



APR 16 2012

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

Re: **Proposed Authority to Construct / Certificate of Conformity (Minor Mod)**  
**District Facility # S-44**  
**Project # 1120576**

Dear Mr. Rios:

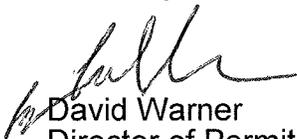
Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for Tricor Refining, LLC, located at 1134 Manor St, Bakersfield, CA, which has been issued a Title V permit. Tricor Refining, LLC is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The project reinstates authorization to combust waste gas in the pilots of a 40 MMBtu/hr hot oil heater.

Enclosed is the engineering evaluation of this application, a copy of the current Title V permit, and proposed Authority to Construct # S-44-2-24 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,



David Warner  
Director of Permit Services

Enclosures  
cc: Richard Edgehill, Permit Services



APR 16 2012

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

**Re: Proposed Authority to Construct / Certificate of Conformity (Minor Mod)  
District Facility # S-44  
Project # 1120576**

Dear Mr. Beecher:

Enclosed for your review is the District's analysis of your application for Authority to Construct for the facility identified above. You have requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project reinstates authorization to combust waste gas in the pilots of a 40 MMBtu/hr hot oil heater.

After addressing any EPA comments made during the 45-day comment period, the Authority to Construct will be issued to the facility with a Certificate of Conformity. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

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

Thank you for your cooperation in this matter.

Sincerely,



David Warner  
Director of Permit Services

Enclosures  
cc: Richard Edgehill, Permit Services

# San Joaquin Valley Air Pollution Control District

## Authority to Construct Application Review

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

Date: April 12, 2012  
Engineer: Richard Edgehill  
Lead Engineer: Allan Phillips *AP SWR AQE*  
APR 12 2012

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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Tricor Refining LLC (Tricor) recently received ATC S-44-2-23 (project 1120513) for a 40 MMBtu/hr vertical cylindrical type hot oil heater to delete oil firing capability and to authorize firing only on PUC-quality natural gas to meet the PM10 control requirements of Rule 4320. During processing of project 1120513, it was the District's understanding that pilot fuel for the heater would also be restricted to PUC-quality natural gas. Therefore the ATC included the following revised condition (words in ~~strikeout~~ text deleted) from base document PTO S-44-2-21:

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] Y

For this project applicant has stated that refinery waste gas is still being combusted in the heater pilots (3-15-12 memo) and has requested that the previous approval (ATC S-44-2-23) be clarified to reinstate authorization of combustion of waste gas in the pilots. The District has approved this request. As there is no proposed change to the method of operation or emissions from the heater, the project is not a NSR modification. Therefore the requirements of BACT, offsets, and public notice do not need to be considered.

### Disposition of Outstanding ATCs

ATC S-44-2-23 will be implemented concurrently with the proposed ATC. Current PTO S-44-2-22 and ATC S-44-2-23 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 restricted by permit condition to combust only PUC-quality natural gas in the 36,800 scf/h main burner and natural gas in the 67 scf/hr pilots. In this project, applicant has requested reauthorization to combust refinery waste gas in the heater pilots.

## 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

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

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 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**

- Post-project heater will operate exclusively on natural gas
- Post project based on 8,760 hrs/yr firing PUC quality natural gas
- Emissions from combustion of natural and refinery waste gas (67 scf/hr total) are insignificant in comparison to those from combustion of PUC-quality 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.

**B. Emission Factors**

<b>Gas-fired Emission Factors</b>		
	Lb/MMBtu (except where indicated)	Source
NO <sub>x</sub>	0.036	Permit to Operate
SO <sub>x</sub>	0.00285	District Policy APR 1720
PM <sub>10</sub>	0.0076	Permit to Operate
CO	400 ppmv @ 3% O <sub>2</sub>	Permit to Operate
VOC	0.0055	Permit to Operate

**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:

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

<b>Pollutant</b>	<b>Daily PE2</b>			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
<b>NO<sub>x</sub></b>	0.0360	40	24	34.6
<b>SO<sub>x</sub></b>	0.00285	40	24	2.7
<b>PM<sub>10</sub></b>	0.0076	40	24	7.3
<b>CO</b>	0.300	40	24	288.0
<b>VOC</b>	0.0055	40	24	5.3

<b>Pollutant</b>	<b>Annual PE2</b>			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
<b>NO<sub>x</sub></b>	0.036	40	8,760	12,614
<b>SO<sub>x</sub></b>	0.00285	40	8,760	999
<b>PM<sub>10</sub></b>	0.0076	40	8,760	2,663
<b>CO</b>	0.300	40	8,760	105,120
<b>VOC</b>	0.0055	40	8,760	1,927

<b>Post Project Potential to Emit (PE2)</b>		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO <sub>x</sub>	34.6	12,614
SO <sub>x</sub>	2.7	999
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 only PUC-quality natural gas 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>			
<b>Permit Number</b>	<b>Fee Schedule</b>	<b>Fee Description</b>	<b>Annual Fee</b>
S-44-2-24	3020-02-H	40 MMBtu/hr Heater	\$1,030.00

**Attachments**

- I: Current PTO S-44-2-22 and ATC S-44-2-23
- II: Emission Profiles
- III: Title V Compliance Certification Form
- IV: Draft Authority to Construct (ATC)

**Attachment I**  
**Current PTO S-44-2-22 and ATC S-44-2-23**

# 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: 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
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: 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
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 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

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.



# AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-44-2-23

**ISSUANCE DATE:** 10/25/2010

**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: DELETE OIL FIRING CAPABILITY FOR HOT OIL HEATER AND FIRE EXCLUSIVELY PUC QUALITY NATURAL GAS FOR RULE 4320 PARTICULATE MATTER COMPLIANCE

## CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. 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
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. 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

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

7. The heater unit shall only be fired exclusively on PUC-quality natural gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. 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
9. 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
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. Permittee shall notify the District in writing within 24 hours upon firing of heaters. [District Rules 1070, 2201] Federally Enforceable Through Title V Permit
12. 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
13. Sum of annual emissions from heaters and boilers listed on permits S-44-1, -2, -3, -4, -5, -6 and -13 shall not exceed any of the the following: NO<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
14. 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
15. 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
16. 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
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
18. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
19. NO<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
20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. Stack gas oxygen (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
22. 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

CONDITIONS CONTINUE ON NEXT PAGE

23. 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
24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. The permittee shall maintain records of: (1) the date and time of NO<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
26. Permittee shall maintain accurate records of fuel type and heating value, daily and annual fuel consumption, and annual emissions from heaters. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Permittee shall maintain records of hours of concurrent operation of gas turbine engine S-73-2 with any heaters listed in permit units S-44-1, -2, -3, -4 & -6. [District Rule 2201] Federally Enforceable Through Title V Permit
28. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
29. Permittee shall maintain records of the occurrence of and duration of any startup, shutdown, or malfunction in the operation of the solvent plant heater, or any malfunction of the air pollution control equipment. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. The portable analyzer shall be calibrated each day of use with a two-point calibration method (zero and span) at beginning of the day. Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 19, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
32. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted. [District Rule 2520, 9.3.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
33. Particulate matter emissions shall not exceed 0.1 grain/dscf calculated to 12% 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
34. 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
35. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 240 or D 2382 for liquid hydrocarbon fuels; ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

36. Nitrogen oxide (NOx) emission concentrations in ppmv shall be referenced at dry stack gas conditions, and shall be calculated to 3.00 percent by volume stack gas oxygen, and lb/MMBtu rates shall be calculated as lb 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
37. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081(amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. 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
39. Continuous emissions monitoring (CEM) results shall be calculated on a rolling three (3) hour average. [40 CFR 60.105(e)] Federally Enforceable Through Title V Permit
40. The owner or operator shall report all rolling 3-hour periods during which the average concentration of 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
41. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
42. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
43. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]
44. On and after July 1, 2010, 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]

# **Attachment II**

## **Emission Profiles**

Permit #: S-44-2-24	Last Updated
Facility: TRICOR REFINING, LLC	04/11/2012 EDGEHILR

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	999.0	2663.0	105120.0	1927.0
Daily Emis. Limit (lb/Day)	34.6	2.7	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 (ATC)**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

**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 PILOTS

**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) 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: Apr 11 2012 1:12PM - EDGEHILR : 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: 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
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: 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
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 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
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. 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
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 (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
19. 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

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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 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
39. ATC shall be implemented concurrently with ATC S-44-2-23. [District Rule 2201] Federally Enforceable Through Title V Permit

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