NOV 1 & 2 2009

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

Re: Notice of Final Decision - ATC / Certificate of Conformity
Facility # S-1131
Project # S-1085344

Dear Mr. Tollstrup:

The Air Pollution Control Officer has issued Authority to Construct permits to Chevron USA Inc for its gas turbines in "A" FEE, "B" FEE, "C" FEE, and "SEKR" leases in Kern River Oilfield, California. The three parts of this proposal are as follows: (1) Issue a set of ATCs that designate each unit as non-compliant Dormant Emissions Unit in accordance with District Policy SSP-1705, Additional Permit Conditions for Dormant Emissions Units (7/15/05); (2) Issue a set of ATCs to install an SCR system for each unit and install a continuous emissions monitoring system (CEMS) for the units in "A" FEE, a separate CEMS for the units in "B" FEE, and a separate CEMS for the units in "C" FEE; and (3) Make permit specific modifications such as removing some old permit conditions that do not belong to these units.

Enclosed are copies of the Authority to Construct permits and a copy of the notice of final action to be published approximately three days from the date of this letter.

Notice of the District’s preliminary decision to issue this Authority to Construct with Certificate of Conformity was published on September 29, 2009. The District's analysis of the proposal was also sent to US EPA Region IX on September 29, 2009. No comments were received following the District's preliminary decision on this project.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Sincerely,

[Signature]

David Warner
Director of Permit Services

DW:JK/I5

Enclosures
NOV 1 2 2009

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

Re: Notice of Final Decision - ATC / Certificate of Conformity
Facility # S-1131
Project # S-1085344

Dear Mr. Rios:

The Air Pollution Control Officer has issued Authority to Construct permits to Chevron USA Inc for its gas turbines in "A" FEE, "B" FEE, "C" FEE, and "SEKR" leases in Kern River Oilfield, California. The three parts of this proposal are as follows: (1) Issue a set of ATCs that designate each unit as non-compliant Dormant Emissions Unit in accordance with District Policy SSP-1705, Additional Permit Conditions for Dormant Emissions Units (7/15/05); (2) Issue a set of ATCs to install an SCR system for each unit and install a continuous emissions monitoring system (CEMS) for the units in "A" FEE, a separate CEMS for the units in "B" FEE, and a separate CEMS for the units in "C" FEE; and (3) Make permit specific modifications such as removing some old permit conditions that do not belong to these units.

Enclosed are copies of the Authority to Construct permits and a copy of the notice of final action to be published approximately three days from the date of this letter.

Notice of the District's preliminary decision to issue this Authority to Construct with Certificate of Conformity was published on September 29, 2009. The District's analysis of the proposal was also sent to CARB on September 29, 2009. No comments were received following the District's preliminary decision on this project.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

[Signature]

David Warner
Director of Permit Services

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer
NOV 12 2009

Mr. John Gruber
Chevron USA Inc
P. O. Box 1392
Bakersfield, CA 93302

Re: Notice of Final Decision - ATC / Certificate of Conformity
Facility # S-1131
Project # S-1085344

Dear Mr. Gruber:

The Air Pollution Control Officer has issued Authority to Construct permits to Chevron USA Inc for its gas turbines in "A" FEE, "B" FEE, "C" FEE, and "SEKR" leases in Kern River Oilfield, California. The three parts of this proposal are as follows: (1) Issue a set of ATCs that designate each unit as non-compliant Dormant Emissions Unit in accordance with District Policy SSP-1705, Additional Permit Conditions for Dormant Emissions Units (7/15/05); (2) Issue a set of ATCs to install an SCR system for each unit and install a continuous emissions monitoring system (CEMS) for the units in "A" FEE, a separate CEMS for the units in "B" FEE, and a separate CEMS for the units in "C" FEE; and (3) Make permit specific modifications such as removing some old permit conditions that do not belong to these units.

Enclosed are copies of the Authority to Construct permits and a copy of the notice of final action to be published approximately three days from the date of this letter.

Notice of the District's preliminary decision to issue this Authority to Construct with Certificate of Conformity was published on September 29, 2009. The District's analysis of the proposal was also sent to US EPA Region IX on September 29, 2009. No comments were received following the District's preliminary decision on this project.

Also enclosed is an invoice for the engineering evaluation fees pursuant to District Rule 3010. Please remit the amount owed, along with a copy of the attached invoice, within 30 days.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Sincerely,

David Warner
Director of Permit Services

DW:JK/Js

Enclosures
NOTICE OF FINAL DECISION
FOR THE ISSUANCE OF AUTHORITY
TO CONSTRUCT PERMITS

NOTICE IS HEREBY GIVEN that the Air Pollution Control Officer has issued Authority to Construct permits to Chevron USA Inc for its gas turbines in "A" FEE, "B" FEE, "C" FEE, and "SEKR" leases in Kern River Oilfield, California. The three parts of this proposal are as follows: (1) issue a set of ATCs that designate each unit as non-compliant Dormant Emissions Unit in accordance with District Policy SSP-1705, Additional Permit Conditions for Dormant Emissions Units (7/15/05); (2) Issue a set of ATCs to install an SCR system for each unit and install a continuous emissions monitoring system (CEMS) for the units in "A" FEE, a separate CEMS for the units in "B" FEE, and a separate CEMS for the units in "C" FEE; and (3) Make permit specific modifications such as removing some old permit conditions that do not belong to these units.

No comments were received following the District's preliminary decision on this project.

The application review for Project #S-1085344, is available for public inspection at the District office at the address below. SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 4800 ENTERPRISE WAY, MODESTO, CA 95356.
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1131-970-14

LEGAL OWNER OR OPERATOR: CHEVRON USA INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL CENTRAL
KERN COUNTY, CA

SECTION: 25 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF: COGENERATION UNIT #1 (NORTH UNIT) SOLAR CENTAUR TYPE H, 52.4 MMBTU/HR (NOMINAL RATING) GAS FIRED TURBINE ENGINE, 3.725 MW, WITH WATER INJECTION AND STRUTHERS UNFIRED HEAT RECOVERY STEAM GENERATOR - LEASE FEE A: DESIGNATE NON-COMPLIANT DORMANT EMISSION UNIT FOR TIER-3 NOX STANDARDS OF RULE 4703

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 NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010]

4. The fuel supply line shall be physically disconnected from this unit. [District Rule 4703]

5. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4703 and all other applicable District regulations. [District Rule 4703]

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 Sadreida, Executive Director, APCO

DAVID WARNER, Director of Permit Services
S-1131-0704: Nov 9 2003 16:12 M / R:\\APCO: Joint Inspection NOT Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
based on recycled paper.©
6. Units shall be fired exclusively on PUC-regulated or FERC-regulated natural gas which has a sulfur content less than or equal to 0.017% by weight. [40 CFR 60.333(a) & (b); 60.332(a); Kern County Rule 407] Federally Enforceable Through Title V Permit

7. Operator shall not discharge into the atmosphere combustion contaminants (PM) exceeding in concentration at the point of discharge, 0.1 gr/dscf. [District Rule 4201; Kern County Rule 404] Federally Enforceable Through Title V Permit

8. Operator shall be required to conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081; Kern County Rule 108.1] Federally Enforceable Through Title V Permit

9. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit

10. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

11. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

12. Nitrogen oxides (NOx) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O2) concentrations shall be determined using EPA Method 3, 3A, or 20. [40 CFR 60.335(b) and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit

13. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332(a), (b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit

14. If the turbine is fired on PUC-regulated or FERC-regulated natural gas, then maintain on file copies of natural gas bills or other relevant records. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a), (b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

16. Permittee shall install, operate and maintain in calibration a predictive emissions monitoring system which continuously measures and records the water-to-fuel ratio and which correlates the water-to-fuel ratio with the NOx concentration in the exhaust by using the method described in 40 CFR 60.335(e). [40 CFR 60.334] Federally Enforceable Through Title V Permit

17. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NOx output. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit

18. Permittee shall install, operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [40 CFR 60.334 and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

19. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit

20. Permittee shall submit an excess NSPS emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semiannually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.7(c)] Federally Enforceable Through Title V Permit

21. Except during periods of startup/shutdown, any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the NOx emissions limit required by NSPS shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
22. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [District NSR Rule] Federally Enforceable Through Title V Permit

23. Gas turbine engine shall be equipped with water injection system for NOx control. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Gas turbine engine water injection rate shall be maintained such that water to fuel ratio is no less than that amount determined necessary to ensure emission limits compliance. [District NSR Rule] Federally Enforceable Through Title V Permit

25. Gas turbine engine shall be equipped with continuously recording water injection rate monitor accurate to within +/- 5%. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours and two hours, respectively, per occurrence. [District Rule 4703] Federally Enforceable Through Title V Permit

27. Except during periods of startup/shutdown, if water injection system is inoperative, gas turbine engine shall be shut down. [40 CFR 60.8(c), District NSR Rule] Federally Enforceable Through Title V Permit

28. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas sample consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit

29. All steam produced by this source operation shall be used only in existing TEOR operation(s) served by existing vapor control system(s). [District NSR Rule] Federally Enforceable Through Title V Permit

30. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit

31. Emissions increases from new wells in zone steamed by this equipment shall be controlled and mitigated as required by District NSR Rule and District Rule 4401 (amended 1/15/98). [District NSR Rule] Federally Enforceable Through Title V Permit

32. Source testing shall be conducted for at least three levels of operating range of water to fuel ratio to demonstrate previously established ratio correlation with NOx emissions remains valid. [District NSR Rule and District Rule 1081] Federally Enforceable Through Title V Permit

33. Compliance with nitrogen oxide, and CO emission limits shall be demonstrated by District-witnessed sample collection by independent testing laboratory within 60 days of permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit

34. Source test results and fuel test data shall be submitted within 60 days after sample collection with water to fuel injection ratio, on mass basis, determined at time of stack gas sampling. [District Rule 1081] Federally Enforceable Through Title V Permit

35. Permittee shall keep accurate daily records of turbine water to fuel injection ratio and such records shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

36. Gas turbine engine shall be equipped with continuously recording oxides of nitrogen and oxygen monitors. NOx monitoring system requirement may be substituted or replaced upon documentation that H2O/fuel ratio correlates well with NOx emission rate. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Permittee shall submit compliance testing plan to the District within 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit

38. Except during periods of startup/shutdown, emission rates for this unit shall not exceed any of the following: PM-10: 0.015 lb/MMBTU, SOx (as SO2): 0.0031 lb/MMBTU, NOx (as NO2): 0.129 lb/MMBTU or VOC: 0.010 lb/MMBTU. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit

39. Except during periods of thermal stabilization or reduced load, CO emissions rate shall not exceed 65.0 ppmv @ 15% O2. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
40. Except during periods of thermal stabilization or reduced loads, NOx emission rate shall not exceed 35 ppmv at 15% O2 on a 3 hour rolling average basis. [District Rule 4703, 5.1.2 and 7.2.1]

41. Emission rates for this unit shall not exceed any of the following: PM-10: 18.9 lb/day, SOx (as SO2): 3.9 lb/day, NOx (as NO2): 162.2 lb/day, VOC: 12.6 lb/day, or CO: 183.6 lb/day [District NSR Rule and 4703] Federally Enforceable Through Title V Permit

42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; 40 CFR 60.332(a) and (b); 60.333(a) and (b); 60.334 (a), (b), and (c)(1); 60.335(a), (b), (c), and (e). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 407; 40 CFR 60.332(c), (d); 60.334(b), and (c)(2); 60.335(d). 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-1131-970-15

LEGAL OWNER OR OPERATOR: CHEVRON USA INC
MAILING ADDRESS:
PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION:
HEAVY OIL CENTRAL
KERN COUNTY, CA

SECTION: 25 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF: COGENERATION UNIT #1 (NORTH UNIT) SOLAR CENTAUR TYPE H, 52.4 MMBTU/HR (NOMINAL RATING) GAS FIRED TURBINE ENGINE, 3.725 MW, WITH WATER INJECTION AND STRUTHERS UNFIRED HEAT RECOVERY STEAM GENERATOR - LEASE FEE A: REMOVE HEAT INPUT RATE (MMBTU/DAY), INSTALL A SELECTIVE CATALYTIC REDUCTION SYSTEM (SCR), A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO AND O2 CONCENTRATIONS, AND REPLACE STRUTHERS UNFIRED HEAT RECOVERY STEAM GENERATOR (HRSG) WITH ANOTHER UNFIRED HRSG (IF NECESSARY)

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 NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

5. Gas turbine engine shall be fired exclusively on PUC-regulated or FERC-regulated natural gas, or natural gas documented to be of comparable quality, which has a sulfur content less than or equal to 0.017% by weight. [40 CFR 60.333(a) and District Rule 4801] 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 Sadreolin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
D-1131-970-15: Nov 30 2009 RQNPM - RAY.jpg: Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. If the turbine is fired on PUC-regulated or FERC-regulated natural gas, then maintain on file copies of natural gas bills or other relevant records. [District Rule 2520] Federally Enforceable Through Title V Permit

7. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

8. HHV and LHV of the fuel shall be determined by using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b), District Rule 4703] Federally Enforceable Through Title V Permit

9. During an initial shakedown period, the emissions shall not exceed any of the following limits: 35 ppmvd NOx @ 15% O2 referenced as NO2; 65 ppmvd CO @ 15% O2; 0.015 lb-PM10/MMBtu; 0.010 lb-VOC/MMBtu referenced as methane; and 0.0031 lb-Sox/MMBtu referenced as SO2. The shakedown period shall not exceed 60 calendar days from the initial startup of the unit under this permit. The shakedown period must be concluded prior to the applicable Rule 4703 compliance deadline selected for this unit. The permittee shall maintain a record of the date of initial operation of this unit, fuel burned (scf/day) on daily basis, and water-to-fuel ratio or results of NOx and CO over 3-hour rolling average period from CEMS (if operational). These records shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Upon concluding the initial shakedown period, emissions from the gas turbine system shall not exceed any of the following limits: 5 ppmvd NOx @ 15% O2 referenced as NO2; 65 ppmvd CO @ 15% O2; 0.015 lb-PM10/MMBtu; 0.010 lb-VOC/MMBtu referenced as methane; and 0.0031 lb-Sox/MMBtu referenced as SO2. NOx and CO emission limits are based on 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 NOx and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

11. Upon concluding the initial shakedown period, the emissions from the gas turbine system, on days when startup, shutdown, or black start occurs, shall not exceed any of the following limits: 40.6 lb-NOx/day referenced as NO2; 1.455 lb-CO/day; 3.9 lb-Sox/day; 87.0 lb-VOC/day referenced as methane; and 35.7 lb-NH3/day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 8,491 lb-NOx/year; 72,854 lb-CO/year; 1,423 lb-Sox/year; 6,885 lb-PM10/year; 4,963 lb-VOC/year; 13,042 lb-NH3/year. All annual emission limits are based on 12 consecutive month rolling emissions total. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Ammonia (NH3) emissions shall not exceed 21 ppmvd @ 15% O2 over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Each three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period shall commence on the hour. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. The twenty-four hour average will be calculated starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each calendar month in a twelve consecutive month rolling emissions total shall commence at the beginning of the first day of the month. The twelve consecutive month rolling emissions totals used to determine compliance with annual emission limits shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit

16. 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 NOx, CO, and O2 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

CONDITIONS CONTINUE ON NEXT PAGE
17. 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

18. 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

19. Source testing to measure start-up mass emission rates of NOx, CO, and VOC shall be conducted for one of the gas turbine engines (S-1131-970 or -973) within 60-days of initial startup under this permit and at least once every seven years thereafter. CEMS relative accuracy shall be determined during source testing in accordance with the procedure listed in 40 CFR Part 60, Appendix F with any necessary changes approved by the District. [District Rule 1081] Federally Enforceable Through Title V Permit

20. Source testing to determine compliance with the NOx, CO and NH3 emission rates (ppmvd @ 15% O2) during normal operation shall be conducted within 60 days of initial startup under this permit and annually thereafter. [District Rules 2201 and 4703, CFR 60.335(a)] Federally Enforceable Through Title V Permit

21. For the purpose of determining compliance with the emissions limits (ppmvd @ 15% O2) 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

22. The following test methods shall be used: NOx - 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; PM10 - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - 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, 40 CFR 60.335(a), and 40 CFR 60.335(b)(1)] Federally Enforceable Through Title V Permit

23. 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

24. The owner or operator shall install, certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) which continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns, provided that CEMS passes the relative accuracy requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 (PS-2) and District approved protocol for startups. If relative accuracy of CEMS cannot be demonstrated during the startup, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from the source test conducted by the facility to determine compliance with emission limits contained in this document. [District Rules 1080, 2201 and 4703, 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

25. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

26. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS 2), or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(1)] Federally Enforceable Through Title V Permit

27. In accordance with 40 CFR Part 60, Appendix F, 5.1, the CEMS must be audited at least once each calendar quarter. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
28. NOx, CO and O2 concentrations from the gas turbine systems operating under permits S-1131-970 and S-1131-973 shall be monitored by a common CEMS. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: (1) perform annual RATA testing on at least one unit (S-1131-970 or S-1131-973), and rotate the unit tested so that each unit is tested over two years; (2) perform annual RAA testing for the unit for which the annual RATA is not performed, (3) if a unit fails RAA testing, RATA test must be conducted within 60 days on the failed unit, and 4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed on each unit. [District Rule 1080] Federally Enforceable Through Title V Permit

29. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit

30. The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(3)] Federally Enforceable Through Title V Permit

31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit

32. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

33. The permittee shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

34. The owner or operator shall submit a written report of CEM operations 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 NOx emissions, 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 CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.334(p)(5)] Federally Enforceable Through Title V Permit

35. Monitor downtime for NOx shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx concentration or diluent O2 (or both). [40 CFR 60.334(j)(1)(ii)(B)] Federally Enforceable Through Title V Permit

36. If the gas turbine system is net 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 H2S 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 60.335(b)(10)] Federally Enforceable Through Title V Permit

37. Should the applicant decide to conduct performance evaluation of CEMS with the initial performance test, a minimum of 9 reference method runs, with a minimum time per run of 21 minutes, at a single load level, between 99 and 100 percent of peak (or the highest physically achievable) load shall be performed. The test data obtained during these runs can be used to demonstrate compliance with the applicable NOx emission limit and to provide reference method data for the RATA of the CEMS. The requirement to test at three additional load levels is waived under this option. [40 CFR 60.335(b)(6)] Federally Enforceable Through Title V Permit
38. A totaling mass or volumetric fuel flow computer shall be utilized and maintained to calculate the amount of natural gas combusted based on measured flow meter parameters (fuel pressure and temperature) and gas composition. [District Rule 4703] Federally Enforceable Through Title V Permit

39. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit

40. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit

41. 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

42. 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

43. 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

44. 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

45. A black start event is defined as the startup of a unit while the cogeneration plant is electrically separated from the utility grid. A black start shall not exceed 4.0 hours per event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

46. The owner or operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly. [District Rule 4703] Federally Enforceable Through Title V Permit

47. 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 (or black start) and each shutdown time period. [District Rule 4703] Federally Enforceable Through Title V Permit

48. 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. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

49. NOx emissions shall not exceed 150 ppmvvd @ 15% O2 (1-hour average), excluding startup (black start), shutdown and reduced load periods. [40 CFR 60.332(a)(1) & 60.332(a)(2)] Federally Enforceable Through Title V Permit

50. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; 40 CFR 60.332(a) and (b); 60.333(a) and (b); 60.334 (a), (b), and (c)(1); 60.335(a), (b), (c), and (e). 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 following subsumed requirements: Kern County Rule 407; 40 CFR 60.332(c), (d); 60.334(b), and (c)(2); 60.335(d). 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-1131-971-15

LEGAL OWNER OR OPERATOR: CHEVRON USA INC
MAILING ADDRESS: PO BOX 1392
                  BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL CENTRAL
           KERN COUNTY, CA

SECTION: NE6  TOWNSHIP: 29S  RANGE: 28E

ISSUANCE DATE: 11/09/2009

EQUIPMENT DESCRIPTION:
MODIFICATION OF: DORMANT COGENERATION SOLAR TAURUS T6501, WITH NOMINAL RATING 52.4 MMBTU/HR
GAS-FIRED GAS TURBINE ENGINE, NOMINAL RATING 3.725 MW, WITH WATER INJECTION AND STRUTHERS
UNFIRED RECOVERY STEAM GENERATOR-LEASE FEE B: DESIGNATE NON-COMPLIANT DORMANT EMISSION UNIT FOR TIER-3 NOX STANDARDS OF RULE 4703

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 NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010]

4. The fuel supply line shall be physically disconnected from this unit. [District Rule 4703]

5. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4703 and all other applicable District regulations. [District Rule 4703]

6. Upon 7 days written notice to the District this unit may be designated as a dormant emission unit or an active emission unit. [District Rule 1070] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-6500 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 Sadroo, Executive Director / APCO

DAVID WALKER, Director of Permit Services
S-1131-971-15; Nov. 2999 ; KERN - KICK BOU : JAD Inspection NOT Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5509 • Fax (661) 392-5585 Printed on recycled paper. ☏
7. When designated as a dormant emissions unit fuel supply line shall be physically disconnected from the emission unit. [District Rule 2080] Federally Enforceable Through Title V Permit

8. Source testing is required within 60 days of recommencing operation if a source test has not been performed within the past 12 months. [District NSR Rule and District Rule 4703] Federally Enforceable Through Title V Permit

9. During non-operation of this unit the permittee shall not be required to perform source testing, fuel sulfur content certification, and monitoring requirements. [District NSR Rule and District Rule 4703] Federally Enforceable Through Title V Permit

10. Permittee shall maintain accurate records of the time and duration of non-operation of this unit. [District NSR Rule and District Rule 4703] Federally Enforceable Through Title V Permit

11. Gas turbine engine shall be fired exclusively on PUC-regulated or FERC-regulated natural gas, or natural gas documented to be of comparable quality, which has a sulfur content less than or equal to 0.017% by weight. [40 CFR 60.333, District Rule 4801, 3.0 and Rule 407 (Kern County)] Federally Enforceable Through Title V Permit

12. Turbine shall not combust more than 1257.6 MMBtu/day of natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Operator shall not discharge into the atmosphere combustion contaminants (PM) exceeding in concentration at the point of discharge, 0.1 g/dscf. [District Rule 4201] Federally Enforceable Through Title V Permit

14. Operator shall be required to conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

15. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D1072, D3246, D4468, D6667, or double GC for H2S and mercaptans. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit

16. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)] Federally Enforceable Through Title V Permit

17. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

18. Nitrogen oxides (NOx) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O2) concentrations shall be determined using EPA Method 3, 3A, or 20. [40 CFR 60.335(b) and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit

19. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332(a), (b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit

20. If the turbine is fired on PUC-regulated or FERC-regulated natural gas, then copies of natural gas bills or other relevant records shall be maintained on file. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. When unit is operating, operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.334(a) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

22. When unit is operating, operator shall operate and maintain in calibration a predictive emissions monitoring system which continuously measures and records the water-to-fuel ratio which correlates the water-to-fuel ratio with the NOx concentration in the exhaust by using the method described in 40 CFR 60.335(b). [40 CFR 60.334(g)] Federally Enforceable Through Title V Permit

23. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NOx output. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit

24. When unit is operating, operator shall operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [40 CFR 60.334(a) and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
25. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(j)(2)] Federally Enforceable Through Title V Permit

26. Permittee shall submit an excess NSPS emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semianually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.7(c)] Federally Enforceable Through Title V Permit

27. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the NOx emissions limit required by NSPS shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(j)(1)] Federally Enforceable Through Title V Permit

28. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [District NSR Rule] Federally Enforceable Through Title V Permit

29. Gas turbine engine shall be equipped with water injection system for NOx control. [District NSR Rule] Federally Enforceable Through Title V Permit

30. Gas turbine engine water injection rate shall be maintained such that water to fuel ratio is no less than that amount determined necessary to ensure emission limits compliance. [District NSR Rule] Federally Enforceable Through Title V Permit

31. Gas turbine engine shall be equipped with continuously recording water injection rate monitor accurate to within ±0.5%. [District NSR Rule] Federally Enforceable Through Title V Permit

32. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours and two hours, respectively, per occurrence. [District Rule 4703] Federally Enforceable Through Title V Permit

33. Thermal stabilization period is defined as the start up or shut down time during which the exhaust gas from the heat recovery steam generator stack or the bypass stack is not within the normal operating temperature range, not to exceed two hours in duration. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

34. Except during periods of startup/shutdown, if water injection system is inoperative, gas turbine engine shall be shut down. [40 CFR 60.8(c), District NSR Rule] Federally Enforceable Through Title V Permit

35. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas sample consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit

36. All steam produced by this source operation shall be used only in existing TEOR operation(s) served by existing vapor control system(s). [District NSR Rule] Federally Enforceable Through Title V Permit

37. All wells producing from strata steam by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit

38. Emissions increases from new wells in zone steam by this equipment shall be controlled and mitigated as required by District NSR Rule and District Rule 4401 (amended 1/15/98). [District NSR Rule] Federally Enforceable Through Title V Permit

39. Source testing shall be conducted for at least three levels of operating range of water to fuel ratio to demonstrate previously established ratio correlation with NOx emissions remains valid. [District NSR Rule and District Rule 1081] Federally Enforceable Through Title V Permit

40. When unit is operating, source testing to determine compliance with nitrogen oxide and CO emission limits shall be conducted annually within 60 days of the source testing anniversary date established for this unit. Source testing to determine compliance shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
41. Source test results and fuel test data shall be submitted within 60 days after sample collection with water to fuel injection ratio, on mass basis, determined at time of stack gas sampling. [District Rule 1081] Federally Enforceable Through Title V Permit

42. Gas turbine engine shall be equipped with continuously recording oxides of nitrogen and oxygen monitors. NOx monitoring system requirement may be substituted or replaced upon documentation that H2O/fuel ratio correlates well with NOx emission rate. [District NSR Rule] Federally Enforceable Through Title V Permit

43. Permittee shall submit compliance testing plan to the District within 60 days prior to the ananl source testing date established for this unit. [District Rule 1081] Federally Enforceable Through Title V Permit

44. Except during periods of startup/shutdown, emission rates for this unit shall not exceed any of the following: PM-10: 0.015 lb/MMBTU, SOx (as SO2): 0.0031 lb/MMBTU, NOx (as NO2): 0.129 lb/MMBTU or VOC: 0.010 lb/MMBTU. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit

45. Except during periods of thermal stabilization or reduced load, CO emissions rate shall not exceed 65.0 ppmv @ 15% O2. [District NSR Rule] Federally Enforceable Through Title V Permit

46. Except during periods of thermal stabilization or reduced loads, NOx emission rate shall not exceed 35 ppmv at 15% O2 on a 3 hour rolling average basis. [District Rule 4703, 5.1.2 and 7.2.1] Federally Enforceable Through Title V Permit

47. Emission rates for this unit shall not exceed any of the following: PM-10: 18.9 lb/day, SOx (as SO2): 3.9 lb/day, NOx (as NO2): 162.2 lb/day, VOC: 12.6 lb/day, or CO: 183.6 lb/day [District NSR Rule and 4703] Federally Enforceable Through Title V Permit

48. When unit is operating, permittee shall record the higher heating value of fuel gas combusted at least once every month and whenever there is a change in the fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

49. When unit is operating, permittee shall keep accurate daily records of fuel gas consumption and turbine water to fuel injection ratio. [District NSR Rule] Federally Enforceable Through Title V Permit

50. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2520, 9.4.2 and 4703, 6.2.4] Federally Enforceable Through Title V Permit

51. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; 40 CFR 60.332(a) and (b); 60.333(a) and (b); 60.334 (a), (b), and (c)(1); 60.335(a), (b), (c), and (e). 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 following subsumed requirements: Kern County Rule 407; 40 CFR 60.332(c), (d); 60.334(b), and (c)(2); 60.335(d). 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-1131-971-16

LEGAL OWNER OR OPERATOR: CHEVRON USA INC
MAILING ADDRESS:
PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION:
HEAVY OIL CENTRAL
KERN COUNTY, CA

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

ISSUANCE DATE: 11/09/2009

EQUIPMENT DESCRIPTION:
MODIFICATION OF: DORMANT COGENERATION SOLAR TAURUS T6501, WITH NOMINAL RATING 52.4 MMBTU/HR GAS-FIRED GAS TURBINE ENGINE, NOMINAL RATING 3.725 MW, WITH WATER INJECTION AND STRUTHERS UNFIRED RECOVERY STEAM GENERATOR - LEASE FEE B: REMOVE HEAT INPUT RATE (MMBTU/DAY), INSTALL A SELECTIVE CATALYTIC REDUCTION SYSTEM (SCR), CONTINUOUS EMISSION MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO AND O2 CONCENTRATIONS, AND REPLACE STRUTHERS UNFIRED HEAT RECOVER STEAM GENERATOR (HRSG) WITH ANOTHER UNFIRED HRSG (IF NECESSARY)

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 NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

5. Gas turbine engine shall be fired exclusively on PUC-regulated or FERC-regulated natural gas, or natural gas documented to be of comparable quality, which has a sulfur content less than or equal to 0.017% by weight. [40 CFR 60.333(a) and District Rule 4801] 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 / APPO

DAVID WARNER, Director of Permit Services
S-1131-971-16: Nov 9 2004 4:43PM – R-A4-O4U : Joint inspection NOT Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5588

Printed on recycled paper.
6. If the turbine is fired on PUC-regulated or FERC-regulated natural gas, then maintain on file copies of natural gas bills or other relevant records. [District Rule 2520] Federally Enforceable Through Title V Permit

7. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the test frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

8. HHV and LHV of the fuel shall be determined by using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b), District Rule 4703] Federally Enforceable Through Title V Permit

9. During an initial shakedown period, the emissions shall not exceed any of the following limits: 35 ppmvd NOx @ 15% O2 referenced as NO2; 65 ppmvd CO @ 15% O2; 0.015 lb-PM10/MMBtu; 0.010 lb-VOC/MMBtu referenced as methane; and 0.0031 lb-Sox/MMBtu referenced as SO2. The shakedown period shall not exceed 60 calendar days from the initial startup of the unit under this permit. The shakedown period must be concluded prior to the applicable Rule 4703 compliance deadline selected for this unit. The permittee shall maintain a record of the date of initial operation of this unit, fuel combusted (scf/day) on daily basis, and water-to-fuel ratio or results of NOx and CO over 3-hour rolling average period from CEMS (if operational). These records shall be made readily available for District inspection upon request. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

10. Upon concluding the initial shakedown period, emissions from the gas turbine system shall not exceed any of the following limits: 5 ppmvd NOx @ 15% O2 referenced as NO2; 65 ppmvd CO @ 15% O2; 0.015 lb-PM10/MMBtu; 0.010 lb-VOC/MMBtu referenced as methane; and 0.0031 lb-Sox/MMBtu referenced as SO2. NOx and CO emission limits are based on 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 NOx and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

11. Upon concluding the initial shakedown period, emissions from the gas turbine system, on days when startup, shutdown, or black start occurs, shall not exceed any of the following limits: 44.8 lb-NOx/day referenced as NO2; 1,659.1 lb-CO/day; 3.9 lb-Sox/day; 18.9 lb-PM10/day; 99.3 lb-VOC/day referenced as methane; and 35.7 lb-NH3/day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 8,210 lb-NOx/year; 73,874 lb-CO/year; 1,423 lb-Sox/year; 6,685 lb-PM10/year; 5,024 lb-VOC/year; 13,042 lb-NH3/year. All annual emission limits are based on 12 consecutive month rolling emissions total. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Ammonia (NH3) emissions shall not exceed 21 ppmvd @ 15% O2 over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Each three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period shall commence on the hour. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. The twenty-four hour average will be calculated starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each calendar month in a twelve consecutive month rolling emissions total shall commence at the beginning of the first day of the month. The twelve consecutive month rolling emissions totals used to determine compliance with annual emission limits shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit

16. 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 NOx, CO, and O2 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

CONDITIONS CONTINUE ON NEXT PAGE
17. 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

18. 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

19. Source testing to measure start-up mass emission rates of NOx, CO, and VOC shall be conducted within 60-days of initial startup under this permit and at least once every seven years thereafter. CEMS relative accuracy shall be determined during source testing in accordance with the procedure listed in 40 CFR Part 60, Appendix F with any necessary changes approved by the District. [District Rule 1081] Federally Enforceable Through Title V Permit

20. Source testing to determine compliance with the NOx, CO and NH3 emission rates (ppmv @ 15% O2) during normal operation shall be conducted within 60 days of initial startup under this permit and annually thereafter. [District Rules 2201 and 4703, CFR 60.335(a)] Federally Enforceable Through Title V Permit

21. For the purpose of determining compliance with the emissions limits (ppmv @ 15% O2) 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

22. The following test methods shall be used: NOx - 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; PM10 - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - 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, 40 CFR 60.335(a), and 40 CFR 60.335(b)(1)] Federally Enforceable Through Title V Permit

23. 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

24. The owner or operator shall install, certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) which continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns, provided that CEMS passes the relative accuracy requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 (PS-2) and District approved protocol for startups. If relative accuracy of CEMS cannot be demonstrated during the startup, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from the source test conducted by the facility to determine compliance with emission limits contained in this document. [District Rules 1080, 2201 and 4703, 40 CFR 60.334(b)(1)] Federally Enforceable Through Title V Permit

25. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

26. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS-2), or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(1)] Federally Enforceable Through Title V Permit

27. In accordance with 40 CFR Part 60, Appendix F, 5.1, the CEMS must be audited at least once each calendar quarter. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit

28. The owner/operator shall perform a RATA for NOx, CO and O2 as specified by 40 CFR Part 60, Appendix F, 5.1.1, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
29. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit

30. The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(3)] Federally Enforceable Through Title V Permit

31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit

32. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

33. The permittee shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

34. The owner or operator shall submit a written report of CEM operations 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 NOx emissions, 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 CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.334(j)(5)] Federally Enforceable Through Title V Permit

35. Monitor downtime for NOx shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx concentration or diluent O2 (or both). [40 CFR 60.334(j)(1)(ii)(B)] Federally Enforceable Through Title V Permit

36. 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 H2S 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 60.335(b)(10)] Federally Enforceable Through Title V Permit

37. Should the applicant decide to conduct performance evaluation of CEMS with the initial performance test, a minimum of 9 reference method runs, with a minimum time per run of 21 minutes, at a single load level, between 90 and 100 percent of peak (or the highest physically achievable) load shall be performed. The test data obtained during these runs can be used to demonstrate compliance with the applicable NOx emission limit and to provide reference method data for the RATA of the CEMS. The requirement to test at three additional load levels is waived under this option. [40 CFR 60.335(b)(6)] Federally Enforceable Through Title V Permit

38. A totalizing mass or volumetric fuel flow computer shall be utilized and maintained to calculate the amount of natural gas combusted based on measured flow meter parameters (fuel pressure and temperature) and gas composition. [District Rule 4703] Federally Enforceable Through Title V Permit

39. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit

40. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
41. 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

42. 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

43. 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

44. 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

45. A black start event is defined as the startup of a unit while the cogeneration plant is electrically separated from the utility grid. A black start shall not exceed 4.0 hours per event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

46. The owner or operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly. [District Rule 4703] Federally Enforceable Through Title V Permit

47. 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 (or black start) and each shutdown time period. [District Rule 4703] Federally Enforceable Through Title V Permit

48. 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. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

49. NOx emissions shall not exceed 150 ppmvd @ 15% O2 (1-hour average), excluding startup (black start), shutdown and reduced load periods. [40 CFR 60.332(a)(1) & 60.332(a)(2)] Federally Enforceable Through Title V Permit

50. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; 40 CFR 60.332(a) and (b); 60.333(a) and (b); 60.334 (a) and (b); 60.335(a), (b), and (c). 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 following subsumed requirements: Kern County Rule 407; 40 CFR 60.332(c) and (d). 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-1131-973-14

LEGAL OWNER OR OPERATOR: CHEVRON USA INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL CENTRAL
KERN COUNTY, CA

SECTION: SE25  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF: COGENERATION UNIT #2 (SOUTH) SOLAR CENTAUR TYPE H, 52.4 MM BTU/HR (NOMINAL RATING) GAS FIRED TURBINE ENGINE, 3.725 MW, WITH WATER INJECTION AND STRUTHERS UNFIRED HEAT RECOVERY STEAM GENERATOR - FEE A: DESIGNATE NON-COMPLIANT DORMANT EMISSION UNIT FOR TIER-3 NOX STANDARDS OF RULE 4703

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 NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010]

4. The fuel supply line shall be physically disconnected from this unit. [District Rule 4703]

5. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4703 and all other applicable District regulations. [District Rule 4703]

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 Sadretdin, Executive Director / APCD

DAVID WARNER, Director of Permit Services
S-1131-973-14, Iss 0 2009 43819-A-REV.11-018, ON FILE: Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. Units shall be fired exclusively on PUC-regulated or FERC-regulated natural gas which has a sulfur content less than or equal to 0.017% by weight. [40 CFR 60.333(a) & (b); 60.332(a); Kern County Rule 407] Federally Enforceable Through Title V Permit

7. Operator shall not discharge into the atmosphere combustion contaminants (PM) exceeding in concentration at the point of discharge, 0.1 gr/scf. [District Rule 4201; Kern County Rule 404] Federally Enforceable Through Title V Permit

8. Operator shall be required to conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081; Kern County Rule 108.1] Federally Enforceable Through Title V Permit

9. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit

10. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 2 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

11. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

12. Nitrogen oxides (NOx) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O2) concentrations shall be determined using EPA Method 3, 3A, or 20. [40 CFR 60.335(b) and District Rule 4703, 6.4]

13. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332(a), (b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit

14. If the turbine is fired on PUC-regulated or FERC-regulated natural gas, then maintain on file copies of natural gas bills or other relevant records. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a), (b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

16. Permittee shall install, operate and maintain in calibration a predictive emissions monitoring system which continuously measures and records the water-to-fuel ratio and which correlates the water-to-fuel ratio with the NOx concentration in the exhaust by using the method described in 40 CFR 60.335(c). [40 CFR 60.334] Federally Enforceable Through Title V Permit

17. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NOx output. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit

18. Permittee shall install, operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [40 CFR 60.334 and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

19. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)]

20. Permittee shall submit an excess NSPS emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semiannually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.7(c)] Federally Enforceable Through Title V Permit

21. Except during periods of startup/shutdown, any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the NOx emissions limit required by NSPS shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
22. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [District NSR Rule] Federally Enforceable Through Title V Permit

23. Gas turbine engine shall be equipped with water injection system for NOx control. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Gas turbine engine water injection rate shall be maintained such that water to fuel ratio is no less than that amount determined necessary to ensure emission limits compliance. [District NSR Rule] Federally Enforceable Through Title V Permit

25. Gas turbine engines shall be equipped with continuously recording water injection rate monitor accurate to within +/- 5%. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours and two hours, respectively, per occurrence. [District Rule 4703] Federally Enforceable Through Title V Permit

27. Except during periods of startup/shutdown, if water injection system is inoperative, gas turbine engine shall be shut down. [40 CFR 60.8(c), District NSR Rule] Federally Enforceable Through Title V Permit

28. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas sample consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit

29. All steam produced by this source operation shall be used only in existing TEOR operation(s) served by existing vapor control system(s). [District NSR Rule] Federally Enforceable Through Title V Permit

30. All wells producing from strata steam by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit

31. Emissions increases from new wells in zone steamed by this equipment shall be controlled and mitigated as required by District NSR Rule and District Rule 4401 (amended 1/15/98). [District NSR Rule] Federally Enforceable Through Title V Permit

32. Source testing shall be conducted for at least three levels of operating range of water to fuel ratio to demonstrate previously established ratio correlation with NOx emissions remains valid. [District NSR Rule and District Rule 1081] Federally Enforceable Through Title V Permit

33. Compliance with nitrogen oxide, and CO emission limits shall be demonstrated by District-witnessed sample collection by independent testing laboratory within 60 days of permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit

34. Source test results and fuel test data shall be submitted within 60 days after sample collection with water to fuel injection ratio, on mass basis, determined at time of stack gas sampling. [District Rule 1081] Federally Enforceable Through Title V Permit

35. Permittee shall keep accurate daily records of turbine water to fuel injection ratio and such records shall be made readily available for District inspection upon request. [District NSR Rule]

36. Gas turbine engine shall be equipped with continuously recording oxides of nitrogen and oxygen monitors. NOx monitoring system requirement may be substituted or replaced upon documentation that H2O/fuel ratio correlates well with NOx emission rate. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Permittee shall submit compliance testing plan to the District within 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit

38. Except during periods of startup/shutdown, emission rates for this unit shall not exceed any of the following: PM-10: 0.015 lb/MMBTU, SOx (as SO2): 0.0031 lb/MMBTU, NOx (as NO2): 0.129 lb/MMBTU or VOC: 0.010 lb/MMBTU. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit

39. Except during periods of thermal stabilization or reduced load, CO emissions rate shall not exceed 65.6 ppmv @ 15% O2. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
40. Except during periods of thermal stabilization or reduced loads, NOx emission rate shall not exceed 35 ppmv at 15% O2 on a 3 hour rolling average basis. [District Rule 4703, 5.1.2 and 7.2.1]

41. Emission rates for this unit shall not exceed any of the following: PM-10: 18.9 lb/day, SOx (as SO2): 3.9 lb/day, NOx (as NO2): 162.2 lb/day, VOC: 12.6 lb/day, or CO: 183.6 lb/day. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit

42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; 40 CFR 60.332(a) and (b); 60.333(a) and (b); 60.334 (a), (b), and (c)(1); 60.335(a), (b), (c), and (e). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

43. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 407; 40 CFR 60.332(c), (d); 60.334(b), and (c)(2); 60.335(d). 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-1131-973-15
LEGAL OWNER OR OPERATOR: CHEVRON USA INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL CENTRAL
KERN COUNTY, CA

SECTION: SE25   TOWNSHIP: 28S   RANGE: 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF: COGENERATION UNIT #2 (SOUTH) SOLAR CENTAUR TYPE H, 52.4 MM BTU/HR (NOMINAL RATING) GAS FIRED TURBINE ENGINE, 3.725 MW, WITH WATER INJECTION AND STRUTHERS UNFIRED HEAT RECOVERY STEAM GENERATOR - FEE A: REMOVE HEAT INPUT RATE (MMBTU/DAY), INSTALL A SELECTIVE CATALYTIC REDUCTION SYSTEM (SCR), A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO AND O2 CONCENTRATIONS, AND REPLACE STRUTHERS UNFIRED HEAT RECOVER STEAM GENERATOR (HRSG) WITH ANOTHER UNFIRED HRSG (IF NECESSARY)

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 NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

5. Gas turbine engine shall be fired exclusively on PUC-regulated or FERC-regulated natural gas, or natural gas documented to be of comparable quality, which has a sulfur content less than or equal to 0.017% by weight. [40 CFR 60.333(a) and District Rule 4801] 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 Sadreddin, Executive Director / PCO

DAVID WARNER / Director of Permit Services

S-1131-973-15 : Nov 9 2009 4:14 PM : PDFLAYOUT : Joint Inspection N/C Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. If the turbine is fired on PUC-regulated or FERC-regulated natural gas, then maintain on file copies of natural gas bills or other relevant records. [District Rule 2520] Federally Enforceable Through Title V Permit

7. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

8. HHV and LHV of the fuel shall be determined by using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b), District Rule 4703] Federally Enforceable Through Title V Permit

9. During an initial shakedown period, the emissions shall not exceed any of the following limits: 35 ppmvd NOx @ 15% O2 referenced as NO2; 65 ppmvd CO @ 15% O2; 0.015 lb-PM10/MMBtu; 0.010 lb-VOC/MMBtu referenced as methane; and 0.0031 lb-SOx/MMBtu referenced as SO2. The shakedown period shall not exceed 60 calendar days from the initial startup of the unit under this permit. The shakedown period must be concluded prior to the applicable Rule 4703 compliance deadline selected for this unit. The permittee shall maintain a record of the date of initial operation of this unit, fuel combusted (scf/day) on daily basis, and water-to-fuel ratio or results of NOx and CO over 3-hour rolling average period from CEMS (if operational). These records shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Upon concluding the initial shakedown period, emissions from the gas turbine system shall not exceed any of the following limits: 5 ppmvd NOx @ 15% O2 referenced as NO2; 65 ppmvd CO @ 15% O2; 0.015 lb-PM10/MMBtu; 0.010 lb-VOC/MMBtu referenced as methane; and 0.0031 lb-SOx/MMBtu referenced as SO2. NOx and CO emission limits are based on 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 NOx and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

11. Upon concluding the initial shakedown period, the emissions from the gas turbine system, on days when startup, shutdown, or black start occurs, shall not exceed any of the following limits: 48.6 lb-NOx/day referenced as NO2; 1,455.1 lb-CO/day; 3.9 lb-SOx/day; 18.9 lb-PM10/day; 87.0 lb-VOC/day referenced as methane; and 35.7 lb-NH3/day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 8,491 lb-NOx/year; 72,854 lb-CO/year; 1,423 lb-SOx/year; 6,885 lb-PM10/year; 4,963 lb-VOC/year; 13,042 lb-NH3/year. All annual emission limits are based on 12 consecutive month rolling emissions total. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Ammonia (NH3) emissions shall not exceed 21 ppmvd @ 15% O2 over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Each three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period shall commence on the hour. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. The twenty-four hour average will be calculated starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each calendar month in a twelve consecutive month rolling emissions total shall commence at the beginning of the first day of the month. The twelve consecutive month rolling emissions totals used to determine compliance with annual emission limits shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit

16. 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 NOx, CO, and O2 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

CONDITIONS CONTINUE ON NEXT PAGE
17. 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

18. 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

19. Source testing to measure start-up mass emission rates of NOx, CO, and VOC shall be conducted for one of the gas turbine engines (S-1131-970 or -973) within 60-days of initial startup under this permit and at least once every seven years thereafter. CEMS relative accuracy shall be determined during source testing in accordance with the procedure listed in 40 CFR Part 60, Appendix F with any necessary changes approved by the District. [District Rule 1081] Federally Enforceable Through Title V Permit

20. Source testing to determine compliance with the NOx, CO and NH3 emission rates (ppmvd @ 15% O2) during normal operation shall be conducted within 60 days of initial startup under this permit and annually thereafter. [District Rules 2201 and 4703, CFR 60.335(a)] Federally Enforceable Through Title V Permit

21. For the purpose of determining compliance with the emissions limits (ppmvd @ 15% O2) 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

22. The following test methods shall be used: NOx - EPA Method 7E or 20 or CARB Method 100; CO - EPA Method 10 or 10B or CARB Method 100; VOC - EPA Method 18 or 20a; PM10 - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - 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, 40 CFR 60.335(a), and 40 CFR 60.335(b)(1)] Federally Enforceable Through Title V Permit

23. 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

24. The owner or operator shall install, certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) which continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns, provided that CEMS passes the relative accuracy requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 (PS-2) and District approved protocol for startups. If relative accuracy of CEMS cannot be demonstrated during the startup, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from the source test conducted by the facility to determine compliance with emission limits contained in this document. [District Rules 1080, 2201 and 4703, 40 CFR 60.334(b)(1)] Federally Enforceable Through Title V Permit

25. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

26. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS 2), or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(1)] Federally Enforceable Through Title V Permit

27. In accordance with 40 CFR Part 60, Appendix F, 5.1, the CEMS must be audited at least once each calendar quarter. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
28. NOx, CO and O2 concentrations from the gas turbine systems operating under permits S-1131-970 and S-1131-973 shall be monitored by a common CEMS. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: (1) perform annual RATA testing on at least one unit (S-1131-970 or S-1131-973), and rotate the unit tested so that each unit is tested over two years; (2) perform annual RAA testing for the unit for which the annual RATA is not performed, (3) if a unit fails RAA testing, RATA test must be conducted within 60 days on the failed unit, and 4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed on each unit. [District Rule 1080] Federally Enforceable Through Title V Permit

29. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit

30. The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(3)] Federally Enforceable Through Title V Permit

31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit

32. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

33. The permittee shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

34. The owner or operator shall submit a written report of CEM operations 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 NOx emissions, 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 CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.334(j)(5)] Federally Enforceable Through Title V Permit

35. Monitor downtime for NOx shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx concentration or diluent O2 (or both). [40 CFR 60.334(j)(1)(ii)(B)] Federally Enforceable Through Title V Permit

36. 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 H2S and mercaptans. The applicable ranges of some ASTM methods are not adequate to measure the content 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 60.335(b)(10)] Federally Enforceable Through Title V Permit

37. Should the applicant decide to conduct performance evaluation of CEMS with the initial performance test, a minimum of 9 reference method runs, with a minimum time per run of 21 minutes, at a single load level, between 90 and 100 percent of peak (or the highest physically achievable) load shall be performed. The test data obtained during these runs can be used to demonstrate compliance with the applicable NOx emission limit and to provide reference method data for the RATA of the CEMS. The requirement to test at three additional load levels is waived under this option. [40 CFR 60.335(b)(6)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
38. A totalizing mass or volumetric fuel flow computer shall be utilized and maintained to calculate the amount of natural gas combusted based on measured flow meter parameters (fuel pressure and temperature) and gas composition. [District Rule 4703] Federally Enforceable Through Title V Permit

39. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit

40. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit

41. The emission control systems shall be in operation and emissions shall be minimized as practically feasible during startup (black start) and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit

42. 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

43. 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

44. 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

45. A black start event is defined as the startup of a unit while the cogen plant is electrically separated from the utility grid. A black start shall not exceed 4.0 hours per event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

46. The owner or operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly. [District Rule 4703] Federally Enforceable Through Title V Permit

47. 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 (or black start) and each shutdown time period. [District Rule 4703] Federally Enforceable Through Title V Permit

48. 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. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

49. NOx emissions shall not exceed 150 ppmvd @ 15% O2 (1-hour average), excluding startup (black start), shutdown and reduced load periods. [40 CFR 60.332(a)(1) & 60.332(a)(2)] Federally Enforceable Through Title V Permit

50. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; 40 CFR 60.332(a) and (b); 60.333(a) and (b); 60.334 (a) and (b); 60.335(a), (b), and (c). 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 following subsumed requirements: Kern County Rule 407; 40 CFR 60.332(c) and (d). 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-1131-574-12

LEGAL OWNER OR OPERATOR: CHEVRON USA INC
MAILING ADDRESS: PO BOX 1392
                  BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL CENTRAL
          KERN COUNTY, CA

SECTION: NE30   TOWNSHIP: 28S   RANGE: 28E

EQUIPMENT DESCRIPTION:
MODIFICATION OF: C oGN E R A T I O N UNIT #2 (EAST): SOLAR CENTAUR TYPE H, 52.4 MMBTU/HR (NOMINAL RATING) GAS FIRED TURBINE ENGINE, 3.725 MW, WITH WATER INJECTION AND STRUTHERS UNFIRED HEAT RECOVERY STEAM GENERATOR - LEASE FEE C: DESIGNATE NON-COMPLIANT DORMANT EMISSION UNIT FOR TIER-3 NOX STANDARDS OF RULE 4703

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 NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2910]

4. The fuel supply line shall be physically disconnected from this unit. [District Rule 4703]

5. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4703 and all other applicable District regulations. [District Rule 4703]

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 / APO

DAVID WARNER, Director of Permit Services

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

* Printed on recycled paper
6. Units shall be fired exclusively on PUC-regulated or FERC-regulated natural gas which has a sulfur content less than or equal to 0.017% by weight. [40 CFR 60.333(a) & (b);60.332(a); Kern County Rule 407] Federally Enforceable Through Title V Permit

7. Operator shall not discharge into the atmosphere combustion contaminants (PM) exceeding in concentration at the point of discharge, 0.1 gr/dscf. [District Rule 4201; Kern County Rule 404] Federally Enforceable Through Title V Permit

8. Operator shall not exceed a NOx emission rate of 35 ppmv, @ 15% O2, excluding thermal stabilization and reduced load periods. [40 CFR 60.332(a)(1) & 60.332(a)(2) and District Rule 4703, 5.1.2] Federally Enforceable Through Title V Permit

9. Operator shall be required to conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081; Kern County Rule 108.1] Federally Enforceable Through Title V Permit

10. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit

11. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

12. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

13. Nitrogen oxides (NOx) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O2) concentrations shall be determined using EPA Method 3, 3A, or 20. [40 CFR 60.335(b) and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit

14. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332(a), (b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit

15. If the turbine is fired on PUC-regulated or FERC-regulated natural gas, then maintain on file copies of natural gas bills or other relevant records. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

17. Permittee shall install, operate and maintain in calibration a predictive emissions monitoring system which continuously measures and records the water-to-fuel ratio and which correlates the water-to-fuel ratio with the NOx concentration in the exhaust by using the method described in 40 CFR 60.335(c). [40 CFR 60.334] Federally Enforceable Through Title V Permit

18. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NOx output. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit

19. Permittee shall install, operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [40 CFR 60.334 and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

20. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit

21. Permittee shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semiannually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.7(c)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
22. Except during periods of startup/shutdown, any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c)] Federally Enforceable Through Title V Permit

23. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Gas turbine engine shall be equipped with water injection system for NOx control. [District NSR Rule] Federally Enforceable Through Title V Permit

25. Gas turbine engine water injection rate shall be maintained such that water to fuel ratio is no less than that amount determined necessary to ensure emission limits compliance. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Gas turbine engine shall be equipped with continuously recording water injection rate monitor accurate to within +/- 5%. [District NSR Rule] Federally Enforceable Through Title V Permit

27. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours and two hours, respectively, per occurrence. [District Rule 4703] Federally Enforceable Through Title V Permit

28. Except during periods of startup/shutdown, if water injection system is inoperative, gas turbine engine shall be shut down. [40 CFR 60.8(c), District NSR Rule] Federally Enforceable Through Title V Permit

29. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas sample consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit

30. All steam produced by this source operation shall be used only in existing TEOR operation(s) served by existing vapor control system(s). [District NSR Rule] Federally Enforceable Through Title V Permit

31. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit

32. Emissions increases from new wells in zone steamed by this equipment shall be controlled and mitigated as required by District NSR Rule and District Rule 4401 (amended 1/15/98). [District NSR Rule] Federally Enforceable Through Title V Permit

33. Source testing shall be conducted for at least three levels of operating range of water to fuel ratio to demonstrate previously established ratio correlation with NOx emissions remains valid. [District NSR Rule and 1081] Federally Enforceable Through Title V Permit

34. Compliance with nitrogen oxide, and CO emission limits shall be demonstrated by District-witnessed sample collection by independent testing laboratory annually within 60 days of permit anniversary date. [District Rules 1081 and 4703] Federally Enforceable Through Title V Permit

35. Source test results and fuel test data shall be submitted within 60 days after sample collection with water to fuel injection ratio, on mass basis, determined at time of stack gas sampling. [District Rule 1081] Federally Enforceable Through Title V Permit

36. Permittee shall keep accurate daily records of turbine water to fuel injection ratio and such records shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Gas turbine engine shall be equipped with continuously recording oxides of nitrogen and oxygen monitors. NOx monitoring system requirement may be substituted or replaced upon documentation that H2O/fuel ratio correlates well with NOx emission rate. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Permittee shall submit compliance testing plan to the District within 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
39. Except during periods of startup/shutdown, emission rates for this unit shall not exceed any of the following: PM-10: 0.015 lb/MMBTU, SOx (as SO2): 0.0031 lb/MMBTU, NOx (as NO2): 35 ppmv @ 15% O2, VOC: 9.010 lb/MMBTU, or CO: 57.0 ppmv @ 15% O2. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit

40. Emission rates for this unit shall not exceed any of the following: PM-10: 18.9 lb/day, SOx (as SO2): 3.9 lb/day, NOx (as NO2): 163.4 lb/day, VOC: 12.6 lb/day, or CO: 162.2 lb/day [District NSR Rule and 4703] Federally Enforceable Through Title V Permit

41. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; 40 CFR 60.332(a) and (b); 60.333(a) and (b); 60.334 (a), (b), and (c)(1); 60.335(a), (b), (c), and (e). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 407; 40 CFR 60.332(c), (d); 60.334(b), and (c)(2); 60.335(d). 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-1131-974-13
LEGAL OWNER OR OPERATOR: CHEVRON USA INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302
LOCATION: HEAVY OIL CENTRAL
KERN COUNTY, CA
SECTION: NE30 TOWNSHIP: 28S RANGE: 28E

EQUIPMENT DESCRIPTION:
MODIFICATION OF: COGENERATION UNIT #2 (EAST): SOLAR CENTAUR TYPE H, 52.4 MMBTU/HR (NOMINAL RATING) GAS FIRED TURBINE ENGINE, 3.725 MV, WITH WATER INJECTION AND STRUTHERS UNFIRED HEAT RECOVERY STEAM GENERATOR - LEASE FEE C: REMOVE HEAT INPUT RATE (MMBTU/DAY), INSTALL A SELECTIVE CATALYTIC REDUCTION SYSTEM (SCR), A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO AND O2 CONCENTRATIONS, AND REPLACE STRUTHERS UNFIRED HEAT RECOVERY STEAM GENERATOR (HRSG) WITH ANOTHER UNFIRED HRSG (IF NECESSARY)

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 NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

5. Gas turbine engine shall be fired exclusively on PUC-regulated or FERC-regulated natural gas, or natural gas documented to be of comparable quality, which has a sulfur content less than or equal to 0.017% by weight. [40 CFR 60.333(a) and District Rule 4801] 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 Sadrekon, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1131-974-13, Rev 9/2008 - APCO - Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. If the turbine is fired on PUC-regulated or FERC-regulated natural gas, then maintain on file copies of natural gas bills or other relevant records. [District Rule 2520] Federally Enforceable Through Title V Permit

7. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

8. HHV and LHV of the fuel shall be determined by using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b), District Rule 4703] Federally Enforceable Through Title V Permit

9. During an initial shakedown period, the emissions shall not exceed any of the following limits: 35 ppmvd NOx @ 15% O2 referenced as NO2; 57 ppmvd CO @ 15% O2; 0.015 lb-PM10/MMBtu; 0.010 lb-VOC/MMBtu referenced as methane; and 0.003 lb-SOx/MMBtu referenced as SO2. The shakedown period shall not exceed 60 calendar days from the initial startup of the unit under this permit. The shakedown period must be concluded prior to the applicable Rule 4703 compliance deadline selected for this unit. The permittee shall maintain a record of the date of initial operation of this unit, fuel combusted (scf/day) on daily basis, and water-to-fuel ratio or results of NOx and CO over 3-hour rolling average period from CEMS (if operational). These records shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Upon concluding the initial shakedown period, emissions from the gas turbine system, when startup or shutdown or black start do not occur, shall not exceed any of the following limits: 5 ppmvd NOx @ 15% O2 referenced as NO2; 57 ppmvd CO @ 15% O2; 0.015 lb-PM10/MMBtu; 0.010 lb-VOC/MMBtu referenced as methane; and 0.003 lb-SOx/MMBtu referenced as SO2. NOx and CO emission limits are based on 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 NOx and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

11. Upon concluding the initial shakedown period, emissions from the gas turbine system, on days when startup, shutdown, or black start occurs, shall not exceed any of the following limits: 40.6 lb-NOx/day referenced as NO2; 1,436.9 lb-CO/day; 3.9 lb-SOx/day; 18.9 lb-PM10/day; 87.0 lb-VOC/day referenced as methane; and 35.7 lb-NH3/day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 8,491 lb-NOx/year; 64,692 lb-CO/year; 1,423 lb-SOx/year; 6,885 lb-PM10/year; 4,963 lb-VOC/year; 13,042 lb-NH3/year. All annual emission limits are based on 12 consecutive month rolling emissions total. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Ammonia (NH3) emissions shall not exceed 21 ppmvd @ 15% O2 over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Each three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period shall commence on the hour. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. The twenty-four hour average will be calculated starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each calendar month in a twelve consecutive month rolling emissions total shall commence at the beginning of the first day of the month. The twelve consecutive month rolling emissions totals used to determine compliance with annual emission limits shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit

16. 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 NOx, CO, and O2 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

CONDITIONS CONTINUE ON NEXT PAGE
17. 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

18. 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

19. Source testing to measure start-up mass emission rates of NOx, CO, and VOC shall be conducted for one of the gas turbine engines (S-1131-974 or -1079) within 60-days of initial startup under this permit and at least once every seven years thereafter. CEMS relative accuracy shall be determined during source testing in accordance with the procedure listed in 40 CFR Part 60, Appendix F with any necessary changes approved by the District. [District Rule 1081] Federally Enforceable Through Title V Permit

20. Source testing to determine compliance with the NOx, CO and NH3 emission rates (ppmv @ 15% O2) during normal operation shall be conducted within 60 days of initial startup under this permit and annually thereafter. [District Rules 2201 and 4703, CFR 60.335(a)] Federally Enforceable Through Title V Permit

21. For the purpose of determining compliance with the emissions limits (ppmv @ 15% O2) 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

22. The following test methods shall be used: NOx - 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; PM10 - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - 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, 40 CFR 60.335(a), and 40 CFR 60.335(b)(1)] Federally Enforceable Through Title V Permit

23. 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

24. The owner or operator shall install, certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) which continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns, provided that CEMS passes the relative accuracy requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 (PS-2) and District approved protocol for startups. If relative accuracy of CEMS cannot be demonstrated during the startup, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from the source test conducted by the facility to determine compliance with emission limits contained in this document. [District Rules 1080, 2201 and 4703, 40 CFR 60.334(b)(1)] Federally Enforceable Through Title V Permit

25. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

26. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS 2), or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(1)] Federally Enforceable Through Title V Permit

27. In accordance with 40 CFR Part 60, Appendix F, 5.1, the CEMS must be audited at least once each calendar quarter. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
28. NOx, CO and O2 concentrations from the gas turbine systems operating under permits S-1131-974 and S-1131-1079 shall be monitored by a common CEMS. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: (1) perform annual RATA testing on at least one unit (S-1131-974 or S-1131-1079), and rotate the unit tested so that each unit is tested over two years; (2) perform annual RAA testing for the unit for which the annual RATA is not performed, (3) if a unit fails RAA testing, RATA test must be conducted within 60 days on the failed unit, and (4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed on each unit. [District Rule 1080] Federally Enforceable Through Title V Permit

29. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit

30. The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(3)] Federally Enforceable Through Title V Permit

31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit

32. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

33. The permittee shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

34. The owner or operator shall submit a written report of CEM operations 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 NOx emissions, 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 CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.334(j)(5)] Federally Enforceable Through Title V Permit

35. Monitor downtime for NOx shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx concentration or diluent O2 (or both). [40 CFR 60.334(j)(1)(iii)(B)] Federally Enforceable Through Title V Permit

36. 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 H2S 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 60.335(b)(10)] Federally Enforceable Through Title V Permit

37. Should the applicant decide to conduct performance evaluation of CEMS with the initial performance test, a minimum of 9 reference method runs, with a minimum time per run of 21 minutes, at a single load level, between 90 and 100 percent of peak (or the highest physically achievable) load shall be performed. The test data obtained during these runs can be used to demonstrate compliance with the applicable NOx emission limit and to provide reference method data for the RATA of the CEMS. The requirement to test at three additional load levels is waived under this option. [40 CFR 60.335(b)(6)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
38. A totaling mass or volumetric fuel flow computer shall be utilized and maintained to calculate the amount of natural gas combusted based on measured flow meter parameters (fuel pressure and temperature) and gas composition. [District Rule 4703] Federally Enforceable Through Title V Permit

39. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit

40. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit

41. The emission control systems shall be in operation and emissions shall be minimized as far as technologically feasible during startup (black start) and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit

42. 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

43. 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

44. 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

45. A black start event is defined as the startup of a unit while the cogen plant is electrically separated from the utility grid. A black start shall not exceed 4.0 hours per event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

46. The owner or operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly. [District Rule 4703] Federally Enforceable Through Title V Permit

47. 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 (or black start) and each shutdown time period. [District Rule 4703] Federally Enforceable Through Title V Permit

48. 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. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

49. NOx emissions shall not exceed 150 ppmvd @ 15% O2 (1-hour average), excluding startup (black start), shutdown and reduced load periods. [40 CFR 60.332(a)(1) & 60.332(a)(2)] Federally Enforceable Through Title V Permit

50. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; 40 CFR 60.332(a) and (b); 60.333(a) and (b); 60.334(a) and (b); 60.335(a), (b), and (c). 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 following subsumed requirements: Kern County Rule 407; 40 CFR 60.332(c) and (d). 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-1131-1038-9

LEGAL OWNER OR OPERATOR: CHEVRON USA INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL CENTRAL
KERN COUNTY, CA

SECTION: NW10 TOWNSHIP: 2S RANGE: 28E

EQUIPMENT DESCRIPTION:
MODIFICATION OF: 58.2 MMBTU/HR (NOMINAL RATING), 4.0 MW ALLISON MODEL 501-KB5 GAS-FIRED TURBINE
ENGINE COGENERATION SYSTEM WITH WATER INJECTION, HEAT RECOVERY STEAM GENERATOR, AND CEM
SYSTEMS FOR NOX, CO, AND O2: DESIGNATE NON-COMPATIBLE DORMANT EMISSION UNIT FOR TIER-3 NOX
STANDARDS OF RULE 4703

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 NSR Rule] Federally Enforceable
Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
[District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for
changes specified in conditions below. [District Rule 2010]

4. The fuel supply line shall be physically disconnected from this unit. [District Rule 4703]

5. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all
necessary retrofits required to comply with the applicable requirements of District Rule 4703 and all other applicable
District regulations. [District Rule 4703]

6. Either conventional or pilotless fuel nozzles may be used. [District Rule 2010] 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 Sadreolin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. Lube oil cooler/accumulator shall be equipped with device to prevent detectable emissions. [District NSR Rule] Federally Enforceable Through Title V Permit

8. If water injection is inoperative, turbine shall be shut down. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Turbine shall not burn more than 1.33 MMScf/day of natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit

10. All turbine exhaust shall flow to heat recovery steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

11. CEM equipment shall be maintained and calibrated according to EPA guidelines specified in CFR Part 60, Appendix B. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Audits of monitors shall be conducted at least once every 12 months by independent testing lab in accordance with EPA guidelines, witnessed by District, and reports shall be submitted to District within 60 days of audit. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Unit shall be equipped with continuously recording fuel gas flowmeter. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Gas turbine engine exhaust may be diverted to bypass stack under Rule 1100 (Equipment Breakdown), provided all applicable record keeping and reporting requirements of Rule 1100 are fulfilled. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Compliance source testing for NOx, CO, fuel gas sulfur content, and demonstrated percent efficiency of gas turbine engine shall be conducted at least once every 12 months. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit

16. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

17. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours and two hours, respectively, per occurrence. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Except during periods of gas turbine engine startup/shutdown, gas turbine water injection rate shall be maintained at water-to-fuel ratio documented to achieve compliance with emission limits. [District NSR Rule] Federally Enforceable Through Title V Permit

19. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NOx output. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed any of the following: PM10: 17.9 lb/day, SOx (as SO2): 8.4 lb/day, NOx (as NO2): 180.2 lb/day, VOC: 48.9 lb/day, or CO: 125.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Except during periods of startup/shutdown, emission rates (3-hour rolling average) shall not exceed any of the following: PM10: 0.0128 lb/MMBTU, SOx (as SO2): 0.006 lb/MMBTU, NOx (as NO2): 0.129 lb/MMBTU or 38 ppmvd @ 15% O2, VOC: 0.035 lb/MMBTU, or CO: 40 ppmvd @ 15% O2. [District NSR Rule & Rule 4703] Federally Enforceable Through Title V Permit

22. Except during periods of thermal stabilization or reduced loads, NOx emission rate shall not exceed 35 ppmv at 15% O2 on a 3 hour rolling average basis. [District Rule 4703, 5.1.2 and 7.2.1]

23. NOx emission rate (one hour average) shall not exceed the NSPS standard of 206 ppmvd @ 15% O2. [District Rule 4001] Federally Enforceable Through Title V Permit

24. Permittee shall report the following emission exceedences to the District: emission rates of NOx & CO on a three-hour rolling average, NSPS emission rate on one hour average, and DEL of NOx & CO during days of gas turbine engine startup/shutdown. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
25. On days of gas turbine engine startup/shutdown, permittee shall demonstrate compliance with NOx and CO daily emission limitations by records of calculations using CEM data, fuel rate data, and daily hours of operation data.
[Federal NSR Rule] Federally Enforceable Through Title V Permit

26. For units equipped with continuous emissions monitors (CEMs), CEM records shall be used in place of calculated emissions.
[Federal NSR Rule] Federally Enforceable Through Title V Permit

27. If monitoring provisions fail, the emissions shall be calculated on operational data (steam production rate, inlet air and exhaust gas flowrates, etc.) or, if such data is not available, for the four days of operation preceding the breakdown.
[Federal NSR Rule] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of quantity of fuel used per day, all maintenance activities related to this unit, and date and time of fuel nozzle replacement, and type of fuel nozzle installed.
[Federal NSR Rule] Federally Enforceable Through Title V Permit

29. Operator shall not discharge into the atmosphere combustion contaminants (PM) exceeding in concentration at the point of discharge, 0.1 gr/sccf. [District Rule 4201; Kern County Rule 404] Federally Enforceable Through Title V Permit

30. Reduced load period shall be defined as the time during which a gas turbine is operated at less than rated capacity in order to change the exhaust gas diverter gate not exceeding one hour. [District Rule 4703, 3.16] Federally Enforceable Through Title V Permit

31. Thermal stabilization period shall be defined as the start-up or shutdown time necessary to bring the heat recovery steam generator to proper temperature, not exceeding two hours. [District Rule 4703, 3.21] Federally Enforceable Through Title V Permit

32. Operator shall be required to conform to the compliance testing procedures described in District Rule 1081. [Kern County Rule 108.1; District Rule 1081] Federally Enforceable Through Title V Permit

33. The sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit

34. The sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

35. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

36. Nitrogen oxides (NOx) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O2) concentrations shall be determined using EPA Method 3, 3A, or 20. [40 CFR 60.335(b) and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit

37. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332(a),(b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit

38. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [Kern County Rule 108; District Rule 1080] Federally Enforceable Through Title V Permit

39. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEM's that have been installed pursuant to District Rule 1080, and emission measurements. [Kern County Rule 108; District Rule 1080; 40 CFR 60.7 (b)] Federally Enforceable Through Title V Permit

40. Results of continuous emission monitoring must be averaged in accordance with the requirements of 40 CFR 60.13. [40 CFR 60.334(a),(b),(c) and District Rule 4703, 5.0] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
41. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a), (b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

42. Operator shall install, operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, and the exhaust gas NOx concentration at 15% O2 on a dry basis. [40 CFR 60.334(a), (b)] Federally Enforceable Through Title V Permit

43. The continuous NOx monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [Kern County Rule 108 and District Rule 1080, 6.7] Federally Enforceable Through Title V Permit

44. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit

45. A violation of NOx emission standards indicated by the NOx CEM shall be reported by the operator to the APCO within 96 hours. [Kern County Rule 108 and District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

46. The APCO shall be notified no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [Kern County Rule 108 and District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

47. Operators of CEM's installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include: A. time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; B. 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; C. applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; D. a negative declaration when no excess emissions occurred. [Kern County Rule 108 and District Rule 1080, 8.0] Federally Enforceable Through Title V Permit

AUTHORITY TO CONSTRUCT


LEGAL OWNER OR OPERATOR: CHEVRON USA INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL CENTRAL
KERN COUNTY, CA

SECTION: NW10  TOWNSHIP: 29S  RANGE: 28E

EQUIPMENT DESCRIPTION:
MODIFICATION OF: 58.2 MMBTU/HR (NOMINAL RATING), 4.0 MW ALLISON MODEL 501-K85 GAS-FIRED TURBINE ENGINE COGENERATION SYSTEM WITH WATER INJECTION, HEAT RECOVERY STEAM GENERATOR, AND CEM SYSTEMS FOR NOX, CO, AND O2: REMOVE FUEL USE LIMIT, INSTALL A SELECTIVE CATALYTIC REDUCTION SYSTEM (SCR), AND REPLACE HEAT RECOVER STEAM GENERATOR (HRSG) WITH ANOTHER UNFIRED HRSG (IF NECESSARY)

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 NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

5. Gas turbine engine shall be fired exclusively on PUC-regulated or FERC-regulated natural gas, or natural gas with sulfur content no greater than 0.8% by weight. [40 CFR 60.333] Federally Enforceable Through Title V Permit

6. If the turbine is fired on PUC-regulated or FERC-regulated natural gas, then maintain on file copies of natural gas bills or other relevant records. [District Rule 2520] 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-1131-1038-10; Nov 8, 2009; 6:53 PM; [000:000]; [AR]; Inspection NOT Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585 Printed on recycled paper.
7. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)(3)] Federally Enforceable Through Title V Permit

8. HHV and LHV of the fuel shall be determined by using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b), District Rule 4703] Federally Enforceable Through Title V Permit

9. This unit shall be equipped with lube oil cooler/accumulator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. During an initial shakedown period, the emissions shall not exceed any of the following limits: 35 ppmvd NOx @ 15% O2 referenced as NO2; 40 ppmvd CO @ 15% O2; 0.0128 lb-PM10/MMBtu; 0.035 lb-VOC/MMBtu referenced as methane; and 0.006 lb-SOx/MMBtu referenced as SO2. The shakedown period shall not exceed 60 calendar days from the initial startup of the unit under this permit. The shakedown period must be concluded prior to the applicable Rule 4703 compliance deadline selected for this unit. The permittee shall maintain a record of the date of initial operation of this unit, fuel combusted (scf/day) on daily basis, results of NOx and CO over 3-hour rolling average period from CEMS. These records shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Upon concluding the initial shakedown period, emissions from the gas turbine system shall not exceed any of the following limits: 5 ppmvd NOx @ 15% O2 referenced as NO2; 40 ppmvd CO @ 15% O2; 0.0128 lb-PM10/MMBtu; 0.035 lb-VOC/MMBtu referenced as methane; and 0.006 lb-SOx/MMBtu referenced as SO2. NOx and CO emission limits are based on 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 NOx and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

12. Upon concluding the initial shakedown period, emissions from the gas turbine system, on days when startup, shutdown, or black start occurs, shall not exceed any of the following limits: 42.7 lb-NOx/day referenced as NO2; 1,408.3 lb-CO/day; 8.4 lb-SOx/day; 17.9 lb-PM10/day; 116.5 lb-VOC/day referenced as methane; and 39.7 lb-NH3/day. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 9,418 lb-NOx/year; 51,864 lb-CO/year; 3,059 lb-SOx/year; 6,526 lb-PM10/year; 18,183 lb-VOC/year; 14,486 lb-NH3/year. All annual emission limits are based on 12 consecutive month rolling emissions total. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Ammonia (NH3) emissions shall not exceed 21 ppmvd @ 15% O2 over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Each three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period shall commence on the hour. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. The twenty-four hour average will be calculated starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each calendar month in a twelve consecutive month rolling emissions total shall commence at the beginning of the first day of the month. The twelve consecutive month rolling emissions totals used to determine compliance with annual emission limits shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit

17. 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 NOx, CO, and O2 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

CONDITIONS CONTINUE ON NEXT PAGE
18. 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

19. 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

20. Source testing to measure start-up mass emission rates of NOx, CO, and VOC shall be conducted for one of the gas turbine engines (S-1131-1038 or -1039) within 60-days of initial startup under this permit and at least once every seven years thereafter. CEMS relative accuracy shall be determined during source testing in accordance with the procedure listed in 40 CFR Part 60, Appendix F with any necessary changes approved by the District. [District Rule 1081] Federally Enforceable Through Title V Permit

21. Source testing to determine compliance with the NOx, CO and NH3 emission rates (ppmv@ 15% O2) during normal operation shall be conducted within 60 days of initial startup under this permit and annually thereafter. [District Rules 2201 and 4703, CFR 60.335(a)] Federally Enforceable Through Title V Permit

22. For the purpose of determining compliance with the emissions limits (ppmv@ 15% O2) 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

23. The following test methods shall be used: NOx - 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; PM10 - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - 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, 40 CFR 60.335(a), and 40 CFR 60.335(b)(1)] 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 owner or operator shall install, certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) which continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns, provided that CEMS passes the relative accuracy requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 (PS-2) and District approved protocol for startups. If relative accuracy of CEMS cannot be demonstrated during the startup, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from the source test conducted by the facility to determine compliance with emission limits contained in this document. [District Rules 1080, 2201 and 4703, 40 CFR 60.334(b)(1)] Federally Enforceable Through Title V Permit

26. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

27. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS 2), or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(1)] Federally Enforceable Through Title V Permit

28. In accordance with 40 CFR Part 60, Appendix F, 5.1, the CEMS must be audited at least once each calendar quarter. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
29. NOx, CO and O2 concentrations from the gas turbine systems operating under permits S-1131-1038 and S-1131-1039 shall be monitored by a common CEMS. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: (1) perform annual RATA testing on at least one unit (S-1131-1038 or S-1128-1039), and rotate the unit tested so that each unit is tested over two years; (2) perform annual RAA testing for the unit for which the annual RATA is not performed, (3) if a unit fails RAA testing, RATA test must be conducted within 60 days on the failed unit, and 4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed on each unit. [District Rule 1080] Federally Enforceable Through Title V Permit

30. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit

31. The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(b), or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(3)] Federally Enforceable Through Title V Permit

32. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit

33. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

34. The permittee shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

35. The owner or operator shall submit a written report of CEM operations 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 NOx emissions, 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 CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.334(j)(5)] Federally Enforceable Through Title V Permit

36. Monitor downtime for NOx shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx concentration or diluent O2 (or both). [40 CFR 60.334(j)(1)(iii)(B)] Federally Enforceable Through Title V Permit

37. 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 H2S 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 60.335(b)(10)] Federally Enforceable Through Title V Permit

38. Should the applicant decide to conduct performance evaluation of CEMS with the initial performance test, a minimum of 9 reference method runs, with a minimum time per run of 21 minutes, at a single load level, between 90 and 100 percent of peak (or the highest physically achievable) load shall be performed. The test data obtained during these runs can be used to demonstrate compliance with the applicable NOx emission limit and to provide reference method data for the RATA of the CEMS. The requirement to test at three additional load levels is waived under this option. [40 CFR 60.335(b)(6)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
39. A totalizing mass or volumetric fuel flow computer shall be utilized and maintained to calculate the amount of natural gas combusted based on measured flow meter parameters (fuel pressure and temperature) and gas composition. [District Rule 4703] Federally Enforceable Through Title V Permit

40. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit

41. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit

42. The emission control systems shall be in operation and emissions shall be minimized to the extent of its technology during startup (black start) and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit

43. 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

44. 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

45. 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

46. A black start event is defined as the startup of a unit while the cogeneration plant is electrically separated from the utility grid. A black start shall not exceed 4.0 hours per event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

47. The owner or operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly. [District Rule 4703] Federally Enforceable Through Title V Permit

48. 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 (or black start) and each shutdown time period. [District Rule 4703] Federally Enforceable Through Title V Permit

49. 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. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

50. NOx emissions shall not exceed 150 ppmvd @ 15% O2 (1-hour average), excluding startup (black start), shutdown and reduced load periods. [40 CFR 60.332(a)(1) & 60.332(a)(2)] Federally Enforceable Through Title V Permit

51. Formerly S-1109-373-15. [District Rule]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1131-1039-9

LEGAL OWNER OR OPERATOR: CHEVRON USA INC

MAILING ADDRESS: PO BOX 1392

BAKERSFIELD, CA 93302

LOCATION:

HEAVY OIL CENTRAL
KERN COUNTY, CA

SECTION: NW10  TOWNSHIP: 29S  RANGE: 28E

ISSUANCE DATE: 11/09/2009

EQUIPMENT DESCRIPTION:
MODIFICATION OF: 58.2 MMBTU/HR (NOMINAL RATING), 4.0 MW ALLISON MODEL 501-KB5 GAS-FIRED TURBINE ENGINE COGENERATION SYSTEM WITH WATER INJECTION, HEAT RECOVERY STEAM GENERATOR, AND CEM SYSTEMS FOR NOX, CO, AND O2; DESIGNATE NON-COMPLIANT DORMANT EMISSION UNIT FOR TIER-3 NOX STANDARDS OF RULE 4703

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 NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010]

4. The fuel supply line shall be physically disconnected from this unit. [District Rule 4703]

5. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4703 and all other applicable District regulations. [District Rule 4703]

6. Either conventional or pilotless fuel nozzles may be used. [District Rule 2010] Federally Enforceable Through Title V Permit

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 Sadedin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Northern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. Lube oil cooler/accumulator shall be equipped with device to prevent detectable emissions. [District NSR Rule] Federally Enforceable Through Title V Permit

8. If water injection is inoperative, turbine shall be shut down. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Turbine shall not burn more than 1.33 MMscf/day of natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit

10. All turbine exhaust shall flow to heat recovery steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

11. CEM equipment shall be maintained and calibrated according to EPA guidelines specified in CFR Part 60, Appendix B. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Audits of monitors shall be conducted at least once every 12 months by independent testing lab in accordance with EPA guidelines, witnessed by District, and reports shall be submitted to District within 60 days of audit. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Unit shall be equipped with continuously recording fuel gas flowmeter. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Gas turbine engine exhaust may be diverted to bypass stack under Rule 1100 (Equipment Breakdown), provided all applicable record keeping and reporting requirements of Rule 1160 are fulfilled. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Compliance source testing for NOx, CO, fuel gas sulfur content, and demonstrated percent efficiency of gas turbine engine shall be conducted at least once every 12 months. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit

16. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

17. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours and two hours, respectively, per occurrence. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Except during periods of gas turbine engine startup/shutdown, gas turbine water injection rate shall be maintained at water-to-fuel ratio documented to achieve compliance with emission limits. [District NSR Rule] Federally Enforceable Through Title V Permit

19. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NOx output. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed any of the following: PM10: 17.9 lb/day, SOx (as SO2): 8.4 lb/day, NOx (as NO2): 180.2 lb/day, VOC: 48.9 lb/day, or CO: 125.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Except during periods of startup/shutdown, emission rates (3-hour rolling average) shall not exceed any of the following: PM10: 0.0128 lb/MBTU, SOx (as SO2): 0.006 lb/MBTU, NOx (as NO2): 0.129 lb/MBTU or 38 ppmvd @ 15% O2, VOC: 0.035 lb/MBTU, or CO: 40 ppmvd @ 15% O2. [District NSR Rule & Rule 4703] Federally Enforceable Through Title V Permit

22. Except during periods of thermal stabilization or reduced loads, NOx emission rate shall not exceed 35 ppmvd at 15% O2 on a 3 hour rolling average basis. [District Rule 4703, 5.1.2 and 7.2.1]

23. NOx emission rate (one hour average) shall not exceed the NSPS standard of 206 ppmvd @ 15% O2. [District Rule 4001] Federally Enforceable Through Title V Permit

24. Permittee shall report the following emission exceedences to the District: emission rates of NOx & CO on a three-hour rolling average, NSPS emission rate on one hour average, and DEL of NOx & CO during days of gas turbine engine startup/shutdown. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
25. On days of gas turbine engine startup/shutdown, permittee shall demonstrate compliance with NOx and CO daily emission limitations by records of calculations using CEM data, fuel rate data, and daily hours of operation data. [District NSR Rule] Federally Enforceable Through Title V Permit

26. For units equipped with continuous emissions monitors (CEMs), CEM records shall be used in place of calculated emissions. [District NSR Rule] Federally Enforceable Through Title V Permit

27. If monitoring provisions fail, the emissions shall be calculated on operational data (steam production rate, inlet air and exhaust gas flowrates, etc.) or, if such data is not available, for the four days of operation preceding the breakdown. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of quantity of fuel used per day, all maintenance activities related to this unit, and date and time of fuel nozzle replacement, and type of fuel nozzle installed. [District NSR Rule] Federally Enforceable Through Title V Permit

29. Operator shall not discharge into the atmosphere combustion pollutants (PM) exceeding in concentration at the point of discharge, 0.1 gr/dscf. [District Rule 4201; Kern County Rule 404] Federally Enforceable Through Title V Permit

30. Reduced load period shall be defined as the time during which a gas turbine is operated at less than rated capacity in order to change the exhaust gas diverter gate not exceeding one hour. [District Rule 4703, 3.16] Federally Enforceable Through Title V Permit

31. Thermal stabilization period shall be defined as the start-up or shutdown time necessary to bring the heat recovery steam generator to proper temperature, not exceeding two hours. [District Rule 4703, 3.21] Federally Enforceable Through Title V Permit

32. Operator shall be required to conform to the compliance testing procedures described in District Rule 1081. [Kern County Rule 108.1; District Rule 1081] Federally Enforceable Through Title V Permit

33. The sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit

34. The sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

35. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

36. Nitrogen oxides (NOx) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O2) concentrations shall be determined using EPA Method 3, 3A, or 20. [40 CFR 60.335(b) and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit

37. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332(a),(b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit

38. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [Kern County Rule 108; District Rule 1080] Federally Enforceable Through Title V Permit

39. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEM's that have been installed pursuant to District Rule 1080, and emission measurements. [Kern County Rule 108; District Rule 1080; 40 CFR 60.7 (b)] Federally Enforceable Through Title V Permit

40. Results of continuous emission monitoring must be averaged in accordance with the requirements of 40 CFR 60.13. [40 CFR 60.334(a),(b),(c) and District Rule 4703, 5.0] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
41. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

42. Operator shall install, operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, and the exhaust gas NOx concentration at 15% O2 on a dry basis. [40 CFR 60.334(a),(b)] Federally Enforceable Through Title V Permit

43. The continuous NOx monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [Kern County Rule 108 and District Rule 1080, 6.7] Federally Enforceable Through Title V Permit

44. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit

45. A violation of NOx emission standards indicated by the NOx CEM shall be reported by the operator to the APCO within 96 hours. [Kern County Rule 108 and District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

46. The APCO shall be notified no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [Kern County Rule 108 and District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

47. Operators of CEM's installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include: A. time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; B. 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; C. applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; D. a negative declaration when no excess emissions occurred. [Kern County Rule 108 and District Rule 1080, 8.0] Federally Enforceable Through Title V Permit

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1131-1039-10

LEGAL OWNER OR OPERATOR: CHEVRON USA INC
MAILING ADDRESS:
PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION:
HEAVY OIL CENTRAL
KERN COUNTY, CA

SECTION: NW10   TOWNSHIP: 29S   RANGE: 28E

EQUIPMENT DESCRIPTION:
MODIFICATION OF: 58.2 MM BTU/HR (NOMINAL RATING), 4.0 MW ALLISON MODEL 501-KB5 GAS-FIRED TURBINE ENGINE COGENERATION SYSTEM WITH WATER INJECTION, HEAT RECOVERY STEAM GENERATOR, AND CEM SYSTEMS FOR NOX, CO, AND O2: REMOVE FUEL USE LIMIT, INSTALL A SELECTIVE CATALYTIC REDUCTION SYSTEM (SCR), AND REPLACE HEAT RECOVER STEAM GENERATOR (HRSG) WITH ANOTHER UNFIRED HRSG (IF NECESSARY)

ISSUANCE DATE: 11/09/2009

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 76.7 and 76.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

5. Gas turbine engine shall be fired exclusively on PUC-regulated or FERC-regulated natural gas, or natural gas with sulfur content no greater than 0.8% by weight. [40 CFR 60.333] Federally Enforceable Through Title V Permit

6. If the turbine is fired on PUC-regulated or FERC-regulated natural gas, then maintain on file copies of natural gas bills or other relevant records. [District Rule 2520] 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 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 Sadreddin, Executive Director / APD

DAVID WARNER, Director of Permit Services
(S-1131-1039-10: Nov 9 2009) / APD / REUIOUI / 41/4/17750

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.33(h)(3)] Federally Enforceable Through Title V Permit

8. HHV and LHV of the fuel shall be determined by using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b), District Rule 4703] Federally Enforceable Through Title V Permit

9. This unit shall be equipped with lube oil cooler/accumulator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. During an initial shakedown period, the emissions shall not exceed any of the following limits: 35 ppmvd NOx @ 15% O2 referenced as NO2; 40 ppmvd CO @ 15% O2; 0.0128 lb-PM10/MMBtu; 0.035 lb-VOC/MMBtu referenced as methane; and 0.006 lb-SOx/MMBtu referenced as SO2. The shakedown period shall not exceed 60 calendar days from the initial startup of the unit under this permit. The shakedown period must be concluded prior to the applicable Rule 4703 compliance deadline selected for this unit. The permittee shall maintain a record of the date of initial operation of this unit, fuel combusted (scf/day) on daily basis, results of NOx and CO over 3-hour rolling average period from CBMS. These records shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Upon concluding the initial shakedown period, emissions from the gas turbine system shall not exceed any of the following limits: 5 ppmvd NOx @ 15% O2 referenced as NO2; 40 ppmvd CO @ 15% O2; 0.0128 lb-PM10/MMBtu, 0.035 lb-VOC/MMBtu referenced as methane; and 0.006 lb-SOx/MMBtu referenced as SO2. NOx and CO emission limits are based on 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 NOx and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

12. Upon concluding the initial shakedown period, emissions from the gas turbine system, on days when startup, shutdown, or black start occurs, shall not exceed any of the following limits: 42.7 lb-NOx/day referenced as NO2; 1,408.3 lb-CO/day; 8.4 lb-SOx/day; 17.9 lb-PM10/day; 116.5 lb-VOC/day referenced as methane; and 39.7 lb-NH3/day. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 9,418 lb-NOx/year; 51,864 lb-CO/year; 3,059 lb-SOx/year; 6,526 lb-PM10/year; 18,183 lb-VOC/year; 14,486 lb-NH3/year. All annual emission limits are based on 12 consecutive month rolling emissions total. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Ammonia (NH3) emissions shall not exceed 21 ppmvd @ 15% O2 over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Each three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period shall commence on the hour. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. The twenty-four hour average will be calculated starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each calendar month in a twelve consecutive month rolling emissions total shall commence at the beginning of the first day of the month. The twelve consecutive month rolling emissions totals used to determine compliance with annual emission limits shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit

17. 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 NOx, CO, and O2 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

CONDITIONS CONTINUE ON NEXT PAGE
18. 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

19. 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

20. Source testing to measure start-up mass emission rates of NOx, CO, and VOC shall be conducted for one of the gas turbine engines (S-1131-1038 or -1039) within 60-days of initial startup under this permit and at least once every seven years thereafter. CEMS relative accuracy shall be determined during source testing in accordance with the procedure listed in 40 CFR Part 60, Appendix F with any necessary changes approved by the District. [District Rule 1081] Federally Enforceable Through Title V Permit

21. Source testing to determine compliance with the NOx, CO and NH3 emission rates (ppmv @ 15% O2) during normal operation shall be conducted within 60 days of initial startup under this permit and annually thereafter. [District Rules 2201 and 4703, CFR 60.335(a)] Federally Enforceable Through Title V Permit

22. For the purpose of determining compliance with the emissions limits (ppmv @ 15% O2) 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

23. The following test methods shall be used: NOx - 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; PM10 - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - 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, 40 CFR 60.335(a), and 40 CFR 60.335(b)(1)] 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 owner or operator shall install, certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) which continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns, provided that CEMS passes the relative accuracy requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 (PS-2) and District approved protocol for startups. If relative accuracy of CEMS cannot be demonstrated during the startup, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from the source test conducted by the facility to determine compliance with emission limits contained in this document. [District Rules 1080, 2201 and 4703, 40 CFR 60.334(b)(1)] Federally Enforceable Through Title V Permit

26. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

27. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS 2), or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(1)] Federally Enforceable Through Title V Permit

28. In accordance with 40 CFR Part 60, Appendix F, 5.1, the CEMS must be audited at least once each calendar quarter. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
29. NO\textsubscript{x}, CO and O\textsubscript{2} concentrations from the gas turbine systems operating under permits S-1131-1038 and S-1131-1039 shall be monitored by a common CEMS. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: (1) perform annual RATA testing on at least one unit (S-1131-1038 or S-1128-1039), and rotate the unit tested so that each unit is tested over two years; (2) perform annual RAA testing for the unit for which the annual RATA is not performed, (3) if a unit fails RAA testing, RATA test must be conducted within 60 days on the failed unit, and (4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed on each unit. [District Rule 1080] Federally Enforceable Through Title V Permit

30. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit

31. The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(3)] Federally Enforceable Through Title V Permit

32. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit

33. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

34. The permittee shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

35. The owner or operator shall submit a written report of CEM operations 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 NO\textsubscript{x} emissions, 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 CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.334(j)(5)] Federally Enforceable Through Title V Permit

36. Monitor downtime for NO\textsubscript{x} shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO\textsubscript{x} concentration or diluent O\textsubscript{2} (or both). [40 CFR 60.334(j)(1)(iii)(B)] Federally Enforceable Through Title V Permit

37. 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 H2S 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 60.335(b)(10)] Federally Enforceable Through Title V Permit

38. Should the applicant decide to conduct performance evaluation of CEMS with the initial performance test, a minimum of 9 reference method runs, with a minimum time per run of 21 minutes, at a single load level, between 90 and 100 percent of peak (or the highest physically achievable) load shall be performed. The test data obtained during these runs can be used to demonstrate compliance with the applicable NO\textsubscript{x} emission limit and to provide reference method data for the RATA of the CEMS. The requirement to test at three additional load levels is waived under this option. [40 CFR 60.335(b)(6)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
39. A totaling mass or volumetric fuel flow computer shall be utilized and maintained to calculate the amount of natural gas combusted based on measured flow meter parameters (fuel pressure and temperature) and gas composition. [District Rule 4703] Federally Enforceable Through Title V Permit

40. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit

41. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit

42. 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

43. 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

44. 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

45. 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

46. A black start event is defined as the startup of a unit while the cogen plant is electrically separated from the utility grid. A black start shall not exceed 4.0 hours per event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

47. The owner or operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly. [District Rule 4703] Federally Enforceable Through Title V Permit

48. 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 (or black start) and each shutdown time period. [District Rule 4703] Federally Enforceable Through Title V Permit

49. 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. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

50. NOx emissions shall not exceed 150 ppmv @ 15% O2 (1-hour average), excluding startup (black start), shutdown and reduced load periods. [40 CFR 60.332(a)(1) & 60.332(a)(2)] Federally Enforceable Through Title V Permit

51. Formerly S-1109-374-15. [District Rule]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1131-1079-10

LEGAL OWNER OR OPERATOR: CHEVRON USA INC
MAILING ADDRESS: PO BOX 1392
                  BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL CENTRAL
          KERN COUNTY, CA

SECTION: 30  TOWNSHIP: 28S  RANGE: 28E

EQUIPMENT DESCRIPTION:
MODIFICATION OF: COGENERATION UNIT #1 (FEE C LEASE - WEST UNIT) SOLAR CENTAUR 50-T5901S, 48.7
MMBTU/HR (NOMINAL RATING) GAS-FIRED DOE CERAMIC GTE, 4.1 MW, WITH LUBE OIL MIST ELIMINATOR,
UNFIRED HEAT RECOVERY STEAM GENERATOR, AND CONTINUOUS MONITORING SYSTEM. DESIGNATE NON-
COMPLIANT DORMANT EMISSION UNIT FOR TIER-3 NOX STANDARDS OF RULE 4703

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 NSR Rule] Federally Enforceable
   Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
   to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
   [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for
   changes specified in conditions below. [District Rule 2010]

4. The fuel supply line shall be physically disconnected from this unit. [District Rule 4703]

5. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all
   necessary retrofits required to comply with the applicable requirements of District Rule 4703 and all other applicable
   District regulations. [District Rule 4703]

6. Gas turbine shall be fired exclusively with PUC or FERC regulated natural gas or natural gas documented to be of
   comparable quality. [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 by verifying 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 Sadrekon, Executive Director / APCO

DAVID WARTER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585 Printed on recycled paper.
7. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

8. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Heat recovery steam generator exhaust stack shall be equipped with permanent provisions to allow collection of gas sample consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit

10. Emission rates shall not exceed any of the following: PM-10: 0.015 lb/MMBTU, SOx (as SO2): 0.003 lb/MMBTU, NOx (as NO2): 25 ppmv @ 15% O2, VOC: 0.016 lb/MMBTU, or CO: 33 ppmv @ 15% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emissions shall not exceed either of the following NSPS Subpart GG limits (1 hour standard): NOx (as NO2): 171 ppmvd @ 15% O2, or SOx (as SO2): 150 ppmvd @ 15% O2. [District Rule 4001] Federally Enforceable Through Title V Permit

12. Permittee shall satisfy all applicable requirements of District Rule 4001, New Source Performance Standards - Subpart GG and notification and reporting requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

13. Compliance source testing for NOx, CO and demonstrated percent efficiency shall be conducted within 60 days of initial startup, and not less than once every 12 months for each mode of operation (standard operation and each experimental mode of operation). [District Rule 4703] Federally Enforceable Through Title V Permit

14. Compliance source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

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

17. Compliance with SOx emission limits shall be demonstrated by fuel gas sulfur content analysis at the time of NOx testing. Sulfur testing is not required for PUC or FERC regulated natural gas. [District Rule 1081] Federally Enforceable Through Title V Permit

18. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or EPA Method 20, CO (ppmv) - EPA Method 10 or 10B, stack gas oxygen - EPA Methods 3, 3A or 20, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081 and 4703] Federally Enforceable Through Title V Permit

19. Permittee shall maintain onsite for a period of at least five years accurate daily records of Predictive Emissions Monitoring System (PEMS) gas turbine engine exhaust NOx concentrations and such records shall be made readily available for District inspection upon request. [District NSR Rule and 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. Permittee’s written request for approval of experimental components and operating conditions shall include at minimum the following information: components to be installed and conditions for operation, expected duration of operation, and description of, and justification for, expected emissions and maximum heat input rate. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit

21. Permittee’s request for approval of experimental components and operating conditions shall be submitted to the District at least 30 days prior to the initial planned installation date. The permittee shall also notify the District at least 15 days prior to the initial actual installation of the experimental components or start of operating conditions. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit

22. Permittee shall notify the District, in writing, of turbine operating mode (standard or experimental) no later than 48 hours after changing mode of operation. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. Operator shall not discharge into the atmosphere combustion contaminants (PM) exceeding in concentration at the point of discharge, 0.1 gr/dscf. [District Rule 4201; Kern County Rule 404] Federally Enforceable Through Title V Permit

24. Operator shall not exceed a NOx emission rate of: A. (If Rating <10 MW) 42 ppmvd @ 15% O2, excluding the thermal stabilization periods or reduced load periods. [40 CFR 60.332(a)(1) & 60.332(a)(2); District Rule 4703, 5.1.1] Federally Enforceable Through Title V Permit

25. Operator shall be required to conform to the compliance testing procedures described in District Rule 1081. [Kern County Rule 108.1; District Rule 1081] Federally Enforceable Through Title V Permit

26. The HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, OR ASTM 1945. [40 CFR 60.332(a),(b)] Federally Enforceable Through Title V Permit

27. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332(a),(b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit

28. The operator shall provide source test information annually regarding the demonstrated percent efficiency (EFF) as defined in District Rule 4703, 5.1.1. [40 CFR 60.332(a),(b) and 4703, 5.1.1] Federally Enforceable Through Title V Permit

29. Operations during periods of startup and shutdown shall not constitute representative conditions for the purpose of a NOx performance test nor shall NOx emissions in excess of the level of the emission limit shown in this permit during periods of startup and shutdown be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard. Operation during periods of malfunction shall not constitute representative conditions for the purpose of determining compliance with emission limits based on 40 CFR 60.8 [40 CFR 60.8(c)] Federally Enforceable Through Title V Permit

30. If the turbine is fired on PUC or FERC-regulated natural gas or natural gas documented to be of comparable quality, then maintain on file copies of natural gas bills. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and 4703, 6.2.4] Federally Enforceable Through Title V Permit

32. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit

33. Permittee shall maintain onsite for a period of at least five years accurate records of daily fuel consumption, daily fuel sulfur content, and daily fuel nitrogen content and shall make such records readily available for District inspection upon request. Daily monitoring of fuel sulfur and nitrogen contents is not required for PUC or FERC regulated natural gas. [District Rules 4001 and 2201] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1131-1079-11
ISSUANCE DATE: 11/09/2009

LEGAL OWNER OR OPERATOR: CHEVRON USA INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL CENTRAL
KERN COUNTY, CA

SECTION: 30  TOWNSHIP: 28S  RANGE: 28E

EQUIPMENT DESCRIPTION:
MODIFICATION OF: COGENERATION UNIT #1 (FEE C LEASE - WEST UNIT) SOLAR CENTAUR 50-T5901S, 48.7
MMBTU/HR (NOMINAL RATING) GAS-FIRED DOE CERAMIC GTE, 4.1 MW, WITH LUBE OIL MIST ELIMINATOR,
UNFIRED HEAT RECOVERY STEAM GENERATOR, AND CONTINUOUS MONITORING SYSTEM: REMOVE HEAT
INPUT RATE (MMBTU/DAY), INSTALL A SELECTIVE CATALYTIC REDUCTION SYSTEM (SCR), A CONTINUOUS
EMISSION MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO AND O2 CONCENTRATIONS, AND REPLACE
STRUTHERS UNFIRED HEAT RECOVER STEAM GENERATOR (HRSG) WITH ANOTHER UNFIRED HRSG (IF
NECESSARY)

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 NSR Rule] Federally Enforceable
Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
[District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally
Enforceable Through Title V Permit

5. Gas turbine engine shall be fired exclusively on PUC-regulated or FERC-regulated natural gas, or natural gas
documented to be of comparable quality. [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 Sadreddin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1131-1079-11  Rev B 9-2009 5-4-04 REV . 4th Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
Printed on recycled paper.
6. If the turbine is fired on PUC-regulated or FERC-regulated natural gas, then maintain on file copies of natural gas bills or other relevant records. [District Rule 2520] Federally Enforceable Through Title V Permit

7. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit

8. HHV and LHV of the fuel shall be determined by using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b), District Rule 4703] Federally Enforceable Through Title V Permit

9. During an initial shakedown period, the emissions shall not exceed any of the following limits: 25 ppmvd NOx @ 15% O2 referenced as NO2; 33 ppmvd CO @ 15% O2; 0.015 lb-PM10/MMBtu; 0.016 lb-VOC/MMBtu referenced as methane; and 0.003 lb-SOx/MMBtu referenced as SO2. The shakedown period shall not exceed 60 calendar days from the initial startup of the unit under this permit. The shakedown period must be concluded prior to the applicable Rule 4703 compliance deadline selected for this permit. The permittee shall maintain a record of the date of initial operation of this unit, fuel combusted (scfd/day) on daily basis, and water-to-fuel ratio or results of NOx and CO over 3-hour rolling average period from CEMS (if operational). These records shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Upon concluding the initial shakedown period, emissions from the gas turbine system shall not exceed any of the following limits: 5 ppmvd NOx @ 15% O2 referenced as NO2; 33 ppmvd CO @ 15% O2; 0.015 lb-PM10/MMBtu; 0.016 lb-VOC/MMBtu referenced as methane; and 0.003 lb-SOx/MMBtu referenced as SO2. NOX and CO emission limits are based on 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 NOX and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

11. Upon concluding the initial shakedown period, emissions from the gas turbine system, on days when startup, shutdown, or black start occurs, shall not exceed any of the following limits: 39.3 lb-NOx/day referenced as NO2; 1,376.9 lb-CO/day; 3.5 lb-SOx/day; 17.5 lb-PM10/day; 92.0 lb-VOC/day referenced as methane; and 33.2 lb-NH3/day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 7,899 lb-NOx/year; 37,828 lb-CO/year; 1,280 lb-SOx/year; 6,399 lb-PM10/year; 7,193 lb-VOC/year; 12,121 lb-NH3/year. All annual emission limits are based on 12 consecutive month rolling emissions total. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Ammonia (NH3) emissions shall not exceed 21 ppmvd @ 15% O2 over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Each three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period shall commence on the hour. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. The twenty-four hour average will be calculated starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each calendar month in a twelve consecutive month rolling emissions total shall commence at the beginning of the first day of the month. The twelve consecutive month rolling emissions totals used to determine compliance with annual emission limits shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit

16. 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 NOx, CO, and O2 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
17. 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

18. 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

19. Source testing to measure start-up mass emission rates of NOx, CO, and VOC shall be conducted for one of the gas turbine engines (S-1131-974 or -1079) within 60-days of initial startup under this permit and at least once every seven years thereafter. CEMS relative accuracy shall be determined during source testing in accordance with the procedure listed in 40 CFR Part 60, Appendix F with any necessary changes approved by the District. [District Rule 1081] Federally Enforceable Through Title V Permit

20. Source testing to determine compliance with the NOx, CO and NH3 emission rates (ppmv @ 15% O2) shall be conducted within 60 days of initial startup under this permit and annually thereafter for each mode of operation (standard operation and each experimental mode of operation). [District Rules 2201 and 4703, CFR 60.335(a)] Federally Enforceable Through Title V Permit

21. For the purpose of determining compliance with the emissions limits (ppmv @ 15% O2) 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

22. The following test methods shall be used: NOx - 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; PM10 - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - 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, 40 CFR 60.335(a), and 40 CFR 60.335(b)(1)] Federally Enforceable Through Title V Permit

23. 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

24. The owner or operator shall install, certify, maintain, operate, and quality assure a continuous emission monitor system (CEMS) which continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns, provided that CEMS passes the relative accuracy requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 (PS-2) and District approved protocol for startups. If relative accuracy of CEMS cannot be demonstrated during the startup, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from the source test conducted by the facility to determine compliance with emission limits contained in this document. [District Rules 1080, 2201 and 4703, 40 CFR 60.334(b)(1)] Federally Enforceable Through Title V Permit

25. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

26. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix B Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS 2), or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(1)] Federally Enforceable Through Title V Permit

27. In accordance with 40 CFR Part 60, Appendix F, 5.1, the CEMS must be audited at least once each calendar quarter. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 100] Federally Enforceable Through Title V Permit
28. NOx, CO and O2 concentrations from the gas turbine systems operating under permits S-1131-974 and S-1131-1079 shall be monitored by a common CEMS. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: (1) perform annual RATA testing on at least one unit (S-1131-974 or S-1131-1079), and rotate the unit tested so that each unit is tested over two years; (2) perform annual RAA testing for the unit for which the annual RATA is not performed, (3) if a unit fails RAA testing, RATA test must be conducted within 60 days on the failed unit, and (4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed on each unit. [District Rule 1080] Federally Enforceable Through Title V Permit

29. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit

30. The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.334(b)(3)] Federally Enforceable Through Title V Permit

31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit

32. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

33. The permittee shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

34. The owner or operator shall submit a written report of CEM operations 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 NOx emissions, 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 CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.334(j)(5)] Federally Enforceable Through Title V Permit

35. Monitor downtime for NOx shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx concentration or diluent O2 (or both). [40 CFR 60.334(j)(1)(iii)(B)] Federally Enforceable Through Title V Permit

36. 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 H2S 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 60.335(b)(10)] Federally Enforceable Through Title V Permit

37. Should the applicant decide to conduct performance evaluation of CEMS with the initial performance test, a minimum of 9 reference method runs, with a minimum time per run of 21 minutes, at a single load level, between 90 and 100 percent of peak (or the highest physically achievable) load shall be performed. The test data obtained during these runs can be used to demonstrate compliance with the applicable NOx emission limit and to provide reference method data for the RATA of the CEMS. The requirement to test at three additional load levels is waived under this option. [40 CFR 60.335(b)(6)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
38. A totalizing mass or volumetric fuel flow computer shall be utilized and maintained to calculate the amount of natural gas combusted based on measured flow meter parameters (fuel pressure and temperature) and gas composition. [District Rule 4703] Federally Enforceable Through Title V Permit

39. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit

40. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit

41. 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

42. 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

43. 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

44. 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

45. A black start event is defined as the startup of a unit while the cogen plant is electrically separated from the utility grid. A black start shall not exceed 4.0 hours per event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

46. The owner or operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly. [District Rule 4703] Federally Enforceable Through Title V Permit

47. 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 (or black start) and each shutdown time period. [District Rule 4703] Federally Enforceable Through Title V Permit

48. 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. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

49. Emissions shall not exceed either of the following NSPS Subpart GG limits (1 hour standard): NOx (as NO2): 171 ppmvd @ 15% O2, or SOx (as SO2): 150 ppmvd @ 15% O2. [40 CFR 60.332(c)] Federally Enforceable Through Title V Permit

50. Permittee’s written request for approval of experimental components and operating conditions shall include at minimum the following information: components to be installed and conditions for operation, expected duration of operation, and description of, and justification for, expected emissions and maximum heat input rate. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

51. Permittee’s request for approval of experimental components and operating conditions shall be submitted to the District at least 30 days prior to the initial planned installation date. The permittee shall also notify the District at least 15 days prior to the initial actual installation of the experimental components or start of operating conditions. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

52. Permittee shall notify the District, in writing, of turbine operating mode (standard or experimental) no later than 48 hours after changing mode of operation. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit