



AUG 11 2010

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

Re: **Notice of Minor Title V Permit Modification**  
**District Facility # C-535**  
**Project # C-1102730**

Dear Mr. Rios:

Enclosed for you to review is an application for minor Title V permit modification for the facility identified above. Fresno/Clovis Regional Wastewater Treatment Plant is proposing a Title V minor permit modification to incorporate the recently issued ATC's #C-535-18-6 and C-535-19-6 into the Title V operating permit. Fresno/Clovis Regional WWTP is requesting authorization to allow use of portable analyzer during periods when continuous emissions monitoring system (CEMS) is not operating properly for either gas turbine.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued ATC's #C-535-18-6 and C-535-19-6, application, and previous Title V permit. Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Jim Swaney at (559) 230-5900.

Sincerely,

David Warner  
Director of Permit Services

Enclosures

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

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

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1990 E. Gettysburg Avenue  
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**Southern Region**  
34946 Flyover Court  
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AUG 11 2010

Raul Campos  
Fresno/Clovis Regional Wastewater Treatment Plant  
5607 W Jensen Avenue  
Fresno, CA 93706

**Re: Notice of Minor Title V Permit Modification  
District Facility # C-535  
Project # C-1102730**

Dear Mr. Campos:

Enclosed is the District's analysis of your application for minor Title V permit modification for the facility identified above. You proposed a Title V minor permit modification to incorporate recently issued ATC's #C-535-18-6 and C-535-19-6 into the Title V operating permit. Fresno/Clovis Regional WWTP is requesting authorization to allow use of portable analyzer during periods when continuous emissions monitoring system (CEMS) is not operating properly for either gas turbine.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued ATC's #C-535-18-6 and C-535-19-6, application, and previous Title V permit. This project will be subject to a 45-day EPA commenting period prior to the District taking final action.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Jim Swaney at (559) 230-5900.

Sincerely,

David Warner  
Director of Permit Services

Enclosures

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# **TITLE V APPLICATION REVIEW**

Minor Modification  
Project #: C-1102730

Engineer: Renald Harris  
Date: August 8, 2010

Facility Number: C-535  
Facility Name: Fresno/Clovis Regional Wastewater Treatment Plant  
Mailing Address: 5607 W Jensen Avenue  
Fresno, CA 93706

Contact Name: Raul Campos  
Phone: (559) 621-5132

Responsible Official: Stephen Hogg  
Title: Assistant Director Public Utilities

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## **I. PROPOSAL**

Fresno/Clovis Regional Wastewater Treatment Plant (WWTP) is proposing a Title V minor permit modification to incorporate the recently issued ATCs #C-535-18-6 and -19-6 into the Title V operating permit. Fresno/Clovis Regional WWTP is requesting authorization to allow use of portable analyzer during periods when continuous emissions monitoring system (CEMS) is not operating properly for either gas turbine.

The purpose of this evaluation is to identify all applicable requirements, determine if the facility will comply with the applicable requirements and to provide the legal and factual basis for the proposed revisions.

## **II. FACILITY LOCATION**

5607 W. Jensen Avenue  
Fresno, CA

### **III. EQUIPMENT DESCRIPTION**

**C-535-18-7:** 3.377 MW DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #1 WITH WATER INJECTION AND HEAT RECOVERY STEAM GENERATOR

**S-535-19-7:** 3.377 MW DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #2 WITH WATER INJECTION AND HEAT RECOVERY STEAM GENERATOR

### **IV. SCOPE OF EPA AND PUBLIC REVIEW**

This change to a Title V permit is considered to be a minor modification and, as such, requires no public review.

### **V. APPLICABLE REQUIREMENTS**

District Rule 2520, Federally Mandated Operating Permits (Adopted June 21, 2001)

### **VI. DESCRIPTION OF PROPOSED MODIFICATIONS**

Fresno/Clovis Regional WWTP has incorporated use of a portable analyzer during periods when continuous emissions monitoring system (CEMS) is not operating properly for either gas turbine.

#### C-535-18-7 and -19-7:

Permit condition 17 was added from the ATC to the proposed Permit to Operate to indicate that the Fresno/Clovis Regional WWTP is authorize to use a portable analyzer when the continuous emission monitoring system (CEMS) for NOx and CO, and when the water-to-fuel ratio monitoring system are not operating properly.

Permit condition 18 was added from the ATC to the proposed Permit to Operate discussing emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period, as well as, when to take the readings with the portable analyzer, and calibrating according to manufacturer's specification.

Permit condition 19 was added from the ATC to the proposed Permit to Operate to indicate what to do if the NO<sub>x</sub> and/or CO concentrations, as measured by the permittee with a portable analyzer, exceed the permitted emission limits.

The proposed modifications authorizing ATCs #C-535-18-4, and -19-4 do not result in any emissions increases; therefore, emissions increase calculations are not required.

## VII. COMPLIANCE

In accordance with Rule 2520, 3.20, these modifications:

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

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including;

1. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
2. The source's suggested draft permit; and

3. Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used.

## **VIII. ATTACHMENTS**

- A. Proposed Modified Title V Operating Permit No. C-535-18-7 and C-535-19-7
- B. Authorities to Construct No. C-535-18-6 and C-535-19-6
- C. Application
- D. Previous Title V Operating Permit No.'s C-535-18-5 and C-535-19-5

# ATTACHMENT A

Proposed Modified Title V Operating Permit No.  
(C-535-18-7 and C-535-19-7)

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-535-18-7

EXPIRATION DATE: 01/31/2006

## EQUIPMENT DESCRIPTION:

3.377 MW DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #1 WITH WATER INJECTION AND HEAT RECOVERY STEAM GENERATOR

## PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. {2256} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101, 5.1] Federally Enforceable Through Title V Permit
5. The gas-fired turbines shall be fired exclusively on natural gas or a blend (combination) of natural gas and digester gas with the combination having a sulfur content of no greater than 5.6 grain of sulfur compounds (as S) per 100 dry scf. When fired on digester gas, the turbine shall use a combination of digester gas and at least 50% PUC-regulated natural gas. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
6. The owner or operator shall install, operate and maintain in calibration a system which continuously measures and records: the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a)] Federally Enforceable Through Title V Permit
7. The exhaust stack shall be equipped with a continuous emissions monitor (CEM) for NO<sub>x</sub>, CO, and O<sub>2</sub>. The CEMs shall meet the requirements of 40 CFR part 60, Appendices B and F and shall be capable of monitoring emissions during startups and shutdowns as well as during normal operating conditions. [District Rules 1080, 2201, 4001, and 4703] Federally Enforceable Through Title V Permit
8. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
9. Upon notice by the District that the facility's CEM system 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 CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
10. 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 policy document titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

11. Emission rates from this unit, except during thermal stabilization or reduced load periods, shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) - 5.74 lb/hr and 25 ppmvd @ 15% O<sub>2</sub>; SO<sub>x</sub> (as SO<sub>2</sub>) - 1.0 lb/hr; PM<sub>10</sub> - 1.34 lb/hr; CO - 27.95 lb/hr and 188.0 ppmvd @ 15% O<sub>2</sub>; or VOC (as methane) - 0.02 lb/hr. [District Rules 2201 and 4703, 5.1.1, 5.1.2, & 5.2; and 40 CFR 60.332(a)(2), 40 CFR 60.333(a) & (b)] Federally Enforceable Through Title V Permit
12. Thermal Stabilization is defined as the startup or shutdown time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per occurrence. Reduced Load 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 diverter gate, not to exceed one hour. [District Rules 2201 and 4703, 3.19 & 3.25] Federally Enforceable Through Title V Permit
13. Emissions from this unit (including emissions during thermal stabilization or reduced load periods), shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) - 137.8 lb/day; SO<sub>x</sub> (as SO<sub>2</sub>) - 24.0 lb/day; PM<sub>10</sub> - 32.2 lb/day; CO - 670.8 lb/day; or VOC - 0.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall perform a source test to measure the NO<sub>x</sub> and CO emission concentrations and to correlate the amount of water injected to the amount of fuel consumed, to the associated measured NO<sub>x</sub> emissions levels at least once every 12 months. [District Rule 4703, 6.3.1] Federally Enforceable Through Title V Permit
15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.3] Federally Enforceable Through Title V Permit
17. When the continuous emission monitoring system (CEMS) for NO<sub>x</sub> and CO is not operating properly, and when the water-to-fuel ratio monitoring system is not operating properly, the permittee shall notify the District of the breakdown condition in accordance with Rule 1100 (Equipment Breakdown). During the breakdown relief period, the facility shall demonstrate emissions compliance by monitoring and recording hourly NO<sub>x</sub> and CO concentrations utilizing a portable analyzer that meets District specifications. The facility shall operate the portable analyzer providing data to the District for a maximum of 96 hours per breakdown occurrence. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
18. Portable analyzer readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
19. If the NO<sub>x</sub> and/or CO concentrations, as measured by the permittee with a portable analyzer, exceed the permitted emission limits, the permittee shall notify the District and return the NO<sub>x</sub> and CO concentrations to the permitted emission limits as soon as possible but no longer than eight (8) hours after detection. If the permittee's portable analyzer readings continue to exceed the permitted emissions limits after eight (8) hours, the permittee shall notify the District within the following one (1) hour, and conduct a certified source test within 60 days to demonstrate compliance with the permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate that a violation has occurred, subject to enforcement action. The permittee must correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
20. When no continuous emission monitoring data for NO<sub>x</sub> is available or when the NO<sub>x</sub> continuous emission monitoring system is not operating properly, the water-to-fuel ratio shall be maintained between the limits established during the annual source test. Operator shall perform and submit an engineering performance test to demonstrate continuous compliance with NO<sub>x</sub> emissions limits for any water injection system ratios beyond the water-to-fuel ratio range determined during the annual source test. [District Rules 1070, 2201, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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21. The following test methods shall be used: NO<sub>x</sub> - EPA Method 7E or 20, CO - EPA Method 10 or 10B, and O<sub>2</sub> - EPA Method 3, 3A, or 20. NO<sub>x</sub> test results shall be corrected to ISO standard conditions as defined in 40 CFR Part 60 Subpart GG Section 60.335. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rules 1081, 4001, and 4703, 6.4.1, 6.4.2, & 6.4.3] Federally Enforceable Through Title V Permit
22. When the unit is fired solely on PUC-regulated natural gas, maintain on file copies of the natural gas bills. [District Rule 2520, 9.3.2 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
23. When the unit is not fired solely on PUC-regulated natural gas, the sulfur content of the fuel shall be tested weekly except that if compliance with the fuel sulfur content limit in this permit has been demonstrated for 8 consecutive weeks, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content limit in this permit, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
24. When the unit is not fired solely on PUC-regulated natural gas, the sulfur content of the fuel being fired in the turbine shall be determined using ASTM method D-1072, D-4084, D-3246, or D-4810. [District Rule 1081, 40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
25. When the unit is not fired solely on PUC-regulated natural gas, the operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2.)] Federally Enforceable Through Title V Permit
26. 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, type and quantity of fuel used, and percentage of PUC-quality natural gas in the gas consumed. [District Rules 2201, 2520, 9.4.2 and 4703, 6.2.6] Federally Enforceable Through Title V Permit
27. {2252} The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), and emission measurements. [40 CFR 60.8(d) and District Rule 1080, 7.0] Federally Enforceable Through Title V Permit
28. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201, 2520, 9.4.2, and 4703, 6.2.4] Federally Enforceable Through Title V Permit
29. Records shall be maintained on the quality and accuracy of all instruments to verify compliance. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
30. When no continuous emission monitoring data for NO<sub>x</sub> is available or when the NO<sub>x</sub> continuous emission monitoring system is not operating properly, the owner or operator shall report periods of excess emissions that are defined as follows: any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the NO<sub>x</sub> emission limit. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, and gas turbine load. [40 CFR 60.334(c)(1)] Federally Enforceable Through Title V Permit
31. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
32. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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33. For the NO<sub>x</sub>, CO, and O<sub>2</sub> CEMs, the owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
34. {2251} The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
35. {2253} Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess emissions, nature and 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, 8.0] Federally Enforceable Through Title V Permit

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

DRAFT

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-535-19-7

EXPIRATION DATE: 01/31/2006

## EQUIPMENT DESCRIPTION:

3.377 MW DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #2 WITH WATER INJECTION AND HEAT RECOVERY STEAM GENERATOR:

## PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. {2256} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101, 5.1] Federally Enforceable Through Title V Permit
5. The gas-fired turbines shall be fired exclusively on natural gas or a blend (combination) of natural gas and digester gas with the combination having a sulfur content of no greater than 5.6 grain of sulfur compounds (as S) per 100 dry scf. When fired on digester gas, the turbine shall use a combination of digester gas and at least 50% PUC-regulated natural gas. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
6. The owner or operator shall install, operate and maintain in calibration a system which continuously measures and records: the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a)] Federally Enforceable Through Title V Permit
7. The exhaust stack shall be equipped with a continuous emissions monitor (CEM) for NO<sub>x</sub>, CO, and O<sub>2</sub>. The CEMs shall meet the requirements of 40 CFR part 60, Appendices B and F and shall be capable of monitoring emissions during startups and shutdowns as well as during normal operating conditions. [District Rules 1080, 2201, 4001, and 4703] Federally Enforceable Through Title V Permit
8. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
9. Upon notice by the District that the facility's CEM system 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 CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
10. 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 policy document titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

11. Emission rates from this unit, except during thermal stabilization or reduced load periods, shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) - 5.74 lb/hr and 25 ppmvd @ 15% O<sub>2</sub>; SO<sub>x</sub> (as SO<sub>2</sub>) - 1.0 lb/hr; PM<sub>10</sub> - 1.34 lb/hr; CO - 27.95 lb/hr and 188.0 ppmvd @ 15% O<sub>2</sub>; or VOC (as methane) - 0.02 lb/hr. [District Rules 2201 and 4703, 5.1.1, 5.1.2, & 5.2; and 40 CFR 60.332(a)(2), 40 CFR 60.333(a) & (b)] Federally Enforceable Through Title V Permit
12. Thermal Stabilization is defined as the startup or shutdown time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per occurrence. Reduced Load 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 diverter gate, not to exceed one hour. [District Rules 2201 and 4703, 3.19 & 3.25] Federally Enforceable Through Title V Permit
13. Emissions from this unit (including emissions during thermal stabilization or reduced load periods), shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) - 137.8 lb/day; SO<sub>x</sub> (as SO<sub>2</sub>) - 24.0 lb/day; PM<sub>10</sub> - 32.2 lb/day; CO - 670.8 lb/day; or VOC - 0.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall perform a source test to measure the NO<sub>x</sub> and CO emission concentrations and to correlate the amount of water injected to the amount of fuel consumed, to the associated measured NO<sub>x</sub> emissions levels at least once every 12 months. [District Rule 4703, 6.3.1] Federally Enforceable Through Title V Permit
15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.3] Federally Enforceable Through Title V Permit
17. When the continuous emission monitoring system (CEMS) for NO<sub>x</sub> and CO is not operating properly, and when the water-to-fuel ratio monitoring system is not operating properly, the permittee shall notify the District of the breakdown condition in accordance with Rule 1100 (Equipment Breakdown). During the breakdown relief period, the facility shall demonstrate emissions compliance by monitoring and recording hourly NO<sub>x</sub> and CO concentrations utilizing a portable analyzer that meets District specifications. The facility shall operate the portable analyzer providing data to the District for a maximum of 96 hours per breakdown occurrence. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
18. Portable analyzer readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
19. If the NO<sub>x</sub> and/or CO concentrations, as measured by the permittee with a portable analyzer, exceed the permitted emission limits, the permittee shall notify the District and return the NO<sub>x</sub> and CO concentrations to the permitted emission limits as soon as possible but no longer than eight (8) hours after detection. If the permittee's portable analyzer readings continue to exceed the permitted emissions limits after eight (8) hours, the permittee shall notify the District within the following one (1) hour, and conduct a certified source test within 60 days to demonstrate compliance with the permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate that a violation has occurred, subject to enforcement action. The permittee must correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
20. When no continuous emission monitoring data for NO<sub>x</sub> is available or when the NO<sub>x</sub> continuous emission monitoring system is not operating properly, the water-to-fuel ratio shall be maintained between the limits established during the annual source test. Operator shall perform and submit an engineering performance test to demonstrate continuous compliance with NO<sub>x</sub> emissions limits for any water injection system ratios beyond the water-to-fuel ratio range determined during the annual source test. [District Rules 1070, 2201, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

21. The following test methods shall be used: NO<sub>x</sub> - EPA Method 7E or 20, CO - EPA Method 10 or 10B, and O<sub>2</sub> - EPA Method 3, 3A, or 20. NO<sub>x</sub> test results shall be corrected to ISO standard conditions as defined in 40 CFR Part 60 Subpart GG Section 60.335. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rules 1081, 4001, and 4703, 6.4.1, 6.4.2, & 6.4.3] Federally Enforceable Through Title V Permit
22. When the unit is fired solely on PUC-regulated natural gas, maintain on file copies of the natural gas bills. [District Rule 2520, 9.3.2 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
23. When the unit is not fired solely on PUC-regulated natural gas, the sulfur content of the fuel shall be tested weekly except that if compliance with the fuel sulfur content limit in this permit has been demonstrated for 8 consecutive weeks, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content limit in this permit, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
24. When the unit is not fired solely on PUC-regulated natural gas, the sulfur content of the fuel being fired in the turbine shall be determined using ASTM method D-1072, D-4084, D-3246, or D-4810. [District Rule 1081, 40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
25. When the unit is not fired solely on PUC-regulated natural gas, the operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2).] Federally Enforceable Through Title V Permit
26. 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, type and quantity of fuel used, and percentage of PUC-quality natural gas in the gas consumed. [District Rules 2201, 2520, 9.4.2 and 4703, 6.2.6] Federally Enforceable Through Title V Permit
27. {2252} The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), and emission measurements. [40 CFR 60.8(d) and District Rule 1080, 7.0] Federally Enforceable Through Title V Permit
28. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201, 2520, 9.4.2, and 4703, 6.2.4] Federally Enforceable Through Title V Permit
29. Records shall be maintained on the quality and accuracy of all instruments to verify compliance. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
30. When no continuous emission monitoring data for NO<sub>x</sub> is available or when the NO<sub>x</sub> continuous emission monitoring system is not operating properly, the owner or operator shall report periods of excess emissions that are defined as follows: any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the NO<sub>x</sub> emission limit. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, and gas turbine load. [40 CFR 60.334(c)(1)] Federally Enforceable Through Title V Permit
31. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
32. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

33. For the NO<sub>x</sub>, CO, and O<sub>2</sub> CEMs, the owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
34. {2251} The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
35. {2253} Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess emissions, nature and 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, 8.0] Federally Enforceable Through Title V Permit

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

DRAFT

# ATTACHMENT B

Authorities to Construct No.  
(C-535-18-6 and C-535-19-6)



## AUTHORITY TO CONSTRUCT

PERMIT NO: C-535-18-6

ISSUANCE DATE: 12/22/2009

LEGAL OWNER OR OPERATOR: FRESNO/CLOVIS REGIONAL WWTP  
MAILING ADDRESS: 5607 W JENSEN AVE  
FRESNO, CA 93706-9458

LOCATION: 5607 W JENSEN AVE  
FRESNO, CA 93706

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 3.377 MW DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #1 WITH WATER INJECTION AND HEAT RECOVERY STEAM GENERATOR; ALLOW USE OF PORTABLE ANALYZER WHEN CEMS NOT IN OPERATION

### CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101, 5.1] Federally Enforceable Through Title V Permit
6. The gas-fired turbines shall be fired exclusively on natural gas or a blend (combination) of natural gas and digester gas with the combination having a sulfur content of no greater than 5.6 grain of sulfur compounds (as S) per 100 dry scf. When fired on digester gas, the turbine shall use a combination of digester gas and at least 50% PUC-regulated natural gas. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 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  
C-535-18-6, Dec 22 2009 8:10AM - HARRIS Joint Inspection NOT Required

7. The owner or operator shall install, operate and maintain in calibration a system which continuously measures and records: the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a)] Federally Enforceable Through Title V Permit
8. The exhaust stack shall be equipped with a continuous emissions monitor (CEM) for NO<sub>x</sub>, CO, and O<sub>2</sub>. The CEMs shall meet the requirements of 40 CFR part 60, Appendices B and F and shall be capable of monitoring emissions during startups and shutdowns as well as during normal operating conditions. [District Rules 1080, 2201, 4001, and 4703] Federally Enforceable Through Title V Permit
9. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
10. Upon notice by the District that the facility's CEM system 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 CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
11. 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 policy document titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
12. Emission rates from this unit, except during thermal stabilization or reduced load periods, shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) - 5.74 lb/hr and 25 ppmvd @ 15% O<sub>2</sub>; SO<sub>x</sub> (as SO<sub>2</sub>) - 1.0 lb/hr; PM<sub>10</sub> - 1.34 lb/hr; CO - 27.95 lb/hr and 188.0 ppmvd @ 15% O<sub>2</sub>; or VOC (as methane) - 0.02 lb/hr. [District Rules 2201 and 4703, 5.1.1, 5.1.2, & 5.2; and 40 CFR 60.332(a)(2), 40 CFR 60.333(a) & (b)] Federally Enforceable Through Title V Permit
13. Thermal Stabilization is defined as the startup or shutdown time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per occurrence. Reduced Load 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 diverter gate, not to exceed one hour. [District Rules 2201 and 4703, 3.19 & 3.25] Federally Enforceable Through Title V Permit
14. Emissions from this unit (including emissions during thermal stabilization or reduced load periods), shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) - 137.8 lb/day; SO<sub>x</sub> (as SO<sub>2</sub>) - 24.0 lb/day; PM<sub>10</sub> - 32.2 lb/day; CO - 670.8 lb/day; or VOC - 0.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Permittee shall perform a source test to measure the NO<sub>x</sub> and CO emission concentrations and to correlate the amount of water injected to the amount of fuel consumed, to the associated measured NO<sub>x</sub> emissions levels at least once every 12 months. [District Rule 4703, 6.3.1] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
17. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.3] Federally Enforceable Through Title V Permit
18. When the continuous emission monitoring system (CEMS) for NO<sub>x</sub> and CO is not operating properly, and when the water-to-fuel ratio monitoring system is not operating properly, the permittee shall notify the District of the breakdown condition in accordance with Rule 1100 (Equipment Breakdown). During the breakdown relief period, the facility shall demonstrate emissions compliance by monitoring and recording hourly NO<sub>x</sub> and CO concentrations utilizing a portable analyzer that meets District specifications. The facility shall operate the portable analyzer providing data to the District for a maximum of 96 hours per breakdown occurrence. [District Rules 2201 and 4703]

CONDITIONS CONTINUE ON NEXT PAGE

19. Portable analyzer readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201 and 4703]
20. If the NO<sub>x</sub> and/or CO concentrations, as measured by the permittee with a portable analyzer, exceed the permitted emission limits, the permittee shall notify the District and return the NO<sub>x</sub> and CO concentrations to the permitted emission limits as soon as possible but no longer than eight (8) hours after detection. If the permittee's portable analyzer readings continue to exceed the permitted emissions limits after eight (8) hours, the permittee shall notify the District within the following one (1) hour, and conduct a certified source test within 60 days to demonstrate compliance with the permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate that a violation has occurred, subject to enforcement action. The permittee must correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201 and 4703]
21. When no continuous emission monitoring data for NO<sub>x</sub> is available or when the NO<sub>x</sub> continuous emission monitoring system is not operating properly, the water-to-fuel ratio shall be maintained between the limits established during the annual source test. Operator shall perform and submit an engineering performance test to demonstrate continuous compliance with NO<sub>x</sub> emissions limits for any water injection system ratios beyond the water-to-fuel ratio range determined during the annual source test. [District Rules 1070, 2201, and 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. The following test methods shall be used: NO<sub>x</sub> - EPA Method 7E or 20, CO - EPA Method 10 or 10B, and O<sub>2</sub> - EPA Method 3, 3A, or 20. NO<sub>x</sub> test results shall be corrected to ISO standard conditions as defined in 40 CFR Part 60 Subpart GG Section 60.335. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rules 1081, 4001, and 4703, 6.4.1, 6.4.2, & 6.4.3] Federally Enforceable Through Title V Permit
23. When the unit is fired solely on PUC-regulated natural gas, maintain on file copies of the natural gas bills. [District Rule 2520, 9.3.2 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
24. When the unit is not fired solely on PUC-regulated natural gas, the sulfur content of the fuel shall be tested weekly except that if compliance with the fuel sulfur content limit in this permit has been demonstrated for 8 consecutive weeks, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content limit in this permit, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
25. When the unit is not fired solely on PUC-regulated natural gas, the sulfur content of the fuel being fired in the turbine shall be determined using ASTM method D-1072, D-4084, D-3246, or D-4810. [District Rule 1081, 40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
26. When the unit is not fired solely on PUC-regulated natural gas, the operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit
27. 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, type and quantity of fuel used, and percentage of PUC-quality natural gas in the gas consumed. [District Rules 2201, 2520, 9.4.2 and 4703, 6.2.6] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), and emission measurements. [40 CFR 60.8(d) and District Rule 1080, 7.0] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

29. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201, 2520; 9.4.2, and 4703, 6.2.4] Federally Enforceable Through Title V Permit
30. Records shall be maintained on the quality and accuracy of all instruments to verify compliance. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
31. When no continuous emission monitoring data for NO<sub>x</sub> is available or when the NO<sub>x</sub> continuous emission monitoring system is not operating properly, the owner or operator shall report periods of excess emissions that are defined as follows: any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the NO<sub>x</sub> emission limit. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, and gas turbine load. [40 CFR 60.334(c)(1)] Federally Enforceable Through Title V Permit
32. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
33. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. 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
34. For the NO<sub>x</sub>, CO, and O<sub>2</sub> CEMs, the owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
35. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
36. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess emissions, nature and 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, 8.0] Federally Enforceable Through Title V Permit



**COPY**

## AUTHORITY TO CONSTRUCT

PERMIT NO: C-535-19-6

ISSUANCE DATE: 12/22/2009

LEGAL OWNER OR OPERATOR: FRESNO/CLOVIS REGIONAL WWTP

MAILING ADDRESS: 5607 W JENSEN AVE  
FRESNO, CA 93706-9458

LOCATION: 5607 W JENSEN AVE  
FRESNO, CA 93706

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 3,377 MW DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #2 WITH WATER INJECTION AND HEAT RECOVERY STEAM GENERATOR: ALLOW USE OF PORTABLE ANALYZER WHEN CEMS NOT IN OPERATION

### CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101, 5.1] Federally Enforceable Through Title V Permit
6. The gas-fired turbines shall be fired exclusively on natural gas or a blend (combination) of natural gas and digester gas with the combination having a sulfur content of no greater than 5.6 grain of sulfur compounds (as S) per 100 dry scf. When fired on digester gas, the turbine shall use a combination of digester gas and at least 50% PUC-regulated natural gas. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 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

C-535-19-6 Dec 22 2009 8:10AM - HARRIS Joint Inspection NOT Required

7. The owner or operator shall install, operate and maintain in calibration a system which continuously measures and records: the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a)] Federally Enforceable Through Title V Permit
8. The exhaust stack shall be equipped with a continuous emissions monitor (CEM) for NO<sub>x</sub>, CO, and O<sub>2</sub>. The CEMs shall meet the requirements of 40 CFR part 60, Appendices B and F and shall be capable of monitoring emissions during startups and shutdowns as well as during normal operating conditions. [District Rules 1080, 2201, 4001, and 4703] Federally Enforceable Through Title V Permit
9. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
10. Upon notice by the District that the facility's CEM system 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 CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
11. 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 policy document titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
12. Emission rates from this unit, except during thermal stabilization or reduced load periods, shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) - 5.74 lb/hr and 25 ppmvd @ 15% O<sub>2</sub>; SO<sub>x</sub> (as SO<sub>2</sub>) - 1.0 lb/hr; PM<sub>10</sub> - 1.34 lb/hr; CO - 27.95 lb/hr and 188.0 ppmvd @ 15% O<sub>2</sub>; or VOC (as methane) - 0.02 lb/hr. [District Rules 2201 and 4703, 5.1.1, 5.1.2, & 5.2; and 40 CFR 60.332(a)(2), 40 CFR 60.333(a) & (b)] Federally Enforceable Through Title V Permit
13. Thermal Stabilization is defined as the startup or shutdown time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per occurrence. Reduced Load 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 diverter gate, not to exceed one hour. [District Rules 2201 and 4703, 3.19 & 3.25] Federally Enforceable Through Title V Permit
14. Emissions from this unit (including emissions during thermal stabilization or reduced load periods), shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) - 137.8 lb/day; SO<sub>x</sub> (as SO<sub>2</sub>) - 24.0 lb/day; PM<sub>10</sub> - 32.2 lb/day; CO - 670.8 lb/day; or VOC - 0.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Permittee shall perform a source test to measure the NO<sub>x</sub> and CO emission concentrations and to correlate the amount of water injected to the amount of fuel consumed, to the associated measured NO<sub>x</sub> emissions levels at least once every 12 months. [District Rule 4703, 6.3.1] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
17. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.3] Federally Enforceable Through Title V Permit
18. When the continuous emission monitoring system (CEMS) for NO<sub>x</sub> and CO is not operating properly, and when the water-to-fuel ratio monitoring system is not operating properly, the permittee shall notify the District of the breakdown condition in accordance with Rule 1100 (Equipment Breakdown). During the breakdown relief period, the facility shall demonstrate emissions compliance by monitoring and recording hourly NO<sub>x</sub> and CO concentrations utilizing a portable analyzer that meets District specifications. The facility shall operate the portable analyzer providing data to the District for a maximum of 96 hours per breakdown occurrence. [District Rules 2201 and 4703]

CONDITIONS CONTINUE ON NEXT PAGE

19. Portable analyzer readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201 and 4703]
20. If the NO<sub>x</sub> and/or CO concentrations, as measured by the permittee with a portable analyzer, exceed the permitted emission limits, the permittee shall notify the District and return the NO<sub>x</sub> and CO concentrations to the permitted emission limits as soon as possible but no longer than eight (8) hours after detection. If the permittee's portable analyzer readings continue to exceed the permitted emissions limits after eight (8) hours, the permittee shall notify the District within the following one (1) hour, and conduct a certified source test within 60 days to demonstrate compliance with the permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate that a violation has occurred, subject to enforcement action. The permittee must correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201 and 4703]
21. When no continuous emission monitoring data for NO<sub>x</sub> is available or when the NO<sub>x</sub> continuous emission monitoring system is not operating properly, the water-to-fuel ratio shall be maintained between the limits established during the annual source test. Operator shall perform and submit an engineering performance test to demonstrate continuous compliance with NO<sub>x</sub> emissions limits for any water injection system ratios beyond the water-to-fuel ratio range determined during the annual source test. [District Rules 1070, 2201, and 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. The following test methods shall be used: NO<sub>x</sub> - EPA Method 7E or 20, CO - EPA Method 10 or 10B, and O<sub>2</sub> - EPA Method 3, 3A, or 20. NO<sub>x</sub> test results shall be corrected to ISO standard conditions as defined in 40 CFR Part 60 Subpart GG Section 60.335. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rules 1081, 4001, and 4703, 6.4.1, 6.4.2, & 6.4.3] Federally Enforceable Through Title V Permit
23. When the unit is fired solely on PUC-regulated natural gas, maintain on file copies of the natural gas bills. [District Rule 2520, 9.3.2 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
24. When the unit is not fired solely on PUC-regulated natural gas, the sulfur content of the fuel shall be tested weekly except that if compliance with the fuel sulfur content limit in this permit has been demonstrated for 8 consecutive weeks, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content limit in this permit, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
25. When the unit is not fired solely on PUC-regulated natural gas, the sulfur content of the fuel being fired in the turbine shall be determined using ASTM method D-1072, D-4084, D-3246, or D-4810. [District Rule 1081, 40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
26. When the unit is not fired solely on PUC-regulated natural gas, the operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2.)] Federally Enforceable Through Title V Permit
27. 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, type and quantity of fuel used, and percentage of PUC-quality natural gas in the gas consumed. [District Rules 2201, 2520, 9.4.2 and 4703, 6.2.6] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), and emission measurements. [40 CFR 60.8(d) and District Rule 1080, 7.0] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

29. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201, 2520, 9.4.2, and 4703, 6.2.4] Federally Enforceable Through Title V Permit
30. Records shall be maintained on the quality and accuracy of all instruments to verify compliance. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
31. When no continuous emission monitoring data for NO<sub>x</sub> is available or when the NO<sub>x</sub> continuous emission monitoring system is not operating properly, the owner or operator shall report periods of excess emissions that are defined as follows: any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the NO<sub>x</sub> emission limit. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, and gas turbine load. [40 CFR 60.334(c)(1)] Federally Enforceable Through Title V Permit
32. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
33. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. 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
34. For the NO<sub>x</sub>, CO, and O<sub>2</sub> CEMs, the owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
35. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
36. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess emissions, nature and 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, 8.0] Federally Enforceable Through Title V Permit

# ATTACHMENT C

Application

# San Joaquin Valley Air Pollution Control District

www.valleyair.org

**RECEIVED**

JUL 23 2010

Permits Srvc  
SJVAPCD

## Permit Application For:

ADMINISTRATIVE AMENDMENT     MINOR MODIFICATION     SIGNIFICANT MODIFICATION

1. PERMIT TO BE ISSUED TO: <b>Fresno/Clovis Regional Wastewater Reclamation Facility</b>	
2. MAILING ADDRESS: <b>5607 W. Jensen Ave.</b>	
STREET/P.O. BOX: <u>Same</u>	
CITY: <u>Fresno</u>	STATE: <u>California</u> 9-DIGIT ZIP CODE: <u>93706-9458</u>
3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED:  STREET: <u>same</u> CITY: <u>Same</u>  <u>NW</u> <u>14</u> <u>1/4 SECTION</u> <u>Fresno</u> TOWNSHIP <u>South</u> RANGE <u>19 East</u>	INSTALLATION DATE:  N/A
4. GENERAL NATURE OF BUSINESS: <b>Sewage Treatment Plant</b>	
5. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE (include Permit #'s if known, and use additional sheets if necessary) <b>Application for Title V Minor Modification to incorporate: ATC-C-535-18-6 and ATC-C-535-19-6 (copies attached) into the facility's Title V permit.</b>	
6. TYPE OR PRINT NAME OF APPLICANT: <b>Raul Campos</b>	TITLE OF APPLICANT: <b>Environmental Control Officer</b>
7. SIGNATURE OF APPLICANT: 	DATE: <u>7/7/10</u>
	PHONE: (559) 621-5132 FAX: (559) 457-1168 EMAIL: Raul.Campos@fresno.gov

**For APCD Use Only:**

DATE STAMP	FILING FEE RECEIVED: \$ <u>38.00</u>	CHECK#: <u>683940</u>
	DATE PAID: <u>7/23/10</u>	
	PROJECT NO: <u>C-1102730</u>	FACILITY ID: <u>C-535</u>

**San Joaquin Valley  
Unified Air Pollution Control District**

**TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM**

**I. TYPE OF PERMIT ACTION (Check appropriate box)**

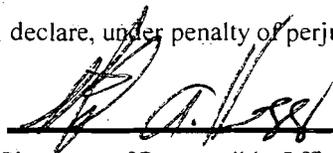
- SIGNIFICANT PERMIT MODIFICATION                       ADMINISTRATIVE  
 MINOR PERMIT MODIFICATION                                       AMENDMENT

COMPANY NAME: <b>Fresno/Clovis Regional Wastewater Reclamation Facility</b>	FACILITY ID: <b>C 535</b>
1. Type of Organization: <input type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input checked="" type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: <b>City of Fresno</b>	
3. Agent to the Owner: <b>Stephen A. Hogg</b>	

**II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):**

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

  
\_\_\_\_\_  
Signature of Responsible Official

7-23-10  
\_\_\_\_\_  
Date

**Stephen A. Hogg**  
\_\_\_\_\_  
Name of Responsible Official (please print)

**Public Utilities, Assistant Director-Wastewater**  
\_\_\_\_\_  
Title of Responsible Official (please print)

# ATTACHMENT D

Previous Title V Operating Permit No.'s  
(C-535-18-5 and C-535-19-5)

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-535-18-5

EXPIRATION DATE: 01/31/2006

## EQUIPMENT DESCRIPTION:

3.377 MW DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #1 WITH WATER INJECTION AND HEAT RECOVERY STEAM GENERATOR

## PERMIT UNIT REQUIREMENTS

---

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101, 5.1] Federally Enforceable Through Title V Permit
5. The gas-fired turbines shall be fired exclusively on natural gas or a blend (combination) of natural gas and digester gas with the combination having a sulfur content of no greater than 5.6 grain of sulfur compounds (as S) per 100 dry scf. When fired on digester gas, the turbine shall use a combination of digester gas and at least 50% PUC-regulated natural gas. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
6. The owner or operator shall install, operate and maintain in calibration a system which continuously measures and records: the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a)] Federally Enforceable Through Title V Permit
7. The exhaust stack shall be equipped with a continuous emissions monitor (CEM) for NO<sub>x</sub>, CO, and O<sub>2</sub>. The CEMs shall meet the requirements of 40 CFR part 60, Appendices B and F and shall be capable of monitoring emissions during startups and shutdowns as well as during normal operating conditions. [District Rules 1080, 2201, 4001, and 4703] Federally Enforceable Through Title V Permit
8. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
9. Upon notice by the District that the facility's CEM system 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 CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
10. 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 policy document titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

11. Emission rates from this unit, except during thermal stabilization or reduced load periods, shall not exceed any of the following limits: NOx (as NO<sub>2</sub>) - 5.74 lb/hr and 25 ppmvd @ 15% O<sub>2</sub>; SOx (as SO<sub>2</sub>) - 1.0 lb/hr; PM<sub>10</sub> - 1.34 lb/hr; CO - 27.95 lb/hr and 188.0 ppmvd @ 15% O<sub>2</sub>; or VOC (as methane) - 0.02 lb/hr. [District Rules 2201 and 4703, 5.1.1, 5.1.2, & 5.2; and 40 CFR 60.332(a)(2), 40 CFR 60.333(a) & (b)] Federally Enforceable Through Title V Permit
12. Thermal Stabilization is defined as the startup or shutdown time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per occurrence. Reduced Load 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 diverter gate, not to exceed one hour. [District Rules 2201 and 4703, 3.19 & 3.25] Federally Enforceable Through Title V Permit
13. Emissions from this unit (including emissions during thermal stabilization or reduced load periods), shall not exceed any of the following limits: NOx (as NO<sub>2</sub>) - 137.8 lb/day; SOx (as SO<sub>2</sub>) - 24.0 lb/day; PM<sub>10</sub> - 32.2 lb/day; CO - 670.8 lb/day; or VOC - 0.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall perform a source test to measure the NOx and CO emission concentrations and to correlate the amount of water injected to the amount of fuel consumed, to the associated measured NOx emissions levels at least once every 12 months. [District Rule 4703, 6.3.1] Federally Enforceable Through Title V Permit
15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.3] Federally Enforceable Through Title V Permit
17. When no continuous emission monitoring data for NOx is available or when the NOx continuous emission monitoring system is not operating properly, the water-to-fuel ratio shall be maintained between the limits established during the annual source test. Operator shall perform and submit an engineering performance test to demonstrate continuous compliance with NOx emissions limits for any water injection system ratios beyond the water-to-fuel ratio range determined during the annual source test. [District Rules 1070, 2201, and 2520, 9.3.2] Federally Enforceable Through Title V Permit
18. The following test methods shall be used: NOx - EPA Method 7E or 20, CO - EPA Method 10 or 10B, and O<sub>2</sub> - EPA Method 3, 3A, or 20. NOx test results shall be corrected to ISO standard conditions as defined in 40 CFR Part 60 Subpart GG Section 60.335. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rules 1081, 4001, and 4703, 6.4.1, 6.4.2, & 6.4.3] Federally Enforceable Through Title V Permit
19. When the unit is fired solely on PUC-regulated natural gas, maintain on file copies of the natural gas bills. [District Rule 2520, 9.3.2 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
20. When the unit is not fired solely on PUC-regulated natural gas, the sulfur content of the fuel shall be tested weekly except that if compliance with the fuel sulfur content limit in this permit has been demonstrated for 8 consecutive weeks, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content limit in this permit, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
21. When the unit is not fired solely on PUC-regulated natural gas, the sulfur content of the fuel being fired in the turbine shall be determined using ASTM method D-1072, D-4084, D-3246 or D-4810. [District Rule 1081, 40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
22. When the unit is not fired solely on PUC-regulated natural gas, the operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2).] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

23. 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, type and quantity of fuel used, and percentage of PUC-quality natural gas in the gas consumed. [District Rules 2201, 2520, 9.4.2 and 4703, 6.2.6] Federally Enforceable Through Title V Permit
24. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), and emission measurements. [40 CFR 60.8(d) and District Rule 1080, 7.0] Federally Enforceable Through Title V Permit
25. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201, 2520, 9.4.2, and 4703, 6.2.4] Federally Enforceable Through Title V Permit
26. Records shall be maintained on the quality and accuracy of all instruments to verify compliance. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
27. When no continuous emission monitoring data for NO<sub>x</sub> is available or when the NO<sub>x</sub> continuous emission monitoring system is not operating properly, the owner or operator shall report periods of excess emissions that are defined as follows: any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the NO<sub>x</sub> emission limit. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, and gas turbine load. [40 CFR 60.334(c)(1)] Federally Enforceable Through Title V Permit
28. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
29. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. 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
30. For the NO<sub>x</sub>, CO, and O<sub>2</sub> CEMs, the owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
31. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
32. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess emissions, nature and 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, 8.0] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-535-19-5

EXPIRATION DATE: 01/31/2006

## EQUIPMENT DESCRIPTION:

3.377 MW DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #2 WITH WATER INJECTION AND HEAT RECOVERY STEAM GENERATOR

## PERMIT UNIT REQUIREMENTS

---

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101, 5.1] Federally Enforceable Through Title V Permit
5. The gas-fired turbines shall be fired exclusively on natural gas or a blend (combination) of natural gas and digester gas with the combination having a sulfur content of no greater than 5.6 grain of sulfur compounds (as S) per 100 dry scf. When fired on digester gas, the turbine shall use a combination of digester gas and at least 50% PUC-regulated natural gas. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
6. The owner or operator shall install, operate and maintain in calibration a system which continuously measures and records: the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a)] Federally Enforceable Through Title V Permit
7. The exhaust stack shall be equipped with a continuous emissions monitor (CEM) for NO<sub>x</sub>, CO, and O<sub>2</sub>. The CEMs shall meet the requirements of 40 CFR part 60, Appendices B and F and shall be capable of monitoring emissions during startups and shutdowns as well as during normal operating conditions. [District Rules 1080, 2201, 4001, and 4703] Federally Enforceable Through Title V Permit
8. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
9. Upon notice by the District that the facility's CEM system 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 CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
10. 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 policy document titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. Emission rates from this unit, except during thermal stabilization or reduced load periods, shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) - 5.74 lb/hr and 25 ppmvd @ 15% O<sub>2</sub>; SO<sub>x</sub> (as SO<sub>2</sub>) - 1.0 lb/hr; PM<sub>10</sub> - 1.34 lb/hr; CO - 27.95 lb/hr and 188.0 ppmvd @ 15% O<sub>2</sub>; or VOC (as methane) - 0.02 lb/hr. [District Rules 2201 and 4703, 5.1.1, 5.1.2, & 5.2; and 40 CFR 60.332(a)(2), 40 CFR 60.333(a) & (b)] Federally Enforceable Through Title V Permit
12. Thermal Stabilization is defined as the startup or shutdown time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours per occurrence. Reduced Load 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 diverter gate, not to exceed one hour. [District Rules 2201 and 4703, 3.19 & 3.25] Federally Enforceable Through Title V Permit
13. Emissions from this unit (including emissions during thermal stabilization or reduced load periods), shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) - 137.8 lb/day; SO<sub>x</sub> (as SO<sub>2</sub>) - 24.0 lb/day; PM<sub>10</sub> - 32.2 lb/day; CO - 670.8 lb/day; or VOC - 0.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall perform a source test to measure the NO<sub>x</sub> and CO emission concentrations and to correlate the amount of water injected to the amount of fuel consumed, to the associated measured NO<sub>x</sub> emissions levels at least once every 12 months. [District Rule 4703, 6.3.1] Federally Enforceable Through Title V Permit
15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.3] Federally Enforceable Through Title V Permit
17. When no continuous emission monitoring data for NO<sub>x</sub> is available or when the NO<sub>x</sub> continuous emission monitoring system is not operating properly, the water-to-fuel ratio shall be maintained between the limits established during the annual source test. Operator shall perform and submit an engineering performance test to demonstrate continuous compliance with NO<sub>x</sub> emissions limits for any water injection system ratios beyond the water-to-fuel ratio range determined during the annual source test. [District Rules 1070, 2201, and 2520, 9.3.2] Federally Enforceable Through Title V Permit
18. The following test methods shall be used: NO<sub>x</sub> - EPA Method 7E or 20, CO - EPA Method 10 or 10B, and O<sub>2</sub> - EPA Method 3, 3A, or 20. NO<sub>x</sub> test results shall be corrected to ISO standard conditions as defined in 40 CFR Part 60 Subpart GG Section 60.335. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rules 1081, 4001, and 4703, 6.4.1, 6.4.2, & 6.4.3] Federally Enforceable Through Title V Permit
19. When the unit is fired solely on PUC-regulated natural gas, maintain on file copies of the natural gas bills. [District Rule 2520, 9.3.2 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
20. When the unit is not fired solely on PUC-regulated natural gas, the sulfur content of the fuel shall be tested weekly except that if compliance with the fuel sulfur content limit in this permit has been demonstrated for 8 consecutive weeks, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content limit in this permit, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
21. When the unit is not fired solely on PUC-regulated natural gas, the sulfur content of the fuel being fired in the turbine shall be determined using ASTM method D-1072, D-4084, D-3246, or D-4810. [District Rule 1081, 40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
22. When the unit is not fired solely on PUC-regulated natural gas, the operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2.)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

23. 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, type and quantity of fuel used, and percentage of PUC-quality natural gas in the gas consumed. [District Rules 2201, 2520, 9.4.2 and 4703, 6.2.6] Federally Enforceable Through Title V Permit
24. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), and emission measurements. [40 CFR 60.8(d) and District Rule 1080, 7.0] Federally Enforceable Through Title V Permit
25. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201, 2520, 9.4.2, and 4703, 6.2.4] Federally Enforceable Through Title V Permit
26. Records shall be maintained on the quality and accuracy of all instruments to verify compliance. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
27. When no continuous emission monitoring data for NO<sub>x</sub> is available or when the NO<sub>x</sub> continuous emission monitoring system is not operating properly, the owner or operator shall report periods of excess emissions that are defined as follows: any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the NO<sub>x</sub> emission limit. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, and gas turbine load. [40 CFR 60.334(c)(1)] Federally Enforceable Through Title V Permit
28. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
29. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. 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
30. For the NO<sub>x</sub>, CO, and O<sub>2</sub> CEMs, the owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
31. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
32. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess emissions, nature and 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, 8.0] Federally Enforceable Through Title V Permit

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