



**JUL 25 2012**

Mr. David Campbell  
San Joaquin Refining Company  
P.O. Box 5576  
Bakersfield, CA 93388

**Re: Final - Authority to Construct / COC (Significant Mod)  
District Facility # S-36  
Project # S-1104824**

Dear Mr. Campbell:

The Air Pollution Control Officer has issued Authorities to Construct (S-36-1-13, -37-13 and -42-7) with Certificates of Conformity to San Joaquin Refining Company at the corner of Standard and Shell Streets in Bakersfield. The applicant is proposing to install a new 19.9 MW cogeneration unit and modifications to an atmospheric/vacuum crude unit, lube oil finishing plant and crude unit and/or visbreaking unit.

Enclosed are the Authorities to Construct. The application and proposal were sent to US EPA Region IX on May 23, 2012. No comments were received following the District's preliminary decision on this project.

The notice of final decision for this project will be published approximately three days from the date of this letter.

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

DW: KTR/cm

Enclosures

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

---

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

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-D244  
Tel: (559) 230-6000 FAX: (559) 230-6061

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



JUL 25 2012

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

**Re: Final - Authority to Construct / COC (Significant Mod)  
District Facility # S-36  
Project # S-1104824**

Dear Mr. Rios:

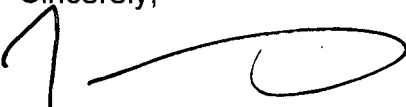
The Air Pollution Control Officer has issued Authorities to Construct (S-36-1-13, -37-13 and -42-7) with Certificates of Conformity to San Joaquin Refining Company at the corner of Standard and Shell Streets in Bakersfield. The applicant is proposing to install a new 19.9 MW cogeneration unit and modifications to an atmospheric/vacuum crude unit, lube oil finishing plant and crude unit and/or visbreaking unit.

Enclosed is a copy of the Authorities to Construct. The application and proposal were sent to US EPA Region IX on May 23, 2012. No comments were received following the District's preliminary decision on this project.

The notice of final decision for this project will be published approximately three days from the date of this letter.

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  
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**Southern Region**  
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Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585



JUL 25 2012

Mike Tollstrup, Chief  
Project Assessment Branch  
Air Resources Board  
P O Box 2815  
Sacramento, CA 95812-2815

**Re: Final - Authority to Construct / COC (Significant Mod)  
District Facility # S-36  
Project # S-1104824**

Dear Mr. Tollstrup:

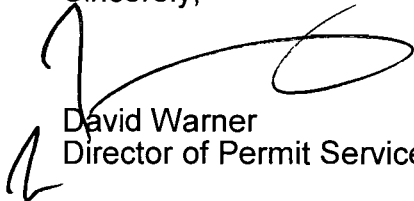
The Air Pollution Control Officer has issued Authorities to Construct (S-36-1-13, -37-13 and -42-7) with Certificates of Conformity to San Joaquin Refining Company at the corner of Standard and Shell Streets in Bakersfield. The applicant is proposing to install a new 19.9 MW cogeneration unit and modifications to an atmospheric/vacuum crude unit, lube oil finishing plant and crude unit and/or visbreaking unit.

Enclosed is a copy of the Authorities to Construct. The application and proposal were sent to US EPA Region IX on May 23, 2012. No comments were received following the District's preliminary decision on this project.

The notice of final decision for this project will be published approximately three days from the date of this letter.

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

DW: KTR/cm

Enclosures

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**NOTICE OF FINAL DECISION  
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT AND  
THE PROPOSED SIGNIFICANT MODIFICATION OF FEDERALLY  
MANDATED OPERATING PERMIT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District has made its final decision to issue Authorities to Construct to San Joaquin Refining Company for crude oil refining operation located at the corner of Standard and Shell Streets in Bakersfield, California. The applicant is proposing to install a new 19.9 MW cogeneration unit and modifications to an atmospheric/vacuum crude unit, lube oil finishing plant and crude unit and/or visbreaking unit.

The District's analysis of the legal and factual basis for this proposed action, project #S-1104824, is available for public inspection at the District office at the address below. For additional information regarding this matter, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500, or contact David Warner, Director of Permit Services, in writing at SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E. GETTYSBURG AVE, FRESNO, CA 93726-0244.



## AUTHORITY TO CONSTRUCT

PERMIT NO: S-36-1-15

ISSUANCE DATE: 07/23/2012

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

LOCATION: STANDARD AND SHELL ST  
BAKERSFIELD, CA 93308

SECTION: NE24 TOWNSHIP: 29S RANGE: 27E

### EQUIPMENT DESCRIPTION:

MODIFICATION OF 79.2 MMBTU/HR ATMOSPHERIC/VACUUM CRUDE UNIT #4 WITH PREFLASH COLUMN, FRACTIONATOR, VACUUM DISTILLATION COLUMN WITH MECHANICAL VACUUM PRODUCING SYSTEM, 27 MMBTU/HR GAS/OIL/WASTE GAS FIRED NATURAL DRAFT VACUUM HEATER #VH-4 WITH THREE ZEECO CLSF 11 LOW NOX BURNERS AND 52.2 MMBTU/HR GAS/OIL FIRED NATURAL DRAFT HEATER #4 WITH ZEECO MODEL CLSF LOW NOX BURNERS; REMOVE OIL FIRING CAPABILITY AND LIMIT CRUDE HEATER #4 FIRING ABILITY TO PERIODS WHEN S-36-115 IS NOT OPERATING

## 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. This Authority to Construct (ATC) shall be implemented concurrently with ATCs S-36-37-14, '-42-10, and '-115-0. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Heater #4 (52.2 MMBtu/hr) shall not operate during periods when S-36-115 is operating. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

  
DAVID WARNER, Director of Permit Services

S-36-1-15: Jul 23 2012 9:01AM - RICKARDK : Joint Inspection Required with RICKARDK

6. The duration of each startup and shutdown period for the 52.2 MMBtu/hr crude heater #4 shall not exceed 8.0 hours and 2.0 hours respectively. Short term NOx and CO emissions limits (lb/MM Btu or ppmv @ 3% O2) shall not apply during periods of startup and and shutdown. [District Rules 2201, 4305, 4360 and 4351] Federally Enforceable Through Title V Permit
7. The duration of each startup and shutdown period for the 27.0 MMBtu/hr vacuum heater VH-4 shall not exceed 9.0 hours and 2.0 hours respectively. Short term NOx and CO emissions limits (lb/MM Btu or ppmv @ 3% O2) shall not apply during periods of startup and and shutdown. [District Rules 2201, 4305, 4360 and 4351] Federally Enforceable Through Title V Permit
8. All equipment shall be constructed, maintained, and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Natural gas combusted in crude heater #4 and the vacuum heater shall be of PUC quality. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The burning of fuel oil in the vacuum heater shall only be performed during periods of involuntary natural gas curtailments and for equipment testing. [District Rules 2520, 9.4.2, 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
11. The burning of fuel oil in each heater is limited to 168 cumulative hours in a calendar year plus 48 hour per calendar year for equipment testing of operation during natural gas curtailments. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
12. Vacuum system exhaust gas emissions shall be controlled by incineration in the 27 MMBtu/hr vacuum heater (VH-4). [District Rule 4453 and Kern County Rule 414.2] Federally Enforceable Through Title V Permit
13. Heat exchangers utilizing cooling water shall be operated and maintained as to prevent VOC emissions from cooling towers. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Gas firing emissions from 52.2 MMBtu/hr crude heater #4 shall not exceed any of the following: PM10: 0.004 lb/MMBtu; VOC: 0.01 lb/MMBtu; NOx (as NO2) - 30 ppmv @ 3% O2 or 0.036 lb/MMBtu; or CO - 400 ppmv @ 3% O2. [District Rules 2201, 2520, 9.4.2, 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
15. Gas firing emissions from 27 MMBtu/hr vacuum heater shall not exceed any of the following: PM10: 0.004 lb/MMBtu; VOC: 0.0075 lb/MMBtu; or CO - 400 ppmv @ 3% O2. [District Rules 2201, 2520, 9.4.2, 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
16. Oil firing emissions from 27 MMBtu/hr vacuum heater shall not exceed any of the following: PM10: 11.56 lb/1000 gal; SOx (as SO2): 172.7 lb/1000 gal; NOx (as NO2): 0.215 lb/MM Btu; VOC: 1.12 lb/1000 gal; or CO : 400 ppmv @ 3% O2. [District Rules 2201, 2520, 9.4.2, 4305 and 4306] Federally Enforceable Through Title V Permit
17. NOx emissions when gas firing 27 MMBtu/hr vacuum heater shall not exceed 30 ppmv @ 3% O2. [Stipulated Abatement Order S-00-40P, District Rules 2201, 2520, 9.4.2, 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
18. Source testing for NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 2520, 9.4.2, 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
19. Source testing for NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 2520, 9.4.2, 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
20. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 2520, 9.4.2, 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
21. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 2520, 9.4.2, 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

22. Source testing shall be by District witnessed, or authorized sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
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. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081, 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
26. The stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, and O<sub>2</sub> shall be measured at least on a monthly basis using District approved portable analyzers. In-stack O<sub>2</sub> monitors are acceptable for O<sub>2</sub> measurement. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
27. If the NO<sub>x</sub> and/or CO concentrations, as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and return the NO<sub>x</sub> and CO concentrations to the allowable emissions rate as soon as possible but no longer than one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emissions rate after one hour, the permittee shall conduct an emissions test within 60 days, utilizing District approved test methods, to determine compliance with the applicable emissions limits. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, the measured NO<sub>2</sub> and CO concentrations corrected to 3% O<sub>2</sub>, and the O<sub>2</sub> concentration. The records must also include a description of any corrective action taken to maintain the emissions within an acceptable range. These records shall be retained at the facility for a period of no less than five years and shall be made available for District inspection upon request. [District Rules 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
29. Permittee shall maintain records of fuel hhv and cumulative annual fuel use for a period of five years and shall make such records readily available for District inspection upon request. [District Rule 4351] Federally Enforceable Through Title V Permit
30. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 19, 1993). [District Rule 1081, and Kern County Rules 108.1] Federally Enforceable Through Title V Permit
31. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
- ~~32. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit~~
33. Particulate matter emissions shall not exceed 0.1 grain/dscf, 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. 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 90 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, 9.4.2] Federally Enforceable Through Title V Permit
35. Emissions of sulfur compounds from each heater 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, 9.4.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit

36. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
37. 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, 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, 9.4.2] Federally Enforceable Through Title V Permit
38. 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, 9.4.2] Federally Enforceable Through Title V Permit
39. 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, 9.4.2] Federally Enforceable Through Title V Permit
40. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 240 or D 2382 for liquid hydrocarbon fuels; ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1 and 4351, 6.2.1] Federally Enforceable Through Title V Permit
41. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period (Kern County Rule 407). To demonstrate compliance with this requirement the operator shall 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 2520, 9.4.2] Federally Enforceable Through Title V Permit
42. 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 averaged over 60 minutes, and lb/MMBtu rates shall be calculated as lb NO<sub>2</sub>/MMBtu of heat input (hhv). [District Rule 2520, 9.4.2, 4305, 5.0, 8.2, 4306, 5.0, 8.2 and 4351, 8.1] Federally Enforceable Through Title V Permit
43. The portable analyzer shall be calibrated daily when in use with a two-point calibration method (zero and span). Calibration shall be performed with certified gases. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO<sub>x</sub> and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO<sub>x</sub> emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO<sub>x</sub> emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.4.2, 4305, 6.3.2, and 4351, 6.3] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE



46. The following conditions must be met for representative unit(s) to be used to test for NO<sub>x</sub> limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
47. All units in a group for which representative units are source for NO<sub>x</sub> emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rule 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
48. All units in a group for which representative units are source tested for NO<sub>x</sub> emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
49. The number of representative units source tested for NO<sub>x</sub> emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
50. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
51. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of District Rule 4801, section 3.1 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit



## AUTHORITY TO CONSTRUCT

PERMIT NO: S-36-37-14

ISSUANCE DATE: 07/23/2012

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

LOCATION: STANDARD AND SHELL ST  
BAKERSFIELD, CA 93308

SECTION: 24 TOWNSHIP: 29S RANGE: 27E

### EQUIPMENT DESCRIPTION:

MODIFICATION OF LUBE OIL FINISHING PLANT WITH 16.5 MMBTU/HR NATURAL GAS-FIRED NATURAL DRAFT EXTRACT HEATER LH-1, 12.6 MMBTU/HR NATURAL GAS-FIRED FORCED DRAFT HOT OIL HEATER LH-2 WITH FGR, 12.0 MMBTU/HR NATURAL GAS-FIRED FORCED DRAFT HOT OIL HEATER LH-3 WITH LOW NOX BURNERS AND FGR, ABSORBER T-1, TREATING TOWER T-2, EXTRACT DRYER T-5/T-6, MP FLASH DRUM D-5, EXPANSION DRUM D-9, BLOWDOWN DRUM D-7, AND SETTLER D-1: LIMIT LH-1 HEATER FIRING ABILITY TO PERIODS WHEN S-36-115 IS NOT OPERATING

## 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. This Authority to Construct (ATC) shall be implemented concurrently with ATCs S-36-1-15, '-42-10, and '-115-0. [District NSR Rule] Federally Enforceable Through Title V Permit
4. LH1 heater (16.5 MMBtu/hr) shall not operate during periods when S-36-115 is operating. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

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

  
DAYID WARNER, Director of Permit Services

6. The duration of each startup and shutdown period for the 16.5 MMBtu/hr heater LH-1 shall not exceed 6.5 hours and 2.0 hours respectively. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit
7. The duration of each startup and shutdown period for the 12.6 MMBtu/hr heater LH-2 shall not exceed 6.5 hours and 2.0 hours respectively. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit
8. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] Federally Enforceable Through Title V Permit
9. Permittee shall maintain, with the permit, accurate fugitive component counts and resulting emissions calculated using API publication 4322, Table E-3 and U.S. E.P.A. publication 450/3-83-007, Table 4-1. [District Rules 4451 and 4452] Federally Enforceable Through Title V Permit
10. Heaters shall be fired exclusively on PUC quality natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Absorber A-1 overhead condensibles shall be transported in a closed system to a closed oil/water separation operation to prevent emissions to the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Solvent dry tanks shall be closed and equipped with operational conservation pressure relief valves or connected to an approved vapor control system. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Nash vacuum pump system vapors and Absorber A-1 overhead vapors shall be vented exclusively to activated carbon canister vapor control system. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Carbon canister vapor collection system serving Absorber A-1 and Nash vacuum system shall be maintained with a minimum of two (2) carbon canisters connected in series, except during change-out of spent canister(s). [District NSR Rule] Federally Enforceable Through Title V Permit
15. Permittee shall monitor daily for VOC concentration of gas between the carbon canisters and at the discharge of the final carbon canister. [District NSR Rule] Federally Enforceable Through Title V Permit
16. VOC concentration at exhaust outlet for carbon canister system shall not exceed 134 ppmv. [District NSR Rule] Federally Enforceable Through Title V Permit
17. Vapor flow rate to carbon canister system shall not exceed 480 Scf per day. [District NSR Rule] Federally Enforceable Through Title V Permit
18. Carbon canisters shall be replaced whenever effluent gas VOC concentration exceeds 134 ppmv at outlet. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Carbon canister vapor control system shall be maintained leak-free (less than 10,000 ppmv @ 1 cm from source) [District NSR Rule] Federally Enforceable Through Title V Permit
20. Nash vacuum system vapors and Absorber A-1 overhead vapors shall be monitored continuously for H<sub>2</sub>S at the carbon canister system exhaust point, with alarm set at 1 ppmv - H<sub>2</sub>S. [District NSR Rule] Federally Enforceable Through Title V Permit

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21. H<sub>2</sub>S emissions from first stage and second stage carbon canisters shall be tested daily, and shall be replaced as required to ensure exhaust to atmosphere does not exceed 1 ppmv-H<sub>2</sub>S. [District NSR Rule] Federally Enforceable Through Title V Permit
22. Carbon canisters shall be serviced in a manner preventing the release of VOCs into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
23. Combined VOC emission rate from combustion equipment and fugitive sources shall not exceed 3.5 lb per day. [District NSR Rule] Federally Enforceable Through Title V Permit
24. Permittee shall comply with all applicable requirements of Rules 4453 and 4454. [District Rules 4453 and 4454] Federally Enforceable Through Title V Permit
25. No vessels, lines, or pressure relief valves shall be designed to vent to atmosphere except during breakdown conditions. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Upon shutdown, vessels containing VOC's shall be controlled per Rule 4454. [District Rule 4454] Federally Enforceable Through Title V Permit
27. Spent, used or contaminated solvent shall not be stored in tanks or containers not connected to an approved vapor control system nor disposed of by introduction into the oily water sewer system. [District NSR Rule and Rule 4102] Federally Enforceable Through Title V Permit
28. Valves and connectors subject to the provisions of Rule 4451 shall not leak in excess of 10,000 ppmv above background when measured one (1) cm from potential source. [District Rule 4451] Federally Enforceable Through Title V Permit
29. Seals on pumps and compressors subject to the provisions of Rule 4452 shall not leak in excess of 10,000 ppmv above background when measured one cm from shaft seal. [District Rule 4452] Federally Enforceable Through Title V Permit
30. Permittee shall comply with all applicable inspection, maintenance, and recordkeeping requirements of Rules 4451 and 4452. [District Rules 4451 and 4452] Federally Enforceable Through Title V Permit
31. Except during periods of start-up and shutdown, emissions from 16.5 MMBtu/hr heater LH-1 shall not exceed any of the following: NOx (as NO2) - 30 ppmv @ 3% O2 or 0.036 lb/MMBtu; or CO - 400 ppmv @ 3% O2. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
32. Except during periods of start-up and shutdown, emissions from 12.6 MMBtu/hr heater LH-2 shall not exceed any of the following: NOx (as NO2) - 30 ppmv @ 3% O2 or 0.036 lb/MMBtu; or CO - 400 ppmv @ 3% O2. [District Rules 2520, 9.4.2, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
33. Except during periods of start-up and shutdown, emissions from 12.0 MMBtu/hr heater LH-3 shall not exceed any of the following: PM10: 0.004 lb/MMBtu; VOC: 0.01 lb/MMBtu; NOx (as NO2) - 30 ppmv @ 3% O2 or 0.036 lb/MMBtu; or CO - 400 ppmv @ 3% O2. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
34. Source testing for NOx and CO emissions shall be conducted within 60 days of startup, and not less than once every 12 months, except as provided below. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
35. Source testing for NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
36. If permittee fails any source test for NOx and CO emissions when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
37. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 2520, 9.4.2, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
38. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
39. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
40. 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
41. The source 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
42. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

43. Records of VOC measurements taken between the carbon canisters and at the discharge of the last carbon canister shall be maintained for a period of at least two (2) years, and made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
44. Permittee shall operate heater LH-1 as intended by manufacturer to maintain compliance with NO<sub>x</sub> and CO emissions limits. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
45. The stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, and O<sub>2</sub> of heaters LH-1, LH-2, and LH-3 shall be measured at least on a monthly basis using District approved portable analyzers. In-stack O<sub>2</sub> monitors are acceptable for O<sub>2</sub> measurement. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
46. If the NO<sub>x</sub> or CO concentrations of heaters LH-1, LH-2, and LH-3, as measured by the portable analyzer, exceed the allowable emissions rate, the permittee shall notify the District and return the NO<sub>x</sub> and CO concentrations to the allowable emissions rate as soon as possible but no longer than one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emissions rate after one hour, the permittee shall conduct an emissions test within 60 days, utilizing District approved test methods, to determine compliance with the applicable emission limits. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
47. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
48. 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
49. The permittee shall maintain records of the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements on heaters LH-1, LH-2, and LH-3, the measured NO<sub>2</sub> and CO concentrations corrected to 3% O<sub>2</sub>, and the O<sub>2</sub> concentration. The records must also include a description of any corrective action taken to maintain the emissions within an acceptable range. These records shall be retained at the facility for a period of no less than five years and shall be made available for District inspection upon request. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
50. Permittee shall maintain records of fuel hhv and cumulative annual fuel use for a period of five years and shall make such records readily available for District inspection upon request. [District Rule 4351] Federally Enforceable Through Title V Permit
51. 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
52. 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, 9.4.2] Federally Enforceable Through Title V Permit
53. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
54. Particulate matter emissions shall not exceed 0.1 grain/dscf, 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

CONDITIONS CONTINUE ON NEXT PAGE

55. 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 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, 9.4.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
56. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
57. 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, 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, 9.4.2] Federally Enforceable Through Title V Permit
58. 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, 9.4.2] Federally Enforceable Through Title V Permit
59. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
60. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period [Kern County Rule 407]. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
61. 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 averaged over 60 minutes, and lb/MMBtu rates shall be calculated as lb NO<sub>2</sub>/MMBtu of heat input (hhv). [District Rules 2520, 9.4.2, 4305, 4306, and/or 4351, 8.1] Federally Enforceable Through Title V Permit
62. The portable analyzer shall be calibrated daily when in use with a two-point calibration method (zero and span). Calibration shall be performed with certified gases. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
63. Emissions for the LH-1, LH-2, and LH-3 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 Rules 2520, 9.4.2, 4305, and 4306] Federally Enforceable Through Title V Permit
64. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO<sub>x</sub> emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO<sub>x</sub> emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.4.2, 4305, 6.3.2, 4306, and 4351, 6.3] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

65. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units:  
1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2, 4305, 6.3.2, and 4306] Federally Enforceable Through Title V Permit
66. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.4.2, 4305, 6.3.2, and 4306] Federally Enforceable Through Title V Permit
67. All units in a group for which representative units are source tested for NOx emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, 4305, 6.3.2, and 4306] Federally Enforceable Through Title V Permit
68. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
69. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
70. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rule 4801, section 3.1 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
71. Nitrogen oxide (NOx) emissions for each heater shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit



## AUTHORITY TO CONSTRUCT

PERMIT NO: S-36-42-10

ISSUANCE DATE: 07/23/2012

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

LOCATION: STANDARD AND SHELL ST  
BAKERSFIELD, CA 93308

SECTION: 24 TOWNSHIP: 29S RANGE: 27E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF CRUDE UNIT AND/OR VISBREAKING UNIT INCLUDING GAS FIRED 12.6 MMBTU/HR HEATER (PERMITTED AS S-36-2), 25 MMBTU/HR NATURAL GAS FIRED VERTICAL ASPHALT HEATER H5 WITH 3 ZEECO CLSF 12 LOW NOX BURNERS, RETENTION VESSEL, AND FIVE HEATER EXCHANGERS: LIMIT ASPHALT HEATER H5 FIRING ABILITY TO PERIODS WHEN S-36-115 IS NOT OPERATING

### 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. This Authority to Construct (ATC) shall be implemented concurrently with ATC S-36-1-15, '-37-14, and '-115-0. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Asphalt heater H5 (25 MMBtu/hr) shall not operate during periods when S-36-115 is operating. [District Rule 2201] Federally Enforceable Through Title V Permit
- ~~5. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4305] 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

07-2-10: Jul 23 2012 9:01AM - RICKARDK : Joint Inspection Required with RICKARDK



6. The duration of each startup and shutdown period for the 25.0 MMBtu/hr Visebreaker heater shall not exceed 8.0 hours and 2.0 hours respectively. Short term NO<sub>x</sub> and CO emissions limits (lb/MM Btu and ppmv @ 3% O<sub>2</sub>) shall not apply during periods of startup and shutdown. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
7. 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
8. 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, 9.4.2] Federally Enforceable Through Title V Permit
9. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
10. Particulate matter emissions for each heater shall not exceed 0.1 grain/dscf, 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
11. Emissions of sulfur compounds from each heater 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 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, 9.4.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
12. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. 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, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
14. 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, 9.4.2] Federally Enforceable Through Title V Permit~~
15. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1 and 4351, 6.2.1] Federally Enforceable Through Title V Permit
16. 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 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; 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 2520, 9.4.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

17. 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 averaged over 60 minutes, and lb/MMBtu rates shall be calculated as lb NO<sub>2</sub>/MMBtu of heat input (hhv). [District Rules 2520, 9.4.2, 4305, 5.0, 8.2, 4306, 5.0, 8.2 and 4351, 8.1] Federally Enforceable Through Title V Permit
18. Waste gas from packed column sour water stripper shall be piped to fuel gas scrubber listed on S-36-80. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Waste liquids from fuel oil steam stripping column shall be piped to closed stripped sour water holding tank. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Natural gas combusted in units shall be of PUC quality. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Fuel oil stripped water shall be piped, via closed piping, to sour water stripper only. [District NSR Rule] Federally Enforceable Through Title V Permit
22. Sour water stripper gas outlet shall discharge only into fuel gas scrubber inlet piping listed on S-36-80-0. [District NSR Rule] Federally Enforceable Through Title V Permit
23. Sour water stripper liquid effluent shall discharge only to a closed stripped sour water holding tank via closed piping. [District NSR Rule] Federally Enforceable Through Title V Permit
24. Both heaters shall be equipped with operational recording fuel flowmeters. [District Rule Rule 1070] Federally Enforceable Through Title V Permit
25. Heat exchangers utilizing cooling water shall be operated and maintained in a manner preventing VOC emissions from the cooling tower. [District NSR Rule] Federally Enforceable Through Title V Permit
26. Process unit turn-around shall be operated in accordance with Rule 4454. [District Rule 4454] Federally Enforceable Through Title V Permit
27. Permittee shall comply with all applicable inspection, maintenance, and recordkeeping requirements of Rules 4451 and 4452. [District Rules 4451, 4452] Federally Enforceable Through Title V Permit
28. Emissions from 25 MMBtu/hr Visbreaker heater shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 30 ppmv @ 3% O<sub>2</sub>, PM<sub>10</sub>: 0.004 lb/MM Btu, CO: 400 ppmv @ 3% O<sub>2</sub> and VOC: 0.0055 lb/MMBtu. [Stipulated Abatement Order S-00-40P and District Rules 2201, 2520, 9.4.2, 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
29. 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
30. 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
31. 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
32. 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
33. 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
34. If permittee fails any compliance demonstration for NO<sub>x</sub> and CO emission limits when testing not less than once every 36 months, compliance with NO<sub>x</sub> and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 2201, 2520, 9.4.2, 4305, 4306 and 4351] Federally Enforceable Through Title V Permit

35. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NO<sub>x</sub> and CO source testing requirement. [District Rules 2201, 2520, 9.4.2, 4305, 4306 and 4351] Federally Enforceable Through Title V Permit
36. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
37. 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
38. 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
39. 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
40. 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 performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
41. 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
42. 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
43. Records of fuel consumed in both heaters shall be maintained for a period of five years shall be made available for District inspection upon request. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit
44. Permittee shall maintain records of fuel hhv and the cumulative annual fuel combusted (scf and Btu) for a period of five years and shall make such records readily available for District inspection upon request. [District Rule 2201 and 2520, 9.5.2 and 4351] Federally Enforceable Through Title V Permit
45. 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, 9.4.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

46. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.4.2, 4305, 6.3.2, and 4351, 6.3] Federally Enforceable Through Title V Permit
47. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit
48. All units in a group for which representative units are source for NOx emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit
49. All units in a group for which representative units are source tested for NOx emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, and 4305, 6.3.2] Federally Enforceable Through Title V Permit
50. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
51. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
52. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of District Rule 4801, section 3.1 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
53. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
54. 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



## AUTHORITY TO CONSTRUCT

PERMIT NO: S-36-115-0

ISSUANCE DATE: 07/23/2012

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

**LOCATION:** STANDARD AND SHELL ST  
BAKERSFIELD, CA 93308

**SECTION:** 14/23 **TOWNSHIP:** 29S **RANGE:** 27E

**EQUIPMENT DESCRIPTION:**

19.9 MW (NOMINAL) COGENERATION UNIT INCLUDING SOLAR TITAN MODEL 250-30000S  
NATURAL/REFINERY/OILFIELD GAS-FIRED TURBINE ENGINE WITH SOLONOX COMBUSTORS, LUBE OIL COOLER  
(HEAT EXCHANGER), SELECTIVE CATALYTIC REDUCTION, OXIDATION CATALYST, 220.8 MMBTU/HR  
NATURAL/REFINERY/OILFIELD GAS-FIRED DUCT BURNER WITH ZEECO MODEL GB 265 COMBUSTORS, WASTE  
HEAT RECOVERY UNIT WITH HOT OIL HEAT EXCHANGER, AND WASTE HEAT BOILER

### 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. This Authority to Construct (ATC) shall be implemented concurrently with ATCs S-36-1-15, '37-14, and '42-10. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOX emission reduction credits for the following quantity of emissions: 1st quarter - 2,041 lb, 2nd quarter - 2,041 lb, 3rd quarter - 2,041 lb, and 4th quarter - 2,041 lb. [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-36-115-0: Jul 23 2012 9:01AM - RICKARDK : Joint Inspection Required with RICKARDK

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOX emission reduction credits for the following quantity of emissions: 1st quarter - 2,257 lb, 2nd quarter - 2,257 lb, 3rd quarter - 2,257 lb, and 4th quarter - 2,257 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/2008, in effect 6/10/2010). [District Rule 2201] Federally Enforceable Through Title V Permit
6. Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits for the following quantity of emissions: 1st quarter - 3,840 lb, 2nd quarter - 3,840 lb, 3rd quarter - 3,840 lb, and 4th quarter - 3,840 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/2008, in effect 6/10/2010). [District Rule 2201] Federally Enforceable Through Title V Permit
7. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,228 lb, 2nd quarter - 1,228 lb, 3rd quarter - 1,228 lb, and 4th quarter - 1,228 lb. [District Rule 2201] Federally Enforceable Through Title V Permit
8. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
9. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
10. Turbine shall be fired on oilfield gas and/or natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Duct burner shall be fired on refinery gas, oilfield gas, and/or natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The owner or operator shall install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration by volume (dry basis) of H<sub>2</sub>S in the fuel gas. [40 CFR 60.107a, 60.4360, 60.4365, 60.4370, and 60.4415(a)(1)] Federally Enforceable Through Title V Permit
13. A totalizing mass or volumetric fuel flow meter shall be utilized on each fuel source and maintained to calculate the amount of gas combusted based on measured flow meter parameters (fuel pressure and temperature), gas composition, and HHV of the fuel. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
14. Combined turbine and duct burner refinery gas and oilfield gas heat input shall not exceed the following annual limits: 142,174.8 MMBtu/yr of refinery gas and 59,305.2 MMBtu/yr of oilfield gas. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Combined turbine and duct burner refinery gas and oilfield gas heat input shall not exceed the following daily limits: 466.56 MMBtu/day of refinery gas and 191.28 MMBtu/day of oilfield gas. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Combined turbine and duct burner total heat input shall not exceed 8,656.8 MMBtu/day or 3,053,386 MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Sulfur content of natural gas and oil field gas in the fuel being combusted shall not exceed 1.0 grains/100 scf. [40 CFR 60.4330(a)(2), 60.102a(g)(1)(ii), 60.104a, and District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
18. Sulfur content of refinery gas in the fuel being combusted shall not exceed 5.53 grains/100 scf. [40 CFR 60.4330(a)(2), 60.102a(g)(1)(ii), 60.104a, and District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
19. Emissions from the cogeneration system, except during periods of startup and shutdown, shall not exceed any of the following limits: 2 ppmvd NO<sub>x</sub> (0.0074 lb/MMBtu) @ 15% O<sub>2</sub> referenced as NO<sub>2</sub>; 4.0 ppmvd CO (0.0090 lb/MMBtu) @ 15% O<sub>2</sub>; 0.0071 lb-PM<sub>10</sub>/MMBtu; 2.0 ppmvd VOC (0.0026 lb/MMBtu) referenced as methane. NO<sub>x</sub>, CO and VOC emission limits are based on 1-hour rolling average period. If unit is in either startup, shutdown, or black start mode during any portion of a clock hour, the unit will not be subject to the ppmvd limits for NO<sub>x</sub> and CO during that clock hour. [District Rules 2201, 4201, and 4703] Federally Enforceable Through Title V Permit

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20. Duct burner emissions, when operated without the turbine operating, shall not exceed any of the following limits: 2 ppmvd NO<sub>x</sub> (0.0074 lb/MMBtu) @ 15% O<sub>2</sub> referenced as NO<sub>2</sub>; 4.0 ppmvd CO (0.0090 lb/MMBtu) @ 15% O<sub>2</sub>; 0.0076 lb-PM<sub>10</sub>/MMBtu; 2.0 ppmvd VOC (0.0026 lb/MMBtu) referenced as methane. NO<sub>x</sub> and CO emission limits are based on -hour 3-hour rolling average period. If unit is in either startup, shutdown, or black start mode during any portion of a clock hour, the unit will not be subject to the ppmvd limits for NO<sub>x</sub> and CO during that clock hour. [District Rules 2201, 4201, and 4703] Federally Enforceable Through Title V Permit
21. Start-up emissions shall not exceed 15.3 lb-NO<sub>x</sub>/hr, 548.1 lb-CO/hr, or 34.1 lb-VOC/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Shutdown emissions shall not exceed 12.8 lb-NO<sub>x</sub>/hr, 648.6 lb-CO/hr, or 39.0 lb-VOC/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Duration of Start-ups shall not exceed 2 hours/day or 24 hours/year. Duration of Shutdowns shall not exceed 1 hour/day or 12 hours/year. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Emissions from the gas turbine system shall not exceed any of the following limits: 98.5 lb-NO<sub>x</sub>/day or 22,626 lb-NO<sub>x</sub>/year referenced as NO<sub>2</sub>; 1,811.8 lb-CO/day or 47,821 lb-CO/year; 33.4 lb-SO<sub>x</sub>/day or 11,368 lb-SO<sub>x</sub>/year; 61.2 lb-PM<sub>10</sub>/day or 21,596 lb-PM<sub>10</sub>/year; 126.5 lb-VOC/day or 9,052 lb-VOC/year referenced as methane. All annual emission limits are based on 12 consecutive month rolling emissions totals. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Ammonia (NH<sub>3</sub>) emissions shall not exceed 10 ppmvd @ 15% O<sub>2</sub> over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit
26. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO<sub>x</sub>, CO, and O<sub>2</sub> analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
27. During initial performance testing, the ammonia injection rate shall be monitored concurrently with each testing run to establish acceptable values and ranges that provide a reasonable assurance of ongoing compliance with the emissions limitations stated in this permit (with or without the turbine operating). The minimum ammonia injection rate(s) demonstrated during the initial performance test to result in compliance with the NO<sub>x</sub> emission limits shall be imposed as a condition in the Permit to Operate. [District Rule 2201 and 40 CFR 60.334(f)(3)] Federally Enforceable Through Title V Permit
28. Permittee shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100]
29. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100]
30. If the ammonia injection rate is less than the minimum ammonia injection rate demonstrated during the initial compliance test, the permittee shall return the ammonia injection rate above the minimum ammonia injection rate established during compliance testing as soon as possible, but no longer than 8 hours after detection. If the ammonia injection rate is not returned above the minimum ammonia injection rate established during compliance testing within 8 hours, the permittee shall notify the District within the following 1 hour and conduct a source test within 60 days of the first exceedance to demonstrate compliance with the applicable emission limits at the reduced ammonia injection rate. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must 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 Rule 2201] Federally Enforceable Through Title V Permit

31. The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, O<sub>2</sub>, and NH<sub>3</sub> weekly. If compliance with the NO<sub>x</sub> and CO emissions is demonstrated for eight (8) consecutive weeks, then the monitoring frequency will be reduced to monthly. If deviations are observed in two consecutive months, monitoring shall revert to weekly until 8 consecutive weeks show no deviations. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within one (1) day of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the week if on a weekly monitoring schedule. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
32. If the NO<sub>x</sub> and/or CO concentrations, as measured by the permittee with a portable analyzer, exceed the permitted emission limits, the permittee shall notify the District and return the NO<sub>x</sub> and CO concentrations to the permitted emission limits as soon as possible but no longer than eight (8) hours after detection. If the permittee's portable analyzer readings continue to exceed the permitted emissions limits after eight (8) hours, the permittee shall notify the District within the following one (1) hour, and conduct a certified source test within 60 days to demonstrate compliance with the permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate that a violation has occurred, subject to enforcement action. The permittee must correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
33. Compliance with ammonia emission limit shall be demonstrated utilizing one of the following procedures: 1) The permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. 2) The permittee may utilize a District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O<sub>2</sub>. The permittee shall submit a detailed calculation protocol or monitoring plan for District Approval at least 60 days prior to the commencement of operation. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
34. 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
35. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NO<sub>x</sub> output. [District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit
36. Source testing shall be witnessed or authorized by District personnel and samples shall be collected by a California Air Resources Board (CARB) certified testing laboratory or a CARB certified source testing firm. [District Rule 1081] Federally Enforceable Through Title V Permit
37. Source testing to determine compliance with the NO<sub>x</sub>, CO, and NH<sub>3</sub> emission rates (ppmvd @ 15% O<sub>2</sub>) during normal operation shall be conducted with the GTE and duct burner firing concurrently and with the duct burner fired solely within 90 days of initial startup under this permit and annually thereafter. [District Rules 2201 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit
- ~~38. Unit shall demonstrate compliance annually with NO<sub>x</sub> and CO emissions limits with the turbine in operation and not in operation. An annual demonstration of compliance with the turbine in operation is not required in any year in which the turbine is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the turbine. An annual demonstration of compliance with the turbine not in operation is not required in any year in which the turbine operated continuously in conjunction with the duct burner in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the turbine. [40 CFR 60.4340 and District Rules 2201 and 4703] Federally Enforceable Through Title V Permit~~
39. For the purpose of determining compliance with the emissions limits (ppmvd @ 15% O<sub>2</sub>) during normal operation in this permit, the arithmetic mean of three test runs shall apply, unless two of the three results are above an applicable limit. If two of three runs are above the applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 1081] Federally Enforceable Through Title V Permit
40. HHV and LHV of the fuel shall be determined by using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703] Federally Enforceable Through Title V Permit

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41. The following test methods shall be used: NO<sub>x</sub> - EPA Method 7E or 20 or CARB Method 100; CO - EPA Method 10 or 10B or CARB Method 100; VOC - EPA Method 18 or 25; PM<sub>10</sub> - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O<sub>2</sub> - EPA Method 3, 3A, or 20 or CARB Method 100. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, and 40 CFR 60.4400 (1)(i)] Federally Enforceable Through Title V Permit
42. 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
43. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 1081]
44. If the gas turbine system is not fired on PUC-regulated or FERC-regulated natural gas, then a fuel sample shall be collected during the source test to determine sulfur content of the fuel combusted in the turbine. The fuel sample shall be analyzed for the total sulfur content using ASTM D1072; D3246; D4084; D4468; D6228; or D6667; or double GC for H<sub>2</sub>S and mercaptans. The applicable ranges of some ASTM methods are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of dilution ratio) may be used after getting a prior approval from the District. [40 CFR 60.4415(a)(1)(i)] Federally Enforceable Through Title V Permit
45. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup (black start) and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
46. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703] Federally Enforceable Through Title V Permit
47. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
48. Reduced load period is defined as the time during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. Each reduced load period shall not exceed one hour. [District Rule 4703] Federally Enforceable Through Title V Permit
49. The owner or operator shall conduct a root cause analysis succeeding any SO<sub>2</sub> discharge to atmosphere that exceeds 500 lb/day. Operator shall record the date and duration of the discharge, the results of the root cause analysis, and the action taken as a result of the root cause analysis. [40 CFR 60.103a] Federally Enforceable Through Title V Permit
50. The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local startup and stop time, length and reason for reduced load periods, total hours of operation, the type and quantity of fuel used, duration of each start-up and each shutdown time period; and, on a monthly basis, fuel HHV. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
51. The owner or operator shall submit a written report of continuous fuel H<sub>2</sub>S monitoring for each calendar quarter to the District. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess H<sub>2</sub>S limits, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the monitor was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit
52. The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [40 CFR 60.108a and District Rules 2201 and 4703] Federally Enforceable Through Title V Permit