exceeding 48 cumulative hours in a calendar year, the permittee shall monitor and record the stack concentration of NO<sub>x</sub> at least once during that year using an APCO approved portable NO<sub>x</sub> analyzer. Monitoring for backup fuel NO<sub>x</sub> emissions shall not be required when the unit is operating on primary fuel, i.e. the unit need not be fired on backup fuel solely to perform monitoring. [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.

29. Backup fuel NOx 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
30. The permittee shall maintain records of: (1) the date and time of backup fuel NOx measurements, (2) the measured backup fuel NOx concentration (in ppmv or lb/MMBtu) 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
31. 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
32. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
33. 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
34. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
35. Permittee shall maintain accurate records of fuel type and heating value, daily and annual fuel consumption, and annual emissions from heaters. [District NSR Rule] Federally Enforceable Through Title V Permit
36. 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
37. 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
38. 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

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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

40. 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
41. 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
42. Particulate matter emissions shall not exceed 0.1 grain/dscf calculated to 12% CO<sub>2</sub>, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
43. 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
44. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO<sub>2</sub>. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or on diesel fuel not exceeding 0.5% sulfur by weight; 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
45. 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
46. When complying with SO<sub>x</sub> 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
47. If the unit is fired on noncertified gaseous fuel and compliance with SO<sub>x</sub> 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
48. If the unit is fired on noncertified liquid fuel and compliance with SO<sub>x</sub> 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
49. 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
50. 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 diesel fuel not exceeding 0.5% sulfur by weight; 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 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

51. Nitrogen oxide (NO<sub>x</sub>) 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 NO<sub>2</sub>/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit
52. Nitrogen oxide (NO<sub>x</sub>) emissions shall not exceed 140 lb/hr, calculated as NO<sub>2</sub>. [District Rules 4301, 5.2.2] Federally Enforceable Through Title V Permit
53. 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<sub>x</sub> and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
54. The owner or operator shall install an instrument for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in fuel gases before being burned in any fuel gas combustion device. The span value for this instrument is 425 mg/dscm H<sub>2</sub>S. The performance evaluations for this H<sub>2</sub>S 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
55. 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
56. The owner or operator shall report all rolling 3-hour periods during which the average concentration of H<sub>2</sub>S as measured by the H<sub>2</sub>S 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
57. 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
58. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO<sub>x</sub> 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<sub>x</sub> emission limit listed in Rule 4320. [District Rule 4320]
59. 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]

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-44-2-22

**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

## PERMIT UNIT REQUIREMENTS

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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) 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. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. Heater 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
5. Heater pilots (three pilots each rated at 65 scf/hr) may be fired on natural gas when gas turbine engine (S-73-2) is operating. [District Rule 2201] Federally Enforceable Through Title V Permit
6. 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
7. Solvent plant heater emission rates shall not exceed any of the following: NO<sub>x</sub> - 30 ppmv @ 3% O<sub>2</sub> or 0.036 lb/MMBtu, CO - 400 ppmv @ 3% O<sub>2</sub>, VOC - 0.0055 lb/MMBtu, PM<sub>10</sub> - 0.0076 lb/MMBtu, or SO<sub>x</sub> - 0.00285 lb/MMBtu. [District Rules 4306 and 4351] Federally Enforceable Through Title V Permit
8. 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<sub>x</sub> - 94.95 tpy, CO - 154.66 tpy, VOC - 7.39 tpy, PM<sub>10</sub> - 18.10 tpy or SO<sub>x</sub> - 30.70 tpy. [District Rule 2201] Federally Enforceable Through Title V Permit
9. 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
10. 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
11. Source testing to measure NO<sub>x</sub> 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. 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
13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
14. NO<sub>x</sub> 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
15. 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
16. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> 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<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, 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<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (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 and heating value, daily and annual fuel consumption, and annual emissions from heaters. [District Rule 2201] Federally Enforceable Through Title V Permit
22. 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
23. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

24. 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
25. 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
26. 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
27. 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
28. Particulate matter emissions shall not exceed 0.1 grain/dscf calculated to 12% CO<sub>2</sub>, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
29. If the unit is fired on noncertified gaseous fuel and compliance with SO<sub>x</sub> 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
30. 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
31. Nitrogen oxide (NO<sub>x</sub>) 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 NO<sub>2</sub>/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2 and/or 4351, 8.1] 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<sub>x</sub> and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. 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
34. Pursuant to Rule 4320, the operator shall pay an annual emission fee to the District for NO<sub>x</sub> 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<sub>x</sub> emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
35. 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
36. 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.

# **Attachment II**

## **Emission Profiles**

Permit #: S-44-2-24      Last Updated  
 Facility: TRICOR REFINING, 06/17/2012    EDGEHILR  
 LLC

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	12614.0	5011.0	2663.0	105120.0	1927.0
Daily Emis. Limit (lb/Day)	34.6	13.7	7.3	288.0	5.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

**Attachment III**  
**Title V Compliance Certification Form**

# San Joaquin Valley Unified Air Pollution Control District

## 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: Merle Menghini	

**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:

Merle Menghini  
Signature of Responsible Official

2-24-12  
Date

Merle Menghini

\_\_\_\_\_  
Name of Responsible Official (please print)

Refinery Manager

\_\_\_\_\_  
Title of Responsible Official (please print)

**Attachment IV**  
**Draft Authority to Construct S-44-2-24 (revised version)**

Revised

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**DRAFT**  
ISSUANCE DATE: DRAFT  
5/14/12

**PERMIT NO:** S-44-2-24

**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; REINSTATE INCINERATION OF REFINERY WASTE GAS IN HEATER AND NATURAL GAS IN HEATER PILOTS *(revised 7/9/12)*

**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

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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DAVID WARNER, Director of Permit Services  
S-44-2-24: Jul 2 2012 3:29PM -- EDGEHILL : Joint Inspection NOT Required

6. 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
7. 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
8. 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
9. 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
10. 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
11. 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
12. Refinery produced gas shall be treated in H<sub>2</sub>S scrubber listed in S-44-13. [District Rule 2201] Federally Enforceable Through Title V Permit
13. H<sub>2</sub>S 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)]
14. Solvent plant heater emission rates shall not exceed any of the following: NO<sub>x</sub> - 30 ppmv @ 3% O<sub>2</sub> or 0.036 lb/MMBtu, CO - 400 ppmv @ 3% O<sub>2</sub>, VOC - 5.5 lb/MMscf of fuel gas, PM<sub>10</sub> - 7.6 lb/MMscf of fuel gas, or SO<sub>x</sub> - 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
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 the following: NO<sub>x</sub> - 94.95 tpy, CO - 154.66 tpy, VOC - 7.39 tpy, PM<sub>10</sub> - 18.10 tpy or SO<sub>x</sub> - 30.70 tpy. [District Rule 2201] 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 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
17. 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
18. Source testing to measure NO<sub>x</sub> 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
19. 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
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. NO<sub>x</sub> 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

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CONDITIONS CONTINUE ON NEXT PAGE

22. 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
23. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> 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
25. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, 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
26. 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
27. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (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
28. 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
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 Rule 2201] Federally Enforceable Through Title V Permit
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. 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
32. 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
33. 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
34. 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 60.480(g)] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

35. Particulate matter emissions shall not exceed 0.1 grain/dscf calculated to 12% CO<sub>2</sub>, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
36. If the unit is fired on noncertified gaseous fuel and compliance with SO<sub>x</sub> 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
37. 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
38. Nitrogen oxide (NO<sub>x</sub>) 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 NO<sub>2</sub>/MMBtu of heat input (hhv). [District Rule 4305, 5.0, 8.2 and/or 4351, 8.1] Federally Enforceable Through Title V Permit
39. 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<sub>x</sub> and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. The owner or operator shall install an instrument for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in fuel gases before being burned in any fuel gas combustion device. The span value for this instrument is 425 mg/dscm H<sub>2</sub>S. The performance evaluations for this H<sub>2</sub>S 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
41. 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
42. The owner or operator shall report all rolling 3-hour periods during which the average concentration of H<sub>2</sub>S as measured by the H<sub>2</sub>S 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
43. 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
44. Pursuant to Rule 4320, the operator shall pay an annual emission fee to the District for NO<sub>x</sub> 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<sub>x</sub> emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
45. 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
46. 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
47. ATC shall be implemented concurrently with ATC S-44-2-21. [District Rule 2201] Federally Enforceable Through Title V Permit

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