



DEC 29 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-1129  
Project # S-1085346**

Dear Mr. Rios:

The Air Pollution Control Officer has issued Authority to Construct permits to Chevron USA, Inc. for its six (6) gas turbine cogeneration units located at McKittrick and North Midway oil fields in Heavy Oil Western Stationary Source in Kern County, California. The modifications involve with making each of the gas turbine engines non-compliant dormant emissions units and subsequently retrofit each with an SCR system for District Rule 4703 compliance.

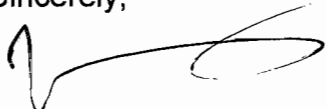
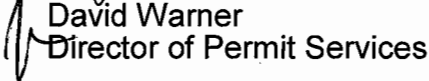
Enclosed are copies of the Authority to Construct permits and a copy of the notice of final action to be published approximately three days from the date of this letter.

Notice of the District's preliminary decision to issue these Authority to Construct permits with Certificate of Conformity was published on November 18, 2009. The District's analysis of the proposal was also sent to CARB on November 13, 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. Jim Swaney, Permit Services Manager, at (559) 230-5897.

Thank you for your cooperation in this matter.

Sincerely,

David Warner  
Director of Permit Services

Enclosures  
c: Sajjad Ahmad, Permit Services

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

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

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061

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



DEC 29 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-1129**  
**Project # S-1085346**

Dear Mr. Tollstrup:

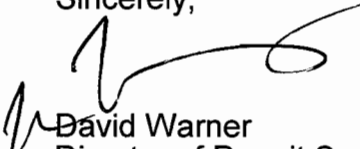
The Air Pollution Control Officer has issued Authority to Construct permits to Chevron USA, Inc. for its six (6) gas turbine cogeneration units located at McKittric and North Midway oil fields in Heavy Oil Western Stationary Source in Kern County, California. The modifications involve with making each of the gas turbine engines non-compliant dormant emissions units and subsequently retrofit each with an SCR system for District Rule 4703 compliance.

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 these Authority to Construct permits with Certificate of Conformity was published on November 18, 2009. The District's analysis of the proposal was also sent to US EPA Region IX on November 13, 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. Jim Swaney, Permit Services Manager, at (559) 230-5897.

Sincerely,



David Warner  
Director of Permit Services

Enclosures  
c: Sajjad Ahmad, Permit Services

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

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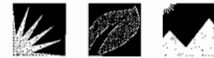
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# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



HEALTHY AIR LIVING™

DEC 29 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-1129  
Project # S-1085346**

Dear Mr. Gruber:

The Air Pollution Control Officer has issued Authority to Construct permits to Chevron USA, Inc. for its six (6) gas turbine cogeneration units located at McKittric and North Midway oil fields in Heavy Oil Western Stationary Source in Kern County, California. The modifications involve with making each of the gas turbine engines non-compliant dormant emissions units and subsequently retrofit each with an SCR system for District Rule 4703 compliance.

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 these Authority to Construct permits with Certificate of Conformity was published on November 18, 2009. The District's analysis of the proposal was also sent to US EPA Region IX and California Air Resources Board (CARB) on November 13, 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. Jim Swaney, Permit Services Manager, at (559) 230-5897.

Sincerely,

David Warner  
Director of Permit Services

Enclosures  
c: Sajjad Ahmad, Permit Services

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

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

Bakersfield Californian

**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 six (6) gas turbine cogeneration units located at McKittric and North Midway oil fields in Heavy Oil Western Stationary Source in Kern County, California. The modifications involve with making each of the gas turbine engines non-compliant dormant emissions units and subsequently retrofit each with an SCR system for District Rule 4703 compliance.

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

The application review for Project #S-1085346, is available for public inspection at [http://www.valleyair.org/notices/public\\_notices\\_idx.htm](http://www.valleyair.org/notices/public_notices_idx.htm) and the District office at the address below. **SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E. GETTYSBURG AVE, FRESNO, CA 93726-0244.**



# AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-1129-47-13

**ISSUANCE DATE:** 12/28/2009

**LEGAL OWNER OR OPERATOR:** CHEVRON U S A INC  
**MAILING ADDRESS:** PO BOX 1392  
BAKERSFIELD, CA 93302

**LOCATION:** HEAVY OIL WESTERN  
CA

**SECTION:** 18 **TOWNSHIP:** 30S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 3.5 MW GAS TURBINE ENGINE COGENERATION UNIT #1 - MCKITTRICK: DESIGNATE AS A NON-COMPLIANT DORMANT EMISSIONS UNIT (DEU) FOR TIER-3 NOX STANDARD OF RULE 4703

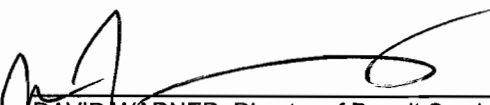
## CONDITIONS

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. Units shall be fired exclusively on PUC-quality natural gas which has a sulfur content of 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

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

  
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DAVID WARNER, Director of Permit Services

S-1129-47-13 Dec 28 2009 8:50AM - AHMADS : Joint Inspection NOT Required

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 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, D 3246 or Double GC for H<sub>2</sub>S and Mercaptans. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
10. If the turbine is not fired on PUC-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 (NO<sub>x</sub>) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O<sub>2</sub>) 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 NO<sub>x</sub> concentration corrected to 15% O<sub>2</sub> (dry). [40 CFR 60.332(a), (b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
14. Unit shall demonstrate compliance annually with NO<sub>x</sub> and CO emissions limits with the duct burner in operation and not in operation. An annual demonstration of compliance with the duct burner in operation is not required in any year in which the duct burner is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the duct burner. An annual demonstration of compliance with the duct burner not in operation is not required in any year in which the duct burner operated continuously in conjunction with the turbine in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the duct burner. [40 CFR 60.335(b) and District Rule 4703, 6.3.2] Federally Enforceable Through Title V Permit
15. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and the quantity used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. The operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
17. 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, source(s) of and quantity of fuel used, fuel sulfur content and fuel nitrogen content. [40 CFR 60.332(a),(b); District Rules 2520, 9.3.2 and 4703, 6.2.4] Federally Enforceable Through Title V Permit
18. The following types of units are not affected units subject to the requirements of the Acid Rain Program: 1) A simple combustion turbine that commenced operation before November 15, 1990, 2) Any unit that, during 1985, did not serve a generator that produced electricity for sale and that did not, as of November 15, 1990, and does not currently, serve a generator that produces electricity for sale, 3) A cogeneration facility which for a unit that commenced construction prior to November 15, 1990, was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 Mwe-hrs actual electric output on an annual basis to any utility power distribution system for sale. Therefore, the requirements of 40 CFR 72.6 do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

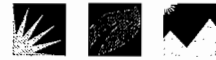
CONDITIONS CONTINUE ON NEXT PAGE

19. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rule 1081, 4201, 3.1; Rules 406 (Fresno), 407 (Kings, San Joaquin, Stanislaus, Tulare, Merced, and Kern), and 404(Madera); 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
20. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern and Stanislaus), and 110 (Madera); Rules 402 (Madera) and 404 (Fresno, Kern, Kings, San Joaquin, Merced, Stanislaus, Tulare); 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
21. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: SJVUAPCD Rule 4703, sections 5.0, 5.1.1, 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.3, 6.4.5, 6.4.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
22. 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). [Rule 4703 and 40 CFR 60.334] 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, 6.2.5] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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 NSPS NOx 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
27. Cogeneration unit includes 48.7 MMBtu/hr (nominal rating) Allison, model 501-KB-5, gas fired turbine engine with either pilotless fuel nozzles or conventional fuel nozzles and 20.0 MMBtu/hr (nominal rating) gas fired Forney duct burner. [District NSR Rule] Federally Enforceable Through Title V Permit
28. Cogeneration unit includes Ideal synchronous electrical generator, Struthers-Wells unfired 22.5 MMBtu/hr steam generator, and an inlet air evaporative cooler. [District NSR Rule] Federally Enforceable Through Title V Permit
29. Turbine lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
30. Fuel gas sulfur content shall not exceed 14 ppmv as hydrogen sulfide (H2S). [District NSR Rule] Federally Enforceable Through Title V Permit
31. Permittee shall notify the District by fax or in writing prior to or within 4 hours of any turbine nozzle replacement, except for identical replacement. [District NSR Rule] Federally Enforceable Through Title V Permit
32. Except during periods of startup/shutdown, emission rates (3 hr average) shall not exceed: PM10: 0.61 lb/hr; SOx (as SO2): 0.16 lb/hr; NOx (as NO2): 30 ppmvd @ 15% O2; VOC: 1.65 lb/hr; and CO: 29 ppmvd @ 15% O2. [District NSR Rule] Federally Enforceable Through Title V Permit
33. NOx (as NO2) and SOx (as SO2) emission rates (1 hr average) shall not exceed NSPS standard of 150 ppmv-dry @ 15% O2, and 150 ppmv-dry @ 15% O2, respectively. [District Rule 2520, 9.3.2; 40 CFR 60.332(c) and 40 CFR 60.333(a)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

34. Emissions shall not exceed the following: PM10: 14.6 lb/day; SOx (as SO2): 3.8 lb/day; NOx (as NO2): 182.4 lb/day; VOC: 39.6 lb/day; and CO: 107.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
35. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption in gas turbine for normal operation and startup/shutdown periods. [District NSR Rule] Federally Enforceable Through Title V Permit
36. Generator gearbox lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
37. Gas turbine engine shall be equipped with continuously recording fuel gas flow rate monitor. [District NSR Rule] Federally Enforceable Through Title V Permit
38. Gas turbine engine shall be equipped with operational water injection system for NOx control. [District NSR Rule] Federally Enforceable Through Title V Permit
39. 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
40. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas samples consistent with EPA methods. [District NSR Rule] Federally Enforceable Through Title V Permit
41. Gas turbine shall be fired exclusively with PUC quality natural gas or equivalent. [District NSR Rule] Federally Enforceable Through Title V Permit
42. Gas turbine engine water injection rate shall be maintained at a water to fuel ratio no less than 0.48/1.0 by weight while operating with pilotless fuel nozzles and no less than 0.8/1.0 by weight while operating with conventional fuel nozzles. [District NSR Rule] Federally Enforceable Through Title V Permit
43. Maximum emission rate of volatile organic compounds (VOC's) from turbine lube oil vent shall not exceed 0.02 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
44. Compliance testing of lube oil vent and gearbox vent shall be required if monthly visible emissions checks from either vent exceeds 5% opacity or equivalent Ringelmann 1/4. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rules 2520, 9.3.2 and NSR] Federally Enforceable Through Title V Permit
45. 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 NSR Rule] Federally Enforceable Through Title V Permit
46. 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. [40 CFR Subpart A 60.2, District NSR Rule] Federally Enforceable Through Title V Permit
47. Permittee shall keep accurate records of fuel sulfur content, and such records shall be made available for District inspection for five years. [40 CFR 60.334(b)(2), District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
48. Annual compliance with GTE/duct burner NOx and CO emission limits (pursuant to Rule 4703 (10/16/97)) and fuel sulfur limit shall be demonstrated by District witnessed or authorized sample collection by independent laboratory. Test results shall be submitted within 60 days. [District NSR Rule and Rule 4703] Federally Enforceable Through Title V Permit
49. The following test methods shall be used: CO (ppmv) - EPA Method 10 or 10B. [District Rules 2520, 9.3.2 and 4703] Federally Enforceable Through Title V Permit





# AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-1129-47-14

**ISSUANCE DATE:** 12/28/2009

**LEGAL OWNER OR OPERATOR:** CHEVRON U S A INC  
**MAILING ADDRESS:** PO BOX 1392  
BAKERSFIELD, CA 93302

**LOCATION:** HEAVY OIL WESTERN  
CA

**SECTION:** 18 **TOWNSHIP:** 30S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 3.5 MW GAS TURBINE ENGINE COGENERATION UNIT #1 - MCKITTRICK: INSTALL A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION TO COMPLY WITH RULE 4703 TIER 3 EMISSION LIMIT OF 5 PPMVD NOX @ 15% O2; INSTALL A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO AND O2 CONCENTRATIONS; REPLACE STRUTHERS-WELLS HEAT RECOVERY STEAM GENERATOR (HRSG) WITH ANOTHER HRSG (IF NECESSARY); AND REPLACE THE EXISTING 20.0 MMBTU/HR DUCT BURNER WITH A NEW 20.0 MMBTU/HR (NOMINAL RATING) DUCT BURNER (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. Cogeneration unit includes 48.7 MMBtu/hr (nominal rating) Allison, model 501-KB-5, gas fired turbine engine with either pilotless fuel nozzles or conventional fuel nozzles and 20.0 MMBtu/hr (nominal rating) gas fired duct burner. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Cogeneration unit includes Ideal synchronous electrical generator, heat recovery steam generator (HRSG), and an inlet air evaporative cooler. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

  
DAVID WARNER, Director of Permit Services

S-1129-47-14 - Dec 28 2009 8:50AM - AHMADS : Joint Inspection NOT Required

5. Turbine lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
8. The gas turbine system (i.e. gas turbine and duct burner) shall be fired exclusively on PUC-regulated gas or PUC-quality natural gas 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
9. The sulfur content in the fuel being combusted shall not exceed 0.71 grains/100 scf, otherwise, the fuel shall be of PUC-regulated quality. [District Rule 2201] Federally Enforceable Through Title V Permit
10. If the gas turbine system is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520] Federally Enforceable Through Title V Permit
11. If the gas turbine system is not fired on PUC-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
12. 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
13. During an initial shakedown period, the emissions shall not exceed any of the following limits: 30 ppmvd NO<sub>x</sub> @ 15% O<sub>2</sub> referenced as NO<sub>2</sub>; 29 ppmvd CO @ 15% O<sub>2</sub>; 0.61 lb-PM<sub>10</sub>/hr; 1.65 lb-VOC/hr referenced as methane; and 0.16 lb-SO<sub>x</sub>/hr referenced as SO<sub>2</sub>. 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 NO<sub>x</sub> 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
14. 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 NO<sub>x</sub> @ 15% O<sub>2</sub> referenced as NO<sub>2</sub>; 29 ppmvd CO @ 15% O<sub>2</sub>; 0.61 lb-PM<sub>10</sub>/hr; 1.65 lb-VOC/hr referenced as methane; and 0.16 lb-SO<sub>x</sub>/hr referenced as SO<sub>2</sub>. NO<sub>x</sub> 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 NO<sub>x</sub> and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
15. 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: 46.6 lb-NO<sub>x</sub>/day referenced as NO<sub>2</sub>; 1,394.7 lb-CO/day; 3.8 lb-SO<sub>x</sub>/day; 14.6 lb-PM<sub>10</sub>/day; 109.0 lb-VOC/day referenced as methane; and 46.8 lb-NH<sub>3</sub>/day. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 11,167 lb-NO<sub>x</sub>/year; 45,793 lb-CO/year; 1,384 lb-SO<sub>x</sub>/year; 5,326 lb-PM<sub>10</sub>/year; 14,790 lb-VOC/year; 17,099 lb-NH<sub>3</sub>/year. All annual emission limits are based on 12 consecutive month rolling emissions totals. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Ammonia (NH<sub>3</sub>) emissions shall not exceed 21 ppmvd @ 15% O<sub>2</sub> over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit
18. 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

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19. 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
20. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO<sub>x</sub>, CO, and O<sub>2</sub> analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. 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
23. Source testing to measure start-up mass emission rates of NO<sub>x</sub>, CO, and VOC shall be conducted for one of the gas turbine engines (S-1129-47, -48, -49) 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
24. Source testing to determine compliance with the NO<sub>x</sub>, CO and NH<sub>3</sub> emission rates (ppmvd @ 15% O<sub>2</sub>) during normal operation shall be conducted 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
25. For the purpose of determining compliance with the emissions limits (ppmvd @ 15% O<sub>2</sub>) during normal operation in this permit, the arithmetic mean of three test runs shall apply, unless two of the three results are above an applicable limit. If two of three runs are above the applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The following test methods shall be used: NO<sub>x</sub> - EPA Method 7E or 20 or CARB Method 100; CO - EPA Method 10 or 10B or CARB Method 100; VOC - EPA Method 18 or 25; PM<sub>10</sub> - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O<sub>2</sub> - EPA Method 3, 3A, or 20 or CARB Method 100. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, 40 CFR 60.335(a), and 40 CFR 60.335(b)(1)] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. 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 NO<sub>x</sub>, CO, and O<sub>2</sub> 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
29. 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

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30. The NO<sub>x</sub>, CO and O<sub>2</sub> 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
31. 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
32. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: 1) annual RATA testing of at least one gas turbine engine (S-1129-47, -48, -49), and rotate the unit tested so that all three units are tested over three years, 2) annual RAA testing for the two gas turbine engines for which the annual RATA testing is not performed, 3) if any of the gas turbine engines fail the RAA testing, they must have a RATA test within 60 days, and 4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed for each gas turbine engine. [District Rule 1080] Federally Enforceable Through Title V Permit
33. 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
34. 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
35. 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
36. 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
37. 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
38. 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<sub>x</sub> 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
39. Monitor downtime for NO<sub>x</sub> shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO<sub>x</sub> concentration or diluent O<sub>2</sub> (or both). [40 CFR 60.334(j)(1)(iii)(B)] Federally Enforceable Through Title V Permit
40. If the gas turbine system is not fired on PUC-regulated or FERC-regulated natural gas, then a fuel sample shall be collected during the source test to determine sulfur content of the fuel combusted in the turbine. The fuel sample shall be analyzed for the total sulfur content using ASTM D1072; D3246; D4084; D4468; D6228; or D6667; or double GC for H<sub>2</sub>S and mercaptans. The applicable ranges of some ASTM methods are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of dilution ratio) may be used after getting a prior approval from the District. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit

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41. 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 run 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
42. 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
43. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
44. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
45. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup (black start) and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
46. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703] Federally Enforceable Through Title V Permit
47. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
48. Reduced load period is defined as the time during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. Each reduced load period shall not exceed one hour. [District Rule 4703] Federally Enforceable Through Title V Permit
49. 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
50. 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
51. 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
52. The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
53. 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
54. 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
55. 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-1129-48-13

**ISSUANCE DATE:** 12/28/2009

**LEGAL OWNER OR OPERATOR:** CHEVRON U S A INC  
**MAILING ADDRESS:** PO BOX 1392  
BAKERSFIELD, CA 93302

**LOCATION:** HEAVY OIL WESTERN  
CA

**SECTION:** 18 **TOWNSHIP:** 30S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 3.5 MW GAS TURBINE ENGINE COGENERATION UNIT #2 - MCKITTRICK: DESIGNATE AS A NON-COMPLIANT DORMANT EMISSIONS UNIT (DEU) FOR TIER-3 NOX STANDARD OF RULE 4703

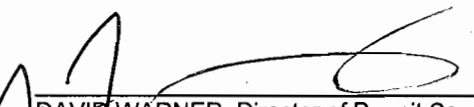
### CONDITIONS

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. Units shall be fired exclusively on PUC-quality natural gas which has a sulfur content of 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

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

  
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DAVID WARNER, Director of Permit Services  
S-1129-48-13 : Dec 28 2009 8:50AM - AHMADS : Joint Inspection NOT Required

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 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, D 3246 or Double GC for H<sub>2</sub>S and Mercaptans. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
10. If the turbine is not fired on PUC-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 (NO<sub>x</sub>) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O<sub>2</sub>) 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 NO<sub>x</sub> concentration corrected to 15% O<sub>2</sub> (dry). [40 CFR 60.332(a), (b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
14. Unit shall demonstrate compliance annually with NO<sub>x</sub> and CO emissions limits with the duct burner in operation and not in operation. An annual demonstration of compliance with the duct burner in operation is not required in any year in which the duct burner is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the duct burner. An annual demonstration of compliance with the duct burner not in operation is not required in any year in which the duct burner operated continuously in conjunction with the turbine in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the duct burner. [40 CFR 60.335(b) and District Rule 4703, 6.3.2] Federally Enforceable Through Title V Permit
15. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and the quantity used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. The operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
17. 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, source(s) of and quantity of fuel used, fuel sulfur content and fuel nitrogen content. [40 CFR 60.332(a),(b); District Rules 2520, 9.3.2 and 4703, 6.2.4] Federally Enforceable Through Title V Permit
18. The following types of units are not affected units subject to the requirements of the Acid Rain Program: 1) A simple combustion turbine that commenced operation before November 15, 1990, 2) Any unit that, during 1985, did not serve a generator that produced electricity for sale and that did not, as of November 15, 1990, and does not currently, serve a generator that produces electricity for sale, 3) A cogeneration facility which for a unit that commenced construction prior to November 15, 1990, was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 Mwe-hrs actual electric output on an annual basis to any utility power distribution system for sale. Therefore, the requirements of 40 CFR 72.6 do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

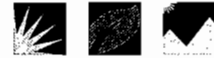
CONDITIONS CONTINUE ON NEXT PAGE

19. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rule 1081, 4201, 3.1; Rules 406 (Fresno), 407 (Kings, San Joaquin, Stanislaus, Tulare, Merced, and Kern), and 404(Madera); 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
20. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern and Stanislaus), and 110 (Madera); Rules 402 (Madera) and 404 (Fresno, Kern, Kings, San Joaquin, Merced, Stanislaus, Tulare); 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
21. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: SJVUAPCD Rule 4703, sections 5.0, 5.1.1, 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.3, 6.4.5, 6.4.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
22. 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). [Rule 4703 and 40 CFR 60.334] 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, 6.2.5] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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 NSPS NOx 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
27. Cogeneration unit includes 48.7 MMBtu/hr Allison (nominal rating), model 501-KB-5, gas fired turbine engine with either pilotless fuel nozzles or conventional fuel nozzles and 20.0 MMBtu/hr (nominal rating) gas fired Forney duct burner. [District NSR Rule] Federally Enforceable Through Title V Permit
28. Cogeneration unit includes Ideal synchronous electrical generator, Struthers-Wells unfired 22.5 MMBtu/hr steam generator, and an inlet air evaporative cooler. [District NSR Rule] Federally Enforceable Through Title V Permit
29. Turbine lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
30. Fuel gas sulfur content shall not exceed 14 ppmv as hydrogen sulfide (H2S). [District NSR Rule] Federally Enforceable Through Title V Permit
31. Permittee shall notify the District by fax or in writing prior to or within 4 hours of any turbine nozzle replacement, except for identical replacement. [District NSR Rule] Federally Enforceable Through Title V Permit
32. Except during periods of startup/shutdown, emission rates (3 hr average) shall not exceed: PM10: 0.61 lb/hr; SOx (as SO2): 0.16 lb/hr; NOx (as NO2): 30 ppmvd @ 15% O2; VOC: 1.65 lb/hr; and CO: 29 ppmvd @ 15% O2. [District NSR Rule] Federally Enforceable Through Title V Permit
33. NOx (as NO2) and SOx (as SO2) emission rates (1 hr average) shall not exceed NSPS standard of 150 ppmv-dry @ 15% O2, and 150 ppmv-dry @ 15% O2, respectively. [District Rule 2520, 9.3.2; 40 CFR 60.332(c) and 40 CFR 60.333(a)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE



34. Emissions shall not exceed the following: PM10: 14.6 lb/day; SOx (as SO2): 3.8 lb/day; NOx (as NO2): 182.4 lb/day; VOC: 39.6 lb/day; and CO: 107.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
35. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption in gas turbine for normal operation and startup/shutdown periods. [District NSR Rule] Federally Enforceable Through Title V Permit
36. Generator gearbox lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
37. Gas turbine engine shall be equipped with continuously recording fuel gas flow rate monitor. [District NSR Rule] Federally Enforceable Through Title V Permit
38. Gas turbine engine shall be equipped with operational water injection system for NOx control. [District NSR Rule] Federally Enforceable Through Title V Permit
39. 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
40. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas samples consistent with EPA methods. [District NSR Rule] Federally Enforceable Through Title V Permit
41. Gas turbine shall be fired exclusively with PUC quality natural gas or equivalent. [District NSR Rule] Federally Enforceable Through Title V Permit
42. Gas turbine engine water injection rate shall be maintained at a water to fuel ratio no less than 0.48/1.0 by weight while operating with pilotless fuel nozzles and no less than 0.8/1.0 by weight while operating with conventional fuel nozzles. [District NSR Rule] Federally Enforceable Through Title V Permit
43. Maximum emission rate of volatile organic compounds (VOC's) from turbine lube oil vent shall not exceed 0.02 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
44. Compliance testing of lube oil vent and gearbox vent shall be required if monthly visible emissions checks from either vent exceeds 5% opacity or equivalent Ringelmann 1/4. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rules 2520, 9.3.2 and NSR] Federally Enforceable Through Title V Permit
45. 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 NSR Rule] Federally Enforceable Through Title V Permit
46. 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. [40 CFR Subpart A 60.2, District NSR Rule] Federally Enforceable Through Title V Permit
47. Permittee shall keep accurate records of fuel sulfur content, and such records shall be made available for District inspection for five years. [40 CFR 60.334(b)(2), District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
48. Annual compliance with GTE/duct burner NOx and CO emission limits (pursuant to Rule 4703 (10/16/97)) and fuel sulfur limit shall be demonstrated by District witnessed or authorized sample collection by independent laboratory. Test results shall be submitted within 60 days. [District NSR Rule and Rule 4703] Federally Enforceable Through Title V Permit
49. The following test methods shall be used: CO (ppmv) - EPA Method 10 or 10B. [District Rules 2520, 9.3.2 and 4703] Federally Enforceable Through Title V Permit



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-1129-48-14

**ISSUANCE DATE:** 12/28/2009

**LEGAL OWNER OR OPERATOR:** CHEVRON U S A INC  
**MAILING ADDRESS:** PO BOX 1392  
BAKERSFIELD, CA 93302

**LOCATION:** HEAVY OIL WESTERN  
CA

**SECTION:** 18 **TOWNSHIP:** 30S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 3.5 MW GAS TURBINE ENGINE COGENERATION UNIT #2 - MCKITTRICK: INSTALL A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION TO COMPLY WITH RULE 4703 TIER 3 EMISSION LIMIT OF 5 PPMVD NOX @ 15% O2; INSTALL A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO AND O2 CONCENTRATIONS; REPLACE STRUTHERS-WELLS HEAT RECOVERY STEAM GENERATOR (HRSG) WITH ANOTHER HRSG (IF NECESSARY); AND REPLACE THE EXISTING 20.0 MMBTU/HR DUCT BURNER WITH A NEW 20.0 MMBTU/HR (NOMINAL RATING) DUCT BURNER (IF NECESSARY)

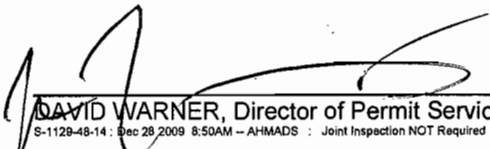
## CONDITIONS

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. Cogeneration unit includes 48.7 MMBtu/hr Allison (nominal rating), model 501-KB-5, gas fired turbine engine with either pilotless fuel nozzles or conventional fuel nozzles and 20.0 MMBtu/hr (nominal rating) gas fired duct burner. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Cogeneration unit includes Ideal synchronous electrical generator, heat recovery steam generator (HRSG), and an inlet air evaporative cooler. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

  
DAVID WARNER, Director of Permit Services  
S-1129-48-14 : Dec 28 2009 8:50AM -- AHMADS : Joint Inspection NOT Required

5. Turbine lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
8. The gas turbine system (i.e. gas turbine and duct burner) shall be fired exclusively on PUC-regulated gas or PUC-quality natural gas 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
9. The sulfur content in the fuel being combusted shall not exceed 0.71 grains/100 scf, otherwise, the fuel shall be of PUC-regulated quality. [District Rule 2201] Federally Enforceable Through Title V Permit
10. If the gas turbine system is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520] Federally Enforceable Through Title V Permit
11. If the gas turbine system is not fired on PUC-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
12. 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
13. During an initial shakedown period, the emissions shall not exceed any of the following limits: 30 ppmvd NOx @ 15% O2 referenced as NO2; 29 ppmvd CO @ 15% O2; 0.61 lb-PM10/hr; 1.65 lb-VOC/hr referenced as methane; and 0.16 lb-SOx/hr 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
14. 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; 29 ppmvd CO @ 15% O2; 0.61 lb-PM10/hr; 1.65 lb-VOC/hr referenced as methane; and 0.16 lb-SOx/hr 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
15. 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: 46.6 lb-NOx/day referenced as NO2; 1,394.7 lb-CO/day; 3.8 lb-SOx/day; 14.6 lb-PM10/day; 109.0 lb-VOC/day referenced as methane; and 46.8 lb-NH3/day. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 11,167 lb-NOx/year; 45,793 lb-CO/year; 1,384 lb-SOx/year; 5,326 lb-PM10/year; 14,790 lb-VOC/year; 17,099 lb-NH3/year. All annual emission limits are based on 12 consecutive month rolling emissions totals. [District Rule 2201] Federally Enforceable Through Title V Permit
17. 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
18. 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

CONDITIONS CONTINUE ON NEXT PAGE

19. 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
20. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO<sub>x</sub>, CO, and O<sub>2</sub> analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. 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
23. Source testing to measure start-up mass emission rates of NO<sub>x</sub>, CO, and VOC shall be conducted for one of the gas turbine engines (S-1129-47, -48, -49) 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
24. Source testing to determine compliance with the NO<sub>x</sub>, CO and NH<sub>3</sub> emission rates (ppmvd @ 15% O<sub>2</sub>) during normal operation shall be conducted 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
25. For the purpose of determining compliance with the emissions limits (ppmvd @ 15% O<sub>2</sub>) during normal operation in this permit, the arithmetic mean of three test runs shall apply, unless two of the three results are above an applicable limit. If two of three runs are above the applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The following test methods shall be used: NO<sub>x</sub> - EPA Method 7E or 20 or CARB Method 100; CO - EPA Method 10 or 10B or CARB Method 100; VOC - EPA Method 18 or 25; PM<sub>10</sub> - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O<sub>2</sub> - EPA Method 3, 3A, or 20 or CARB Method 100. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, 40 CFR 60.335(a), and 40 CFR 60.335(b)(1)] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. 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 NO<sub>x</sub>, CO, and O<sub>2</sub> 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
29. 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

CONDITIONS CONTINUE ON NEXT PAGE

30. The NO<sub>x</sub>, CO and O<sub>2</sub> 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
31. 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
32. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: 1) annual RATA testing of at least one gas turbine engine (S-1129-47, -48, -49), and rotate the unit tested so that all three units are tested over three years, 2) annual RAA testing for the two gas turbine engines for which the annual RATA testing is not performed, 3) if any of the gas turbine engines fail the RAA testing, they must have a RATA test within 60 days, and 4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed for each gas turbine engine. [District Rule 1080] Federally Enforceable Through Title V Permit
33. 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
34. 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
35. 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
36. 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
37. 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
38. 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<sub>x</sub> 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
39. Monitor downtime for NO<sub>x</sub> shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO<sub>x</sub> concentration or diluent O<sub>2</sub> (or both). [40 CFR 60.334(j)(1)(iii)(B)] Federally Enforceable Through Title V Permit
40. If the gas turbine system is not fired on PUC-regulated or FERC-regulated natural gas, then a fuel sample shall be collected during the source test to determine sulfur content of the fuel combusted in the turbine. The fuel sample shall be analyzed for the total sulfur content using ASTM D1072; D3246; D4084; D4468; D6228; or D6667; or double GC for H<sub>2</sub>S and mercaptans. The applicable ranges of some ASTM methods are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of dilution ratio) may be used after getting a prior approval from the District. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

41. 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 run 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
42. 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
43. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
44. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
45. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup (black start) and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
46. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703] Federally Enforceable Through Title V Permit
47. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
48. Reduced load period is defined as the time during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. Each reduced load period shall not exceed one hour. [District Rule 4703] Federally Enforceable Through Title V Permit
49. 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
50. 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
51. 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
52. The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
53. 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
54. 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
55. 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-1129-49-13

**ISSUANCE DATE:** 12/28/2009

**LEGAL OWNER OR OPERATOR:** CHEVRON U S A INC  
**MAILING ADDRESS:** PO BOX 1392  
BAKERSFIELD, CA 93302

**LOCATION:** HEAVY OIL WESTERN  
CA

**SECTION:** 18 **TOWNSHIP:** 30S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 3.5 MW GAS TURBINE ENGINE COGENERATION UNIT #3 - MCKITTRICK: DESIGNATE AS A NON-COMPLIANT DORMANT EMISSIONS UNIT (DEU) FOR TIER-3 NOX STANDARD 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. Units shall be fired exclusively on PUC-quality natural gas which has a sulfur content of 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

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

  
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DAVID WARNER, Director of Permit Services

S-1129-49-13; Dec 28 2009 8:50AM -- AHMADS : Joint Inspection NOT Required

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 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, D 3246 or Double GC for H<sub>2</sub>S and Mercaptans. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
10. If the turbine is not fired on PUC-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 (NO<sub>x</sub>) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O<sub>2</sub>) 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 NO<sub>x</sub> concentration corrected to 15% O<sub>2</sub> (dry). [40 CFR 60.332(a), (b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
14. Unit shall demonstrate compliance annually with NO<sub>x</sub> and CO emissions limits with the duct burner in operation and not in operation. An annual demonstration of compliance with the duct burner in operation is not required in any year in which the duct burner is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the duct burner. An annual demonstration of compliance with the duct burner not in operation is not required in any year in which the duct burner operated continuously in conjunction with the turbine in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the duct burner. [40 CFR 60.335(b) and District Rule 4703, 6.3.2] Federally Enforceable Through Title V Permit
15. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and the quantity used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. The operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
17. 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, source(s) of and quantity of fuel used, fuel sulfur content and fuel nitrogen content. [40 CFR 60.332(a),(b); District Rules 2520, 9.3.2 and 4703, 6.2.4] Federally Enforceable Through Title V Permit
18. The following types of units are not affected units subject to the requirements of the Acid Rain Program: 1) A simple combustion turbine that commenced operation before November 15, 1990, 2) Any unit that, during 1985, did not serve a generator that produced electricity for sale and that did not, as of November 15, 1990, and does not currently, serve a generator that produces electricity for sale, 3) A cogeneration facility which for a unit that commenced construction prior to November 15, 1990, was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 Mwe-hrs actual electric output on an annual basis to any utility power distribution system for sale. Therefore, the requirements of 40 CFR 72.6 do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE



19. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rule 1081, 4201, 3.1; Rules 406 (Fresno), 407 (Kings, San Joaquin, Stanislaus, Tulare, Merced, and Kern), and 404(Madera); 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
20. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern and Stanislaus), and 110 (Madera); Rules 402 (Madera) and 404 (Fresno, Kern, Kings, San Joaquin, Merced, Stanislaus, Tulare); 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
21. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: SJVUAPCD Rule 4703, sections 5.0, 5.1.1, 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.3, 6.4.5, 6.4.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
22. 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). [Rule 4703 and 40 CFR 60.334] 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, 6.2.5] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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 NSPS NOx 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
27. Cogeneration unit includes 48.7 MMBtu/hr (nominal rating) Allison, model 501-KB-5, gas fired turbine engine with either pilotless fuel nozzles or conventional fuel nozzles and 20.0 MMBtu/hr (nominal rating) gas fired Forney duct burner. [District NSR Rule] Federally Enforceable Through Title V Permit
28. Cogeneration unit includes Ideal synchronous electrical generator, Struthers-Wells unfired 22.5 MMBtu/hr steam generator, and an inlet air evaporative cooler. [District NSR Rule] Federally Enforceable Through Title V Permit
29. Turbine lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
30. Fuel gas sulfur content shall not exceed 14 ppmv as hydrogen sulfide (H2S). [District NSR Rule] Federally Enforceable Through Title V Permit
31. Permittee shall notify the District by fax or in writing prior to or within 4 hours of any turbine nozzle replacement, except for identical replacement. [District NSR Rule] Federally Enforceable Through Title V Permit
32. Except during periods of startup/shutdown, emission rates (3 hr average) shall not exceed: PM10: 0.61 lb/hr; SOx (as SO2): 0.16 lb/hr; NOx (as NO2): 30 ppmvd @ 15% O2; VOC: 1.65 lb/hr; and CO: 29 ppmvd @ 15% O2. [District NSR Rule] Federally Enforceable Through Title V Permit
33. NOx (as NO2) and SOx (as SO2) emission rates (1 hr average) shall not exceed NSPS standard of 150 ppmv-dry @ 15% O2, and 150 ppmv-dry @ 15% O2, respectively. [District Rule 2520, 9.3.2; 40 CFR 60.332(c) and 40 CFR 60.333(a)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

34. Emissions shall not exceed the following: PM10: 14.6 lb/day; SOx (as SO2): 3.8 lb/day; NOx (as NO2): 182.4 lb/day; VOC: 39.6 lb/day; and CO: 107.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
35. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption in gas turbine for normal operation and startup/shutdown periods. [District NSR Rule] Federally Enforceable Through Title V Permit
36. Generator gearbox lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
37. Gas turbine engine shall be equipped with continuously recording fuel gas flow rate monitor. [District NSR Rule] Federally Enforceable Through Title V Permit
38. Gas turbine engine shall be equipped with operational water injection system for NOx control. [District NSR Rule] Federally Enforceable Through Title V Permit
39. 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
40. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas samples consistent with EPA methods. [District NSR Rule] Federally Enforceable Through Title V Permit
41. Gas turbine shall be fired exclusively with PUC quality natural gas or equivalent. [District NSR Rule] Federally Enforceable Through Title V Permit
42. Gas turbine engine water injection rate shall be maintained at a water to fuel ratio no less than 0.48/1.0 by weight while operating with pilotless fuel nozzles and no less than 0.8/1.0 by weight while operating with conventional fuel nozzles. [District NSR Rule] Federally Enforceable Through Title V Permit
43. Maximum emission rate of volatile organic compounds (VOC's) from turbine lube oil vent shall not exceed 0.02 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
44. Compliance testing of lube oil vent and gearbox vent shall be required if monthly visible emissions checks from either vent exceeds 5% opacity or equivalent Ringelmann 1/4. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rules 2520, 9.3.2 and NSR] Federally Enforceable Through Title V Permit
45. 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 NSR Rule] Federally Enforceable Through Title V Permit
46. 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. [40 CFR Subpart A 60.2, District NSR Rule] Federally Enforceable Through Title V Permit
47. Permittee shall keep accurate records of fuel sulfur content, and such records shall be made available for District inspection for five years. [40 CFR 60.334(b)(2), District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
48. Annual compliance with GTE/duct burner NOx and CO emission limits (pursuant to Rule 4703 (10/16/97)) and fuel sulfur limit shall be demonstrated by District witnessed or authorized sample collection by independent laboratory. Test results shall be submitted within 60 days. [District NSR Rule and Rule 4703] Federally Enforceable Through Title V Permit
49. The following test methods shall be used: CO (ppmv) - EPA Method 10 or 10B. [District Rules 2520, 9.3.2 and 4703] Federally Enforceable Through Title V Permit



# AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-1129-49-14

**ISSUANCE DATE:** 12/28/2009

**LEGAL OWNER OR OPERATOR:** CHEVRON U S A INC  
**MAILING ADDRESS:** PO BOX 1392  
BAKERSFIELD, CA 93302

**LOCATION:** HEAVY OIL WESTERN  
CA

**SECTION:** 18 **TOWNSHIP:** 30S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 3.5 MW GAS TURBINE ENGINE COGENERATION UNIT #3 - MCKITTRICK: INSTALL A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION TO COMPLY WITH RULE 4703 TIER 3 EMISSION LIMIT OF 5 PPMVD NOX @ 15% O2; INSTALL A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO AND O2 CONCENTRATIONS; REPLACE STRUTHERS-WELLS HEAT RECOVERY STEAM GENERATOR (HRSG) WITH ANOTHER HRSG (IF NECESSARY); AND REPLACE THE EXISTING 20.0 MMBTU/HR DUCT BURNER WITH A NEW 20.0 MMBTU/HR (NOMINAL RATING) DUCT BURNER (IF NECESSARY)

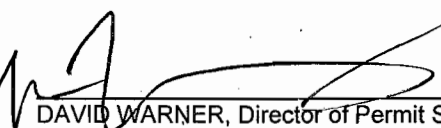
## CONDITIONS

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. Cogeneration unit includes 48.7 MMBtu/hr (nominal rating) Allison, model 501-KB-5, gas fired turbine engine with either pilotless fuel nozzles or conventional fuel nozzles and 20.0 MMBtu/hr (nominal rating) gas fired duct burner. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Cogeneration unit includes Ideal synchronous electrical generator, heat recovery steam generator (HRSG), and an inlet air evaporative cooler. [District NSR Rule] Federally Enforceable Through Title V Permit

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**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-1129-49-14 Dec 28 2009 8:50AM - AHMADS : Joint Inspection NOT Required

5. Turbine lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
8. The gas turbine system (i.e. gas turbine and duct burner) shall be fired exclusively on PUC-regulated gas or PUC-quality natural gas 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
9. The sulfur content in the fuel being combusted shall not exceed 0.71 grains/100 scf, otherwise, the fuel shall be of PUC-regulated quality. [District Rule 2201] Federally Enforceable Through Title V Permit
10. If the gas turbine system is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520] Federally Enforceable Through Title V Permit
11. If the gas turbine system is not fired on PUC-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
12. 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
13. During an initial shakedown period, the emissions shall not exceed any of the following limits: 30 ppmvd NO<sub>x</sub> @ 15% O<sub>2</sub> referenced as NO<sub>2</sub>; 29 ppmvd CO @ 15% O<sub>2</sub>; 0.61 lb-PM<sub>10</sub>/hr; 1.65 lb-VOC/hr referenced as methane; and 0.16 lb-SO<sub>x</sub>/hr referenced as SO<sub>2</sub>. 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 NO<sub>x</sub> 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
14. 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 NO<sub>x</sub> @ 15% O<sub>2</sub> referenced as NO<sub>2</sub>; 29 ppmvd CO @ 15% O<sub>2</sub>; 0.61 lb-PM<sub>10</sub>/hr; 1.65 lb-VOC/hr referenced as methane; and 0.16 lb-SO<sub>x</sub>/hr referenced as SO<sub>2</sub>. NO<sub>x</sub> 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 NO<sub>x</sub> and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
15. 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: 46.6 lb-NO<sub>x</sub>/day referenced as NO<sub>2</sub>; 1,394.7 lb-CO/day; 3.8 lb-SO<sub>x</sub>/day; 14.6 lb-PM<sub>10</sub>/day; 109.0 lb-VOC/day referenced as methane; and 46.8 lb-NH<sub>3</sub>/day. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 11,167 lb-NO<sub>x</sub>/year; 45,793 lb-CO/year; 1,384 lb-SO<sub>x</sub>/year; 5,326 lb-PM<sub>10</sub>/year; 14,790 lb-VOC/year; 17,099 lb-NH<sub>3</sub>/year. All annual emission limits are based on 12 consecutive month rolling emissions totals. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Ammonia (NH<sub>3</sub>) emissions shall not exceed 21 ppmvd @ 15% O<sub>2</sub> over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit
18. 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

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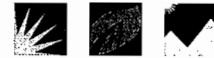
19. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each calendar month in a twelve consecutive month rolling emissions total shall commence at the beginning of the first day of the month. The twelve consecutive month rolling emissions totals used 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
20. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO<sub>x</sub>, CO, and O<sub>2</sub> analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. 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
23. Source testing to measure start-up mass emission rates of NO<sub>x</sub>, CO, and VOC shall be conducted for one of the gas turbine engines (S-1129-47, -48, -49) 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
24. Source testing to determine compliance with the NO<sub>x</sub>, CO and NH<sub>3</sub> emission rates (ppmvd @ 15% O<sub>2</sub>) during normal operation shall be conducted 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
25. For the purpose of determining compliance with the emissions limits (ppmvd @ 15% O<sub>2</sub>) during normal operation in this permit, the arithmetic mean of three test runs shall apply, unless two of the three results are above an applicable limit. If two of three runs are above the applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The following test methods shall be used: NO<sub>x</sub> - EPA Method 7E or 20 or CARB Method 100; CO - EPA Method 10 or 10B or CARB Method 100; VOC - EPA Method 18 or 25; PM<sub>10</sub> - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O<sub>2</sub> - EPA Method 3, 3A, or 20 or CARB Method 100. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, 40 CFR 60.335(a), and 40 CFR 60.335(b)(1)] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. 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 NO<sub>x</sub>, CO, and O<sub>2</sub> 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
29. 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

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30. The NO<sub>x</sub>, CO and O<sub>2</sub> 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
31. 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
32. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: 1) annual RATA testing of at least one gas turbine engine (S-1129-47, -48, -49), and rotate the unit tested so that all three units are tested over three years, 2) annual RAA testing for the two gas turbine engines for which the annual RATA testing is not performed, 3) if any of the gas turbine engines fail the RAA testing, they must have a RATA test within 60 days, and 4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed for each gas turbine engine. [District Rule 1080] Federally Enforceable Through Title V Permit
33. 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
34. 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
35. 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
36. 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
37. 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
38. 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<sub>x</sub> 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
39. Monitor downtime for NO<sub>x</sub> shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO<sub>x</sub> concentration or diluent O<sub>2</sub> (or both). [40 CFR 60.334(j)(1)(iii)(B)] Federally Enforceable Through Title V Permit
40. If the gas turbine system is not fired on PUC-regulated or FERC-regulated natural gas, then a fuel sample shall be collected during the source test to determine sulfur content of the fuel combusted in the turbine. The fuel sample shall be analyzed for the total sulfur content using ASTM D1072; D3246; D4084; D4468; D6228; or D6667; or double GC for H<sub>2</sub>S and mercaptans. The applicable ranges of some ASTM methods are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of dilution ratio) may be used after getting a prior approval from the District. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit

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41. 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 run 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
42. 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
43. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
44. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
45. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup (black start) and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
46. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703] Federally Enforceable Through Title V Permit
47. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
48. Reduced load period is defined as the time during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. Each reduced load period shall not exceed one hour. [District Rule 4703] Federally Enforceable Through Title V Permit
49. 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
50. 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
51. 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
52. The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
53. 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
54. 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
55. 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-1129-53-12

**ISSUANCE DATE:** 12/28/2009

**LEGAL OWNER OR OPERATOR:** CHEVRON U S A INC  
**MAILING ADDRESS:** PO BOX 1392  
BAKERSFIELD, CA 93302

**LOCATION:** HEAVY OIL WESTERN  
CA

**SECTION:** 34 **TOWNSHIP:** 30S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 3.5 MW COMBINED CYCLE GAS TURBINE TOPPING CYCLE COGENERATION NORTH MIDWAY UNIT #7: DESIGNATE AS A NON-COMPLIANT DORMANT EMISSIONS UNIT (DEU) FOR TIER-3 NOX STANDARD 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. Units shall be fired exclusively on PUC-quality natural gas which has a sulfur content of 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

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

  
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DAVID WARNER, Director of Permit Services  
S-1129-53-12 | Dec 28 2009 8:50AM -- AHMADS : Joint Inspection NOT Required



7. Gas turbine shall be fired exclusively with PUC-quality natural gas or equivalent with total sulfur content of less than or equal to 1.0 gr S/100 scf of gas. [District NSR Rule] Federally Enforceable Through Title V Permit
8. 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
9. If the turbine is not fired on PUC-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, D 3246 or Double GC for H<sub>2</sub>S and Mercaptans. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
10. 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
11. Nitrogen oxides (NO<sub>x</sub>) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O<sub>2</sub>) 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
12. The operator shall provide source test information annually regarding the exhaust gas NO<sub>x</sub> concentration corrected to 15% O<sub>2</sub> (dry). [40 CFR 60.332(a), (b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
13. Carbon monoxide (CO) concentrations shall be determined using EPA Method 10 or 10B. [District Rule 4703] Federally Enforceable Through Title V Permit
14. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and the quantity used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. The operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
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, source(s) of and quantity of fuel used, fuel sulfur content and fuel nitrogen content. [40 CFR 60.332(a),(b); District Rules 2520, 9.3.2 and 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 NO<sub>x</sub> concentration in the exhaust by using the method described in 40 CFR 60.335(c). [Rule 4703 and 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 NO<sub>x</sub> output. [District Rule 4703, 6.2.5] 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. [District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit
20. 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
21. 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 NSPS NO<sub>x</sub> 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
22. 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, 5.0] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

23. Cogeneration unit shall include 48.7 MMBtu/hr (nominal rating) Allison, model 501-KB-5, gas-fired turbine engine with pilotless fuel nozzles or conventional fuel nozzles, Ideal Synchronous electrical generator, Struthers-Wells unfired 22.5 MMBtu/hr steam generator and an inlet air evaporative cooler. [District NSR Rule] Federally Enforceable Through Title V Permit
24. Turbine lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
25. Generator gearbox lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
26. Permittee shall notify the District by fax or in writing prior to or within 4 hours of any turbine nozzle replacement, except for identical replacement. [District NSR Rule] Federally Enforceable Through Title V Permit
27. Gas turbine engine shall be equipped with continuously recording fuel gas flow rate monitor. [District NSR Rule] Federally Enforceable Through Title V Permit
28. Gas turbine engine shall be equipped with operational water injection system for NO<sub>x</sub> control. [District NSR Rule] Federally Enforceable Through Title V Permit
29. 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
30. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas samples consistent with EPA methods. [District NSR Rule] Federally Enforceable Through Title V Permit
31. Gas turbine engine water injection rate shall be maintained at a water to fuel ratio no less than 0.48/1.0 by weight while operating with pilotless fuel nozzles and no less than 0.8/1.0 by weight while operating with conventional fuel nozzles. [District NSR Rule] Federally Enforceable Through Title V Permit
32. Evaporative cooler shall use only fresh and filtered water. [District NSR Rule] Federally Enforceable Through Title V Permit
33. Fiber bed filter system shall be maintained and operated in accordance with the manufacturer's plans and specifications. [District NSR Rule] Federally Enforceable Through Title V Permit
34. Maximum emission rate of volatile organic compounds (VOC's) from turbine lube oil vent shall not exceed 0.02 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
35. Except during periods of startup/shutdown, emission rates (3 hr average) shall not exceed: PM<sub>10</sub>: 0.61 lb/hr; SO<sub>x</sub> (as SO<sub>2</sub>): 0.16 lb/hr; NO<sub>x</sub>: 42 ppmvd @ 15% O<sub>2</sub>; VOC: 1.65 lb/hr; and CO: 41 ppmvd @ 15% O<sub>2</sub>. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
36. Except during periods of startup/shutdown, NO<sub>x</sub> emission rate (3 hr average) shall not exceed 35 ppmvd NO<sub>2</sub> @ 15% O<sub>2</sub>. [District Rule 4703]
37. Emissions shall not exceed the following: PM<sub>10</sub>: 14.6 lb/day; SO<sub>x</sub> (as SO<sub>2</sub>): 3.3 lb/day; NO<sub>x</sub> (as NO<sub>2</sub>): 153.0 lb/day; VOC: 39.6 lb/day; and CO: 107.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
38. NO<sub>x</sub> and SO<sub>x</sub> emission rates (1 hr average) shall not exceed NSPS standard of 150 ppmv-dry @ 15% O<sub>2</sub>, and 150 ppmv-dry @ 15% O<sub>2</sub>, respectively. [District Rule 2520, 9.3.2; 40 CFR 60.332(c); 40CFR 60.333(a)] Federally Enforceable Through Title V Permit
39. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption in gas turbine for normal operation and startup/shutdown periods. [District NSR Rule] Federally Enforceable Through Title V Permit
40. Compliance testing of lube oil vent and gearbox vent shall be required if monthly visible emissions checks from either vent exceeds 5% opacity or equivalent Ringelmann 1/4. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rules 2520, 9.3.2 and NSR] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

41. 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 NSR Rule] Federally Enforceable Through Title V Permit
42. 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. [40 CFR Subpart A 60.2, District NSR Rule] Federally Enforceable Through Title V Permit
43. Permittee shall keep accurate records of fuel sulfur content, and such records shall be made available for District inspection for five years. [40 CFR 60.334(b)(2), District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. Annual compliance with GTE NOx and CO emission limits (pursuant to Rule 4703 (10/16/97)) and fuel sulfur limit shall be demonstrated by District witnessed or authorized sample collection by independent laboratory. Test results shall be submitted within 60 days. [District NSR Rule and Rule 4703] Federally Enforceable Through Title V Permit
45. 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
46. The following types of units are not affected units subject to the requirements of the Acid Rain Program: 1) A simple combustion turbine that commenced operation before November 15, 1990, 2) Any unit that, during 1985, did not serve a generator that produced electricity for sale and that did not, as of November 15, 1990, and does not currently, serve a generator that produces electricity for sale, 3) A cogeneration facility which for a unit that commenced construction prior to November 15, 1990, was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 Mwe-hrs actual electric output on an annual basis to any utility power distribution system for sale. Therefore, the requirements of 40 CFR 72.6 do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
47. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rule 1081, 4201, 3.1; Rules 406 (Fresno), 407 (Kings, San Joaquin, Stanislaus, Tulare, Merced, and Kern), and 404(Madera); 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
48. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern and Stanislaus), and 110 (Madera); Rules 402 (Madera) and 404 (Fresno, Kern, Kings, San Joaquin, Merced, Stanislaus, Tulare); 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
49. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: SJVUAPCD Rule 4703, sections 5.0, 5.1.1, 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.3, 6.4.5, 6.4.6. 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-1129-53-13

**ISSUANCE DATE:** 12/28/2009

**LEGAL OWNER OR OPERATOR:** CHEVRON U S A INC  
**MAILING ADDRESS:** PO BOX 1392  
BAKERSFIELD, CA 93302

**LOCATION:** HEAVY OIL WESTERN  
CA

**SECTION:** 34 **TOWNSHIP:** 30S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 3.5 MW COMBINED CYCLE GAS TURBINE TOPPING CYCLE COGENERATION NORTH MIDWAY UNIT #7: INSTALL A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION TO COMPLY WITH RULE 4703 TIER 3 EMISSION LIMIT OF 5 PPMVD NOX @ 15% O2; INSTALL A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO AND O2 CONCENTRATIONS; AND REPLACE STRUTHERS-WELLS HEAT RECOVERY STEAM GENERATOR (HRSG) WITH ANOTHER HRSG (IF NECESSARY)

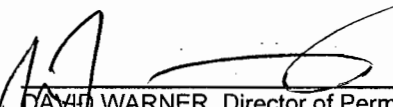
## CONDITIONS

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. Cogeneration unit shall include 48.7 MMBtu/hr (nominal rating) Allison, model 501-KB-5, gas-fired turbine engine with pilotless fuel nozzles or conventional fuel nozzles, Ideal Synchronous electrical generator, unfired 22.5 MMBtu/hr steam generator and an inlet air evaporative cooler. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Turbine lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

  
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DAVID WARNER, Director of Permit Services  
S-1129-53-13 : Dec 28 2009 8:50AM -- AHMADS : Joint Inspection NOT Required

5. Generator gearbox lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
8. The gas turbine shall be fired exclusively on PUC-regulated gas or PUC-quality natural gas 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
9. The sulfur content in the fuel being combusted shall not exceed 1.0 grains/100 scf, otherwise, the fuel shall be of PUC-regulated quality. [District Rule 2201] Federally Enforceable Through Title V Permit
10. If the gas turbine system is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520] Federally Enforceable Through Title V Permit
11. If the gas turbine system is not fired on PUC-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
12. 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
13. During an initial shakedown period, the emissions shall not exceed any of the following limits: 30 ppmvd NO<sub>x</sub> @ 15% O<sub>2</sub> referenced as NO<sub>2</sub>; 41 ppmvd CO @ 15% O<sub>2</sub>; 0.61 lb-PM<sub>10</sub>/hr; 1.65 lb-VOC/hr referenced as methane; and 0.16 lb-SO<sub>x</sub>/hr referenced as SO<sub>2</sub>. 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 NO<sub>x</sub> 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
14. 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 NO<sub>x</sub> @ 15% O<sub>2</sub> referenced as NO<sub>2</sub>; 41 ppmvd CO @ 15% O<sub>2</sub>; 0.61 lb-PM<sub>10</sub>/hr; 1.65 lb-VOC/hr referenced as methane; and 0.16 lb-SO<sub>x</sub>/hr referenced as SO<sub>2</sub>. NO<sub>x</sub> 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 NO<sub>x</sub> and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
15. 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: 39.4 lb-NO<sub>x</sub>/day referenced as NO<sub>2</sub>; 1,394.7 lb-CO/day; 3.3 lb-SO<sub>x</sub>/day; 14.6 lb-PM<sub>10</sub>/day; 109.0 lb-VOC/day referenced as methane; and 33.2 lb-NH<sub>3</sub>/day. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 7,948 lb-NO<sub>x</sub>/year; 45,768 lb-CO/year; 1,195 lb-SO<sub>x</sub>/year; 5,333 lb-PM<sub>10</sub>/year; 14,809 lb-VOC/year; 12,121 lb-NH<sub>3</sub>/year. All annual emission limits are based on 12 consecutive month rolling emissions totals. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Ammonia (NH<sub>3</sub>) emissions shall not exceed 21 ppmvd @ 15% O<sub>2</sub> over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit
18. 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

CONDITIONS CONTINUE ON NEXT PAGE

19. 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
20. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO<sub>x</sub>, CO, and O<sub>2</sub> analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. 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
23. Source testing to measure start-up mass emission rates of NO<sub>x</sub>, CO, and VOC shall be conducted for one of the gas turbine engines (S-1129-53, -54, -55) 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
24. Source testing to determine compliance with the NO<sub>x</sub>, CO and NH<sub>3</sub> emission rates (ppmvd @ 15% O<sub>2</sub>) during normal operation shall be conducted 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
25. For the purpose of determining compliance with the emissions limits (ppmvd @ 15% O<sub>2</sub>) during normal operation in this permit, the arithmetic mean of three test runs shall apply, unless two of the three results are above an applicable limit. If two of three runs are above the applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The following test methods shall be used: NO<sub>x</sub> - EPA Method 7E or 20 or CARB Method 100; CO - EPA Method 10 or 10B or CARB Method 100; VOC - EPA Method 18 or 25; PM<sub>10</sub> - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O<sub>2</sub> - EPA Method 3, 3A, or 20 or CARB Method 100. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, 40 CFR 60.335(a), and 40 CFR 60.335(b)(1)] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. 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 NO<sub>x</sub>, CO, and O<sub>2</sub> 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
29. 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

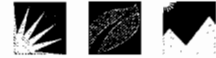
CONDITIONS CONTINUE ON NEXT PAGE

30. The NO<sub>x</sub>, CO and O<sub>2</sub> 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
31. 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
32. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: 1) annual RATA testing of at least one gas turbine engine (S-1129-53, -54, -55), and rotate the unit tested so that all three units are tested over three years, 2) annual RAA testing for the two gas turbine engines for which the annual RATA testing is not performed, 3) if any of the gas turbine engines fail the RAA testing, they must have a RATA test within 60 days, and 4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed for each gas turbine engine. [District Rule 1080] Federally Enforceable Through Title V Permit
33. 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
34. 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
35. 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
36. 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
37. 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
38. 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<sub>x</sub> 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
39. Monitor downtime for NO<sub>x</sub> shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO<sub>x</sub> concentration or diluent O<sub>2</sub> (or both). [40 CFR 60.334(j)(1)(iii)(B)] Federally Enforceable Through Title V Permit
40. If the gas turbine system is not fired on PUC-regulated or FERC-regulated natural gas, then a fuel sample shall be collected during the source test to determine sulfur content of the fuel combusted in the turbine. The fuel sample shall be analyzed for the total sulfur content using ASTM D1072; D3246; D4084; D4468; D6228; or D6667; or double GC for H<sub>2</sub>S and mercaptans. The applicable ranges of some ASTM methods are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of dilution ratio) may be used after getting a prior approval from the District. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

41. 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 run 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
42. 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
43. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
44. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
45. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup (black start) and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
46. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703] Federally Enforceable Through Title V Permit
47. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
48. Reduced load period is defined as the time during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. Each reduced load period shall not exceed one hour. [District Rule 4703] Federally Enforceable Through Title V Permit
49. 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
50. 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
51. 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
52. The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
53. 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
54. 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
55. 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-1129-54-13

**ISSUANCE DATE:** 12/28/2009

**LEGAL OWNER OR OPERATOR:** CHEVRON U S A INC  
**MAILING ADDRESS:** PO BOX 1392  
BAKERSFIELD, CA 93302

**LOCATION:** HEAVY OIL WESTERN  
CA

**SECTION:** 34 **TOWNSHIP:** 30S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 3.5 MW COMBINED CYCLE GAS TURBINE TOPPING CYCLE COGENERATION NORTH MIDWAY UNIT #8: DESIGNATE AS A NON-COMPLIANT DORMANT EMISSIONS UNIT (DEU) FOR TIER-3 NOX STANDARD 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. Units shall be fired exclusively on PUC-quality natural gas which has a sulfur content of 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

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

  
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DAVID WARNER, Director of Permit Services  
S-1129-54-13 Date: 28 2009 8:50AM - AHMADS Joint Inspection NOT Required

7. Gas turbine shall be fired exclusively with PUC-quality natural gas or equivalent with total sulfur content of less than or equal to 1.0 gr S/100 scf of gas. [District NSR Rule] Federally Enforceable Through Title V Permit
8. 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
9. If the turbine is not fired on PUC-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, D 3246 or Double GC for H<sub>2</sub>S and Mercaptans. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
10. 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
11. Nitrogen oxides (NO<sub>x</sub>) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O<sub>2</sub>) 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
12. The operator shall provide source test information annually regarding the exhaust gas NO<sub>x</sub> concentration corrected to 15% O<sub>2</sub> (dry). [40 CFR 60.332(a), (b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
13. Carbon monoxide (CO) concentrations shall be determined using EPA Method 10 or 10B. [District Rule 4703] Federally Enforceable Through Title V Permit
14. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and the quantity used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. The operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
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, source(s) of and quantity of fuel used, fuel sulfur content and fuel nitrogen content. [40 CFR 60.332(a),(b); District Rules 2520, 9.3.2 and 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 NO<sub>x</sub> concentration in the exhaust by using the method described in 40 CFR 60.335(c). [Rule 4703 and 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 NO<sub>x</sub> output. [District Rule 4703, 6.2.5] 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. [District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit
20. 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
21. 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 NSPS NO<sub>x</sub> 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
22. 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, 5.0] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

23. Cogeneration unit shall include 48.7 MMBtu/hr (nominal rating) Allison, model 501-KB-5, gas-fired turbine engine with pilotless fuel nozzles or conventional fuel nozzles, Ideal Synchronous electrical generator, Struthers-Wells unfired 22.5 MMBtu/hr steam generator and an inlet air evaporative cooler. [District NSR Rule] Federally Enforceable Through Title V Permit
24. Turbine lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
25. Generator gearbox lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
26. Permittee shall notify the District by fax or in writing prior to or within 4 hours of any turbine nozzle replacement, except for identical replacement. [District NSR Rule] Federally Enforceable Through Title V Permit
27. Gas turbine engine shall be equipped with continuously recording fuel gas flow rate monitor. [District NSR Rule] Federally Enforceable Through Title V Permit
28. Gas turbine engine shall be equipped with operational water injection system for NOx control. [District NSR Rule] Federally Enforceable Through Title V Permit
29. 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
30. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas samples consistent with EPA methods. [District NSR Rule] Federally Enforceable Through Title V Permit
31. Gas turbine engine water injection rate shall be maintained at a water to fuel ratio no less than 0.48/1.0 by weight while operating with pilotless fuel nozzles and no less than 0.8/1.0 by weight while operating with conventional fuel nozzles. [District NSR Rule] Federally Enforceable Through Title V Permit
32. Evaporative cooler shall use only fresh and filtered water. [District NSR Rule] Federally Enforceable Through Title V Permit
33. Fiber bed filter system shall be maintained and operated in accordance with the manufacturer's plans and specifications. [District NSR Rule] Federally Enforceable Through Title V Permit
34. Maximum emission rate of volatile organic compounds (VOC's) from turbine lube oil vent shall not exceed 0.02 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
35. Except during periods of startup/shutdown, emission rates (3 hr average) shall not exceed: PM10: 0.61 lb/hr; SOx (as SO2): 0.16 lb/hr; NOx: 42 ppmvd @ 15% O2; VOC: 1.65 lb/hr; and CO: 41 ppmvd @ 15% O2. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
36. Except during periods of startup/shutdown, NOx emission rate (3 hr average) shall not exceed 35 ppmvd NO2 @ 15% O2. [District Rule 4703]
37. Emissions shall not exceed the following: PM10: 14.6 lb/day; SOx (as SO2): 3.3 lb/day; NOx (as NO2): 153.0 lb/day; VOC: 39.6 lb/day; and CO: 107.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
38. NOx and SOx emission rates (1 hr average) shall not exceed NSPS standard of 150 ppmv-dry @ 15% O2, and 150 ppmv-dry @ 15% O2, respectively. [District Rule 2520, 9.3.2; 40 CFR 60.332(c); 40CFR 60.333(a)] Federally Enforceable Through Title V Permit
39. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption in gas turbine for normal operation and startup/shutdown periods. [District NSR Rule] Federally Enforceable Through Title V Permit
40. Compliance testing of lube oil vent and gearbox vent shall be required if monthly visible emissions checks from either vent exceeds 5% opacity or equivalent Ringelmann 1/4. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rules 2520, 9.3.2 and NSR] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

41. 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 NSR Rule] Federally Enforceable Through Title V Permit
42. 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. [40 CFR Subpart A 60.2, District NSR Rule] Federally Enforceable Through Title V Permit
43. Permittee shall keep accurate records of fuel sulfur content, and such records shall be made available for District inspection for five years. [40 CFR 60.334(b)(2), District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. Annual compliance with GTE NOx and CO emission limits (pursuant to Rule 4703 (10/16/97)) and fuel sulfur limit shall be demonstrated by District witnessed or authorized sample collection by independent laboratory. Test results shall be submitted within 60 days. [District NSR Rule and Rule 4703] Federally Enforceable Through Title V Permit
45. 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
46. The following types of units are not affected units subject to the requirements of the Acid Rain Program: 1) A simple combustion turbine that commenced operation before November 15, 1990, 2) Any unit that, during 1985, did not serve a generator that produced electricity for sale and that did not, as of November 15, 1990, and does not currently, serve a generator that produces electricity for sale, 3) A cogeneration facility which for a unit that commenced construction prior to November 15, 1990, was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 Mwe-hrs actual electric output on an annual basis to any utility power distribution system for sale. Therefore, the requirements of 40 CFR 72.6 do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
47. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rule 1081, 4201, 3.1; Rules 406 (Fresno), 407 (Kings, San Joaquin, Stanislaus, Tulare, Merced, and Kern), and 404(Madera); 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
48. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern and Stanislaus), and 110 (Madera); Rules 402 (Madera) and 404 (Fresno, Kern, Kings, San Joaquin, Merced, Stanislaus, Tulare); 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
49. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: SJVUAPCD Rule 4703, sections 5.0, 5.1.1, 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.3, 6.4.5, 6.4.6. 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-1129-54-14

**ISSUANCE DATE:** 12/28/2009

**LEGAL OWNER OR OPERATOR:** CHEVRON U S A INC  
**MAILING ADDRESS:** PO BOX 1392  
BAKERSFIELD, CA 93302

**LOCATION:** HEAVY OIL WESTERN  
CA

**SECTION:** 34 **TOWNSHIP:** 30S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 3.5 MW COMBINED CYCLE GAS TURBINE TOPPING CYCLE COGENERATION NORTH MIDWAY UNIT #8: INSTALL A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION TO COMPLY WITH RULE 4703 TIER 3 EMISSION LIMIT OF 5 PPMVD NOX @ 15% O2; INSTALL A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO AND O2 CONCENTRATIONS; AND REPLACE STRUTHERS-WELLS HEAT RECOVERY STEAM GENERATOR (HRSG) WITH ANOTHER 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. Cogeneration unit shall include 48.7 MMBtu/hr (nominal rating) Allison, model 501-KB-5, gas-fired turbine engine with pilotless fuel nozzles or conventional fuel nozzles, Ideal Synchronous electrical generator, unfired 22.5 MMBtu/hr steam generator and an inlet air evaporative cooler. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Turbine lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

  
DAVID WARNER, Director of Permit Services  
S-1129-54-14 : Dec 28 2009 8:50AM -- AHMADS : Joint Inspection NOT Required

5. Generator gearbox lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
8. The gas turbine shall be fired exclusively on PUC-regulated gas or PUC-quality natural gas 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
9. The sulfur content in the fuel being combusted shall not exceed 1.0 grains/100 scf, otherwise, the fuel shall be of PUC-regulated quality. [District Rule 2201] Federally Enforceable Through Title V Permit
10. If the gas turbine system is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520] Federally Enforceable Through Title V Permit
11. If the gas turbine system is not fired on PUC-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
12. 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
13. During an initial shakedown period, the emissions shall not exceed any of the following limits: 30 ppmvd NO<sub>x</sub> @ 15% O<sub>2</sub> referenced as NO<sub>2</sub>; 41 ppmvd CO @ 15% O<sub>2</sub>; 0.61 lb-PM<sub>10</sub>/hr; 1.65 lb-VOC/hr referenced as methane; and 0.16 lb-SO<sub>x</sub>/hr referenced as SO<sub>2</sub>. 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 NO<sub>x</sub> 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
14. 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 NO<sub>x</sub> @ 15% O<sub>2</sub> referenced as NO<sub>2</sub>; 41 ppmvd CO @ 15% O<sub>2</sub>; 0.61 lb-PM<sub>10</sub>/hr; 1.65 lb-VOC/hr referenced as methane; and 0.16 lb-SO<sub>x</sub>/hr referenced as SO<sub>2</sub>. NO<sub>x</sub> 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 NO<sub>x</sub> and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
15. 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: 39.4 lb-NO<sub>x</sub>/day referenced as NO<sub>2</sub>; 1,394.7 lb-CO/day; 3.3 lb-SO<sub>x</sub>/day; 14.6 lb-PM<sub>10</sub>/day; 109.0 lb-VOC/day referenced as methane; and 33.2 lb-NH<sub>3</sub>/day. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 7,948 lb-NO<sub>x</sub>/year; 45,768 lb-CO/year; 1,195 lb-SO<sub>x</sub>/year; 5,333 lb-PM<sub>10</sub>/year; 14,809 lb-VOC/year; 12,121 lb-NH<sub>3</sub>/year. All annual emission limits are based on 12 consecutive month rolling emissions totals. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Ammonia (NH<sub>3</sub>) emissions shall not exceed 21 ppmvd @ 15% O<sub>2</sub> over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit
18. 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

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19. 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
20. 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
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. 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
23. 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-1129-53, -54, -55) 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
24. 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
25. 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
26. 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
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. 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
29. 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

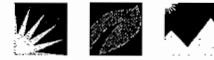
CONDITIONS CONTINUE ON NEXT PAGE

30. The NO<sub>x</sub>, CO and O<sub>2</sub> 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
31. 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
32. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: 1) annual RATA testing of at least one gas turbine engine (S-1129-53, -54, -55), and rotate the unit tested so that all three units are tested over three years, 2) annual RAA testing for the two gas turbine engines for which the annual RATA testing is not performed, 3) if any of the gas turbine engines fail the RAA testing, they must have a RATA test within 60 days, and 4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed for each gas turbine engine. [District Rule 1080] Federally Enforceable Through Title V Permit
33. 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
34. 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
35. 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
36. 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
37. 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
38. 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<sub>x</sub> 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
39. Monitor downtime for NO<sub>x</sub> shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO<sub>x</sub> concentration or diluent O<sub>2</sub> (or both). [40 CFR 60.334(j)(1)(iii)(B)] Federally Enforceable Through Title V Permit
40. If the gas turbine system is not fired on PUC-regulated or FERC-regulated natural gas, then a fuel sample shall be collected during the source test to determine sulfur content of the fuel combusted in the turbine. The fuel sample shall be analyzed for the total sulfur content using ASTM D1072; D3246; D4084; D4468; D6228; or D6667; or double GC for H<sub>2</sub>S and mercaptans. The applicable ranges of some ASTM methods are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of dilution ratio) may be used after getting a prior approval from the District. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit

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41. 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 run 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
42. 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
43. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
44. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
45. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup (black start) and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
46. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703] Federally Enforceable Through Title V Permit
47. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
48. Reduced load period is defined as the time during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. Each reduced load period shall not exceed one hour. [District Rule 4703] Federally Enforceable Through Title V Permit
49. 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
50. 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
51. 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
52. The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
53. 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
54. 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
55. 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-1129-55-12

**ISSUANCE DATE:** 12/28/2009

**LEGAL OWNER OR OPERATOR:** CHEVRON U S A INC  
**MAILING ADDRESS:** PO BOX 1392  
BAKERSFIELD, CA 93302

**LOCATION:** HEAVY OIL WESTERN  
CA

**SECTION:** 34 **TOWNSHIP:** 30S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 3.5 MW COMBINED CYCLE GAS TURBINE TOPPING CYCLE COGENERATION NORTH MIDWAY UNIT #9: DESIGNATE AS A NON-COMPLIANT DORMANT EMISSIONS UNIT (DEU) FOR TIER-3 NOX STANDARD 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. Units shall be fired exclusively on PUC-quality natural gas which has a sulfur content of 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

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

Seyed Sadredin, Executive Director / APCO

  
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DAVID WARNER, Director of Permit Services  
S-1129-55-12 : Dec 28 2009 8:50AM - AHMADS : Joint Inspection NOT Required

7. Gas turbine shall be fired exclusively with PUC-quality natural gas or equivalent with total sulfur content of less than or equal to 1.0 gr S/100 scf of gas. [District NSR Rule] Federally Enforceable Through Title V Permit
8. 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
9. If the turbine is not fired on PUC-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, D 3246 or Double GC for H<sub>2</sub>S and Mercaptans. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
10. 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
11. Nitrogen oxides (NO<sub>x</sub>) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O<sub>2</sub>) 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
12. The operator shall provide source test information annually regarding the exhaust gas NO<sub>x</sub> concentration corrected to 15% O<sub>2</sub> (dry). [40 CFR 60.332(a), (b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
13. Carbon monoxide (CO) concentrations shall be determined using EPA Method 10 or 10B. [District Rule 4703] Federally Enforceable Through Title V Permit
14. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and the quantity used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. The operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
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, source(s) of and quantity of fuel used, fuel sulfur content and fuel nitrogen content. [40 CFR 60.332(a),(b); District Rules 2520, 9.3.2 and 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 NO<sub>x</sub> concentration in the exhaust by using the method described in 40 CFR 60.335(c). [Rule 4703 and 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 NO<sub>x</sub> output. [District Rule 4703, 6.2.5] 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. [District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit
20. 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
21. 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 NSPS NO<sub>x</sub> 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
22. 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, 5.0] Federally Enforceable Through Title V Permit

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23. Cogeneration unit shall include 48.7 MMBtu/hr (nominal rating) Allison, model 501-KB-5, gas-fired turbine engine with pilotless fuel nozzles or conventional fuel nozzles, Ideal Synchronous electrical generator, Struthers-Wells unfired 22.5 MMBtu/hr steam generator and an inlet air evaporative cooler. [District NSR Rule] Federally Enforceable Through Title V Permit
24. Turbine lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
25. Generator gearbox lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
26. Permittee shall notify the District by fax or in writing prior to or within 4 hours of any turbine nozzle replacement, except for identical replacement. [District NSR Rule] Federally Enforceable Through Title V Permit
27. Gas turbine engine shall be equipped with continuously recording fuel gas flow rate monitor. [District NSR Rule] Federally Enforceable Through Title V Permit
28. Gas turbine engine shall be equipped with operational water injection system for NOx control. [District NSR Rule] Federally Enforceable Through Title V Permit
29. 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
30. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas samples consistent with EPA methods. [District NSR Rule] Federally Enforceable Through Title V Permit
31. Gas turbine engine water injection rate shall be maintained at a water to fuel ratio no less than 0.48/1.0 by weight while operating with pilotless fuel nozzles and no less than 0.8/1.0 by weight while operating with conventional fuel nozzles. [District NSR Rule] Federally Enforceable Through Title V Permit
32. Evaporative cooler shall use only fresh and filtered water. [District NSR Rule] Federally Enforceable Through Title V Permit
33. Fiber bed filter system shall be maintained and operated in accordance with the manufacturer's plans and specifications. [District NSR Rule] Federally Enforceable Through Title V Permit
34. Maximum emission rate of volatile organic compounds (VOC's) from turbine lube oil vent shall not exceed 0.02 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
35. Except during periods of startup/shutdown, emission rates (3 hr average) shall not exceed: PM10: 0.61 lb/hr; SOx (as SO2): 0.16 lb/hr; NOx: 42 ppmvd @ 15% O2; VOC: 1.65 lb/hr; and CO: 41 ppmvd @ 15% O2. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
36. Except during periods of startup/shutdown, NOx emission rate (3 hr average) shall not exceed 35 ppmvd NO2 @ 15% O2. [District Rule 4703]
37. Emissions shall not exceed the following: PM10: 14.6 lb/day; SOx (as SO2): 3.3 lb/day; NOx (as NO2): 153.0 lb/day; VOC: 39.6 lb/day; and CO: 107.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
38. NOx and SOx emission rates (1 hr average) shall not exceed NSPS standard of 150 ppmv-dry @ 15% O2, and 150 ppmv-dry @ 15% O2, respectively. [District Rule 2520, 9.3.2; 40 CFR 60.332(c); 40CFR 60.333(a)] Federally Enforceable Through Title V Permit
39. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption in gas turbine for normal operation and startup/shutdown periods. [District NSR Rule] Federally Enforceable Through Title V Permit
40. Compliance testing of lube oil vent and gearbox vent shall be required if monthly visible emissions checks from either vent exceeds 5% opacity or equivalent Ringelmann 1/4. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rules 2520, 9.3.2 and NSR] Federally Enforceable Through Title V Permit

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41. 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 NSR Rule] Federally Enforceable Through Title V Permit
42. 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. [40 CFR Subpart A 60.2, District NSR Rule] Federally Enforceable Through Title V Permit
43. Permittee shall keep accurate records of fuel sulfur content, and such records shall be made available for District inspection for five years. [40 CFR 60.334(b)(2), District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. Annual compliance with GTE NO<sub>x</sub> and CO emission limits (pursuant to Rule 4703 (10/16/97)) and fuel sulfur limit shall be demonstrated by District witnessed or authorized sample collection by independent laboratory. Test results shall be submitted within 60 days. [District NSR Rule and Rule 4703] Federally Enforceable Through Title V Permit
45. 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
46. The following types of units are not affected units subject to the requirements of the Acid Rain Program: 1) A simple combustion turbine that commenced operation before November 15, 1990, 2) Any unit that, during 1985, did not serve a generator that produced electricity for sale and that did not, as of November 15, 1990, and does not currently, serve a generator that produces electricity for sale, 3) A cogeneration facility which for a unit that commenced construction prior to November 15, 1990, was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 Mwe-hrs actual electric output on an annual basis to any utility power distribution system for sale. Therefore, the requirements of 40 CFR 72.6 do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
47. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rule 1081, 4201, 3.1; Rules 406 (Fresno), 407 (Kings, San Joaquin, Stanislaus, Tulare, Merced, and Kern), and 404(Madera); 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
48. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern and Stanislaus), and 110 (Madera); Rules 402 (Madera) and 404 (Fresno, Kern, Kings, San Joaquin, Merced, Stanislaus, Tulare); 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
49. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: SJVUAPCD Rule 4703, sections 5.0, 5.1.1, 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.3, 6.4.5, 6.4.6. 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-1129-55-13

**ISSUANCE DATE:** 12/28/2009

**LEGAL OWNER OR OPERATOR:** CHEVRON U S A INC  
**MAILING ADDRESS:** PO BOX 1392  
BAKERSFIELD, CA 93302

**LOCATION:** HEAVY OIL WESTERN  
CA

**SECTION:** 34 **TOWNSHIP:** 30S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 3.5 MW COMBINED CYCLE GAS TURBINE TOPPING CYCLE COGENERATION NORTH MIDWAY UNIT #9: INSTALL A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION TO COMPLY WITH RULE 4703 TIER 3 EMISSION LIMIT OF 5 PPMVD NOX @ 15% O2; INSTALL A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO AND O2 CONCENTRATIONS; AND REPLACE STRUTHERS-WELLS HEAT RECOVERY STEAM GENERATOR (HRSG) WITH ANOTHER 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. Cogeneration unit shall include 48.7 MMBtu/hr (nominal rating) Allison, model 501-KB-5, gas-fired turbine engine with pilotless fuel nozzles or conventional fuel nozzles, Ideal Synchronous electrical generator, unfired 22.5 MMBtu/hr steam generator and an inlet air evaporative cooler. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Turbine lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

  
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DAVID WARNER, Director of Permit Services  
S-1129-55-13 : Dec 28 2009 8:50AM - AHMADS : Joint Inspection NOT Required

5. Generator gearbox lube oil tank shall vent only through CECO Model #STTOR-10 fiber bed filter system. [District NSR Rule] Federally Enforceable Through Title V Permit
6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
8. The gas turbine shall be fired exclusively on PUC-regulated gas or PUC-quality natural gas 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
9. The sulfur content in the fuel being combusted shall not exceed 1.0 grains/100 scf, otherwise, the fuel shall be of PUC-regulated quality. [District Rule 2201] Federally Enforceable Through Title V Permit
10. If the gas turbine system is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520] Federally Enforceable Through Title V Permit
11. If the gas turbine system is not fired on PUC-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
12. 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
13. During an initial shakedown period, the emissions shall not exceed any of the following limits: 30 ppmvd NO<sub>x</sub> @ 15% O<sub>2</sub> referenced as NO<sub>2</sub>; 41 ppmvd CO @ 15% O<sub>2</sub>; 0.61 lb-PM<sub>10</sub>/hr; 1.65 lb-VOC/hr referenced as methane; and 0.16 lb-SO<sub>x</sub>/hr referenced as SO<sub>2</sub>. 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 NO<sub>x</sub> 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
14. 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 NO<sub>x</sub> @ 15% O<sub>2</sub> referenced as NO<sub>2</sub>; 41 ppmvd CO @ 15% O<sub>2</sub>; 0.61 lb-PM<sub>10</sub>/hr; 1.65 lb-VOC/hr referenced as methane; and 0.16 lb-SO<sub>x</sub>/hr referenced as SO<sub>2</sub>. NO<sub>x</sub> 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 NO<sub>x</sub> and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
15. 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: 39.4 lb-NO<sub>x</sub>/day referenced as NO<sub>2</sub>; 1,394.7 lb-CO/day; 3.3 lb-SO<sub>x</sub>/day; 14.6 lb-PM<sub>10</sub>/day; 109.0 lb-VOC/day referenced as methane; and 33.2 lb-NH<sub>3</sub>/day. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 7,948 lb-NO<sub>x</sub>/year; 45,768 lb-CO/year; 1,195 lb-SO<sub>x</sub>/year; 5,333 lb-PM<sub>10</sub>/year; 14,809 lb-VOC/year; 12,121 lb-NH<sub>3</sub>/year. All annual emission limits are based on 12 consecutive month rolling emissions totals. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Ammonia (NH<sub>3</sub>) emissions shall not exceed 21 ppmvd @ 15% O<sub>2</sub> over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit
18. 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

CONDITIONS CONTINUE ON NEXT PAGE

19. 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
20. 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
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. 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
23. 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-1129-53, -54, -55) 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
24. 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
25. 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
26. 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
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. 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
29. 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

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30. The NO<sub>x</sub>, CO and O<sub>2</sub> 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
31. 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
32. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: 1) annual RATA testing of at least one gas turbine engine (S-1129-53, -54, -55), and rotate the unit tested so that all three units are tested over three years, 2) annual RAA testing for the two gas turbine engines for which the annual RATA testing is not performed, 3) if any of the gas turbine engines fail the RAA testing, they must have a RATA test within 60 days, and 4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed for each gas turbine engine. [District Rule 1080] Federally Enforceable Through Title V Permit
33. 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
34. 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
35. 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
36. 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
37. 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
38. 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<sub>x</sub> 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
39. Monitor downtime for NO<sub>x</sub> shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO<sub>x</sub> concentration or diluent O<sub>2</sub> (or both). [40 CFR 60.334(j)(iii)(B)] Federally Enforceable Through Title V Permit
40. If the gas turbine system is not fired on PUC-regulated or FERC-regulated natural gas, then a fuel sample shall be collected during the source test to determine sulfur content of the fuel combusted in the turbine. The fuel sample shall be analyzed for the total sulfur content using ASTM D1072; D3246; D4084; D4468; D6228; or D6667; or double GC for H<sub>2</sub>S and mercaptans. The applicable ranges of some ASTM methods are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of dilution ratio) may be used after getting a prior approval from the District. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit

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41. 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 run 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
42. 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
43. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
44. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
45. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup (black start) and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
46. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703] Federally Enforceable Through Title V Permit
47. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
48. Reduced load period is defined as the time during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. Each reduced load period shall not exceed one hour. [District Rule 4703] Federally Enforceable Through Title V Permit
49. 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
50. 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
51. 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
52. The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
53. 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
54. 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
55. 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