



AUG 27 2012

Ray Arthur
Fresno/Clovis Regional WWTP
5607 W Jensen Ave
Fresno, CA 93706

**Re: Notice of Minor Title V Permit Modification
District Facility # C-535
Project # C-1121656**

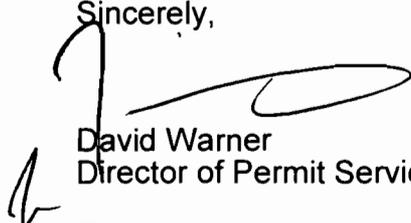
Dear Mr. Arthur:

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 Authorities to Construct C-535-18-9 and '19-9 into the Title V operating permit. The applicant proposes to increase the amount of allowable digester gas fuel for the gas-fired turbines from 50% to 100%.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued Authorities to Construct C-535-18-9 and '19-9, emission increases, 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

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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



AUG 27 2012

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-1121656

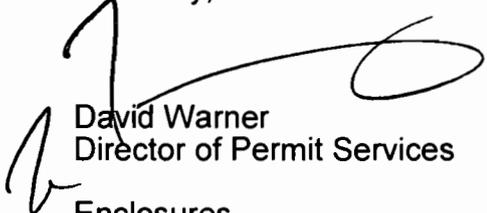
Dear Mr. Rios:

Enclosed for you to review is an application for minor Title V permit modification for the facility identified above. Fresno/Clovis Regional WWTP is proposing a Title V minor permit modification to incorporate the recently issued Authorities to Construct C-535-18-9 and '19-9 into the Title V operating permit. The applicant proposes to increase the amount of allowable digester gas fuel for the gas-fired turbines from 50% to 100%.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued Authorities to Construct C-535-18-9 and '19-9, emission increases, 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

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

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

TITLE V APPLICATION REVIEW

Minor Modification
Project #: C-1121656

Engineer: Stanley Tom
Date: August 3, 2012

Facility Number: C-535
Facility Name: Fresno/Clovis Regional WWTP
Mailing Address: 5607 W Jensen Ave
Fresno, CA 93706

Contact Name: Ray Arthur
Phone: (559) 621-5266

Responsible Official: Ray Arthur
Title: Project Manager

I. PROPOSAL

Fresno/Clovis Regional WWTP is proposing a Title V minor permit modification to incorporate the recently issued ATCs C-535-18-9 and '19-9 into the Title V operating permit. The applicant proposes to increase the amount of allowable digester gas fuel for the gas-fired turbines from 50% to 100%.

ATCs C-535-18-8 and '19-8 to install a SCR system on the turbines for Rule 4703 compliance have been implemented. The facility has submitted a Title V minor modification to incorporate the ATCs into the Title V permit and are current in the 45-day comment period. The draft PTOs (C-535-18-10 and '19-10) to incorporate ATCs C-535-18-8 and '19-8 into the Title V permit will be considered the current permits for this project.

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 Ave
Fresno, CA 93706

III. EQUIPMENT DESCRIPTION

C-535-18-11: 3.377 MW ALLISON MODEL 501 KB-5 DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #1 WITH WATER INJECTION AND SELECTIVE CATALYTIC REDUCTION WITH AMMONIA INJECTION, HEAT RECOVERY STEAM GENERATOR, AND A 2.25 MW STEAM TURBINE SHARED WITH C-535-19

C-535-19-11: 3.377 MW ALLISON MODEL 501 KB-5 DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #2 WITH WATER INJECTION AND SELECTIVE CATALYTIC REDUCTION WITH AMMONIA INJECTION, HEAT RECOVERY STEAM GENERATOR, AND A 2.25 MW STEAM TURBINE SHARED WITH C-535-18

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

C-535-18-11:

Modified Conditions		
Proposed Condition #	Revised Condition Description	Current Condition #
3	The allowable amount of digester gas to be used in the turbine has been increased from 50% to 100%.	3
11	The hourly emission limit for SOx has been updated.	9
12	The hourly emission limit for SOx has been updated.	10
13	The hourly emission limit for SOx has been updated.	11
14	The annual emission limit for SOx has been updated.	12

15	The hourly emission limit for NH3 has been updated.	13
28	The NOx, CO, and O2 source test methods have been updated.	26
34	The recordkeeping requirement has been revised to require fuel usage records to be kept for all fuels instead of only natural gas fuel usage records.	32

New Conditions	
Proposed Condition #	New Condition Description
4	Specifies the sulfur content limit for natural gas.
5	Specifies the sulfur content limit for digester gas.

C-535-19-11:

Modified Conditions		
Proposed Condition #	Revised Condition Description	Current Condition #
3	The allowable amount of digester gas to be used in the turbine has been increased from 50% to 100%.	3
11	The hourly emission limit for SOx has been updated.	9
12	The hourly emission limit for SOx has been updated.	10
13	The hourly emission limit for SOx has been updated.	11
14	The annual emission limit for SOx has been updated.	12
15	The hourly emission limit for NH3 has been updated.	13
28	The NOx, CO, and O2 source test methods have been updated.	26
34	The recordkeeping requirement has been revised to require fuel usage records to be kept for all fuels instead of only natural gas fuel usage records.	32

New Conditions	
Proposed Condition #	New Condition Description
4	Specifies the sulfur content limit for natural gas.
5	Specifies the sulfur content limit for digester gas.

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-535-18-11 and '19-11
- B. Authorities to Construct No. C-535-18-9 and '19-9
- C. Emissions Increases
- D. Application
- E. Previous Title V Operating Permit No.'s C-535-18-10 and '19-10

ATTACHMENT A

Proposed Modified Title V Operating Permit No.
(C-535-18-11 and '19-11)

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-535-18-11

EXPIRATION DATE: 01/31/2016

EQUIPMENT DESCRIPTION:

3.377 MW ALLISON MODEL 501 KB-5 DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #1 WITH WATER INJECTION AND SELECTIVE CATALYTIC REDUCTION WITH AMMONIA INJECTION, HEAT RECOVERY STEAM GENERATOR, AND A 2.25 MW STEAM TURBINE SHARED WITH C-535-19

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 Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The gas-fired turbines shall be fired on natural gas or digester gas or any combination (blend) of natural gas and digester gas. [District Rule 2201]
4. The total sulfur content of the natural gas combusted by this unit shall not exceed 1.0 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The H₂S content of the digester gas combusted by this unit shall not exceed 200 ppmv. [District Rule 2201] 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_x, CO, and O₂. 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, and 4703 and 40 CFR 60.334(b)] 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_x, CO, and O₂ 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. During periods of start-up or shutdown, turbine exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 5.74 lb/hr, SOx - 2.07 lb/hr, PM₁₀ 1.34 lb/hr, CO - 27.95 lb/hr, or VOC - 0.02 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Emission rates from this unit, except during start-up and shutdown, shall not exceed any of the following limits: NOx (as NO₂) - 0.95 lb/hr and 5 ppmvd @ 15% O₂; SOx (as SO₂) - 2.07 lb/hr; PM₁₀ - 1.34 lb/hr; CO - 27.95 lb/hr and 188.0 ppmvd @ 15% O₂; or VOC (as methane) - 0.02 lb/hr. [District Rules 2201 and 4703, 40 CFR 60.332(a)(2) and 40 CFR 60.333(a) & (b)] Federally Enforceable Through Title V Permit
13. Emissions from this unit (including emissions during start-up and shutdown), shall not exceed any of the following limits: NOx (as NO₂) - 51.5 lb/day; SOx (as SO₂) - 49.7 lb/day; PM₁₀ - 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. Emissions from this unit (including emissions during start-up and shutdown), shall not exceed any of the following limits: NOx (as NO₂) - 9,299 lb/year; SOx (as SO₂) - 18,141 lb/year; PM₁₀ - 11,753 lb/year; CO - 244,842 lb/year; or VOC - 183 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Ammonia (NH₃) emissions shall not exceed either of the following limits: 1.37 lb/hr or 10 ppmvd @ 15% O₂ (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
16. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1.) calculate the daily ammonia emissions using the following equation: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c/1,000,000)) \times (1,000,000 / b)) \times d$, where a = average ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation; 4.) The permittee may utilize draeger tubes to measure the ammonia in the exhaust stack. If this option is chosen, the permittee shall monitor and record the stack concentration weekly using a portable emissions monitor that meets District specifications. If compliance with the ammonia emissions is demonstrated for eight consecutive weeks, then the monitoring frequency will be reduced to monthly. If deviations are observed in two consecutive months, monitoring shall revert to weekly until eight consecutive weeks show no deviations. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within one day of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the week if on a weekly monitoring schedule. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The duration of each startup or shutdown event shall not exceed two hours. Start-up and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
18. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
19. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
20. Source testing to measure the NOx, CO, and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) shall be conducted at least once every twelve months. [District Rule 2201] Federally Enforceable Through Title V Permit
21. 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] 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.

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. When the continuous emission monitoring system (CEMS) for NO_x 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_x 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
25. 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
26. If the NO_x 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_x 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
27. When no continuous emission monitoring data for NO_x is available or when the NO_x 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_x emissions limits for any water injection system ratios beyond the water-to-fuel ratio range determined during the annual source test. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
28. The following test methods shall be used: NO_x - EPA Method 7E or 20 or ARB Method 100, CO - EPA Method 10 or 10B or ARB Method 100, O₂ - EPA Method 3, 3A, or 20 or ARB Method 100, and ammonia - BAAQMD Method ST-1B. NO_x 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 and 4703 and 40 CFR 60.335] Federally Enforceable Through Title V Permit
29. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703] Federally Enforceable Through Title V Permit
30. When the unit is fired solely on PUC-regulated natural gas, maintain on file copies of the natural gas bills. [District Rule 2520 and 40 CFR 60.334(h)(3)] 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.

31. 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 and 40 CFR 60.334(i)(3)] Federally Enforceable Through Title V Permit
32. 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 and 40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit
33. 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(j)] Federally Enforceable Through Title V Permit
34. 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. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
35. 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] Federally Enforceable Through Title V Permit
36. 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 and 4703] Federally Enforceable Through Title V Permit
37. Records shall be maintained on the quality and accuracy of all instruments to verify compliance. [District Rules 1070 and 2520] Federally Enforceable Through Title V Permit
38. When no continuous emission monitoring data for NO_x is available or when the NO_x 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_x 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(j)(1)] Federally Enforceable Through Title V Permit
39. 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
40. 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
41. For the NO_x, CO, and O₂ 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
42. 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] 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.

43. 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] 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-535-19-11

EXPIRATION DATE: 01/31/2016

EQUIPMENT DESCRIPTION:

3.377 MW ALLISON MODEL 501 KB-5 DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #2 WITH WATER INJECTION AND SELECTIVE CATALYTIC REDUCTION WITH AMMONIA INJECTION, HEAT RECOVERY STEAM GENERATOR, AND A 2.25 MW STEAM TURBINE SHARED WITH C-535-18

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 Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The gas-fired turbines shall be fired on natural gas or digester gas or any combination (blend) of natural gas and digester gas. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The total sulfur content of the natural gas combusted by this unit shall not exceed 1.0 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The H₂S content of the digester gas combusted by this unit shall not exceed 200 ppmv. [District Rule 2201] 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_x, CO, and O₂. 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, and 4703 and 40 CFR 60.334(b)] 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_x, CO, and O₂ 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. During periods of start-up or shutdown, turbine exhaust emission rates shall not exceed any of the following limits: NO_x (as NO₂) - 5.74 lb/hr, SO_x - 2.07 lb/hr, PM₁₀ 1.34 lb/hr, CO - 27.95 lb/hr, or VOC - 0.02 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Emission rates from this unit, except during start-up and shutdown, shall not exceed any of the following limits: NO_x (as NO₂) - 0.95 lb/hr and 5 ppmvd @ 15% O₂; SO_x (as SO₂) - 2.07 lb/hr; PM₁₀ - 1.34 lb/hr; CO - 27.95 lb/hr and 188.0 ppmvd @ 15% O₂; or VOC (as methane) - 0.02 lb/hr. [District Rules 2201 and 4703, 40 CFR 60.332(a)(2) and 40 CFR 60.333(a) & (b)] Federally Enforceable Through Title V Permit
13. Emissions from this unit (including emissions during start-up and shutdown), shall not exceed any of the following limits: NO_x (as NO₂) - 51.5 lb/day; SO_x (as SO₂) - 49.7 lb/day; PM₁₀ - 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. Emissions from this unit (including emissions during start-up and shutdown), shall not exceed any of the following limits: NO_x (as NO₂) - 9,299 lb/year; SO_x (as SO₂) - 18,141 lb/year; PM₁₀ - 11,753 lb/year; CO - 244,842 lb/year; or VOC - 183 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Ammonia (NH₃) emissions shall not exceed either of the following limits: 1.37 lb/hr or 10 ppmvd @ 15% O₂ (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
16. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1.) calculate the daily ammonia emissions using the following equation: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c/1,000,000)) \times (1,000,000 / b)) \times d$, where a = average ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO_x concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation; 4.) The permittee may utilize draeger tubes to measure the ammonia in the exhaust stack. If this option is chosen, the permittee shall monitor and record the stack concentration weekly using a portable emissions monitor that meets District specifications. If compliance with the ammonia emissions is demonstrated for eight consecutive weeks, then the monitoring frequency will be reduced to monthly. If deviations are observed in two consecutive months, monitoring shall revert to weekly until eight consecutive weeks show no deviations. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within one day of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the week if on a weekly monitoring schedule. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The duration of each startup or shutdown event shall not exceed two hours. Start-up and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
18. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
19. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
20. Source testing to measure the NO_x, CO, and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) shall be conducted within 60 days of startup and at least once every twelve months thereafter. [District Rule 2201] 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. 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] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. When the continuous emission monitoring system (CEMS) for NOx 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 NOx 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
25. 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
26. If the NOx 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 NOx 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
27. 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 and 2201] Federally Enforceable Through Title V Permit
28. The following test methods shall be used: NOx - EPA Method 7E or 20 or ARB Method 100, CO - EPA Method 10 or 10B or ARB Method 100, O2 - EPA Method 3, 3A, or 20 or ARB Method 100, and ammonia - BAAQMD Method ST-1B. 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 and 4703 and 40 CFR 60.335] Federally Enforceable Through Title V Permit
29. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703] Federally Enforceable Through Title V Permit
30. When the unit is fired solely on PUC-regulated natural gas, maintain on file copies of the natural gas bills. [District Rule 2520 and 40 CFR 60.334(h)(3)] 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.

31. 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 and 40 CFR 60.334(i)(3)] Federally Enforceable Through Title V Permit
32. 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 and 40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit
33. 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(j)] Federally Enforceable Through Title V Permit
34. 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. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
35. 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] Federally Enforceable Through Title V Permit
36. 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 and 4703] Federally Enforceable Through Title V Permit
37. Records shall be maintained on the quality and accuracy of all instruments to verify compliance. [District Rules 1070 and 2520] Federally Enforceable Through Title V Permit
38. When no continuous emission monitoring data for NO_x is available or when the NO_x 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_x 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(j)(1)] Federally Enforceable Through Title V Permit
39. 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
40. 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
41. For the NO_x, CO, and O₂ 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
42. 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] 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.

43. 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] 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-535-18-9 and '19-9)



AUTHORITY TO CONSTRUCT

PERMIT NO: C-535-18-9

ISSUANCE DATE: 06/11/2012

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 ALLISON MODEL 501 KB-5 DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #1 WITH WATER INJECTION AND SELECTIVE CATALYTIC REDUCTION, HEAT RECOVERY STEAM GENERATOR, AND A 2.25 MW STEAM TURBINE SHARED WITH C-535-19: INCREASE ALLOWABLE DIGESTER GAS FUEL FROM 50% TO 100%

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 Rule 2201] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. The gas-fired turbines shall be fired on natural gas or digester gas or any combination (blend) of natural gas and digester gas. [District Rule 2201]
5. The total sulfur content of the natural gas combusted by this unit shall not exceed 1.0 gr/100 scf. [District Rule 2201]
6. The H2S content of the digester gas combusted by this unit shall not exceed 200 ppmv. [District Rule 2201]
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

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-535-18-9 : Jun 11 2012 10:35AM - TONS : Joint Inspection NOT Required

8. The exhaust stack shall be equipped with a continuous emissions monitor (CEM) for NO_x, CO, and O₂. 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, and 4703 and 40 CFR 60.334(b)] 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_x, CO, and O₂ 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. During periods of start-up or shutdown, turbine exhaust emission rates shall not exceed any of the following limits: NO_x (as NO₂) - 5.74 lb/hr, SO_x - 2.07 lb/hr, PM₁₀ 1.34 lb/hr, CO - 27.95 lb/hr, or VOC - 0.02 lb/hr. [District Rule 2201]
13. Emission rates from this unit, except during start-up and shutdown, shall not exceed any of the following limits: NO_x (as NO₂) - 0.95 lb/hr and 5 ppmvd @ 15% O₂; SO_x (as SO₂) - 2.07 lb/hr; PM₁₀ - 1.34 lb/hr; CO - 27.95 lb/hr and 188.0 ppmvd @ 15% O₂; or VOC (as methane) - 0.02 lb/hr. [District Rules 2201 and 4703, 40 CFR 60.332(a)(2) and 40 CFR 60.333(a) & (b)]
14. Emissions from this unit (including emissions during start-up and shutdown), shall not exceed any of the following limits: NO_x (as NO₂) - 51.5 lb/day; SO_x (as SO₂) - 49.7 lb/day; PM₁₀ - 32.2 lb/day; CO - 670.8 lb/day; or VOC - 0.5 lb/day. [District Rule 2201]
15. Emissions from this unit (including emissions during start-up and shutdown), shall not exceed any of the following limits: NO_x (as NO₂) - 9,299 lb/year; SO_x (as SO₂) - 18,141 lb/year; PM₁₀ - 11,753 lb/year; CO - 244,842 lb/year; or VOC - 183 lb/year. [District Rule 2201]
16. Ammonia (NH₃) emissions shall not exceed either of the following limits: 1.37 lb/hr or 10 ppmvd @ 15% O₂ (based on a 24 hour rolling average). [District Rule 2201]
17. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1.) calculate the daily ammonia emissions using the following equation: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c / 1,000,000)) \times (1,000,000 / b)) \times d$, where a = average ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO_x concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation; 4.) The permittee may utilize draeger tubes to measure the ammonia in the exhaust stack. If this option is chosen, the permittee shall monitor and record the stack concentration weekly using a portable emissions monitor that meets District specifications. If compliance with the ammonia emissions is demonstrated for eight consecutive weeks, then the monitoring frequency will be reduced to monthly. If deviations are observed in two consecutive months, monitoring shall revert to weekly until eight consecutive weeks show no deviations. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within one day of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the week if on a weekly monitoring schedule. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

18. The duration of each startup or shutdown event shall not exceed two hours. Start-up and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703]
19. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703]
20. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703]
21. Source testing to measure the NO_x, CO, and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) shall be conducted within 60 days of startup and at least once every twelve months thereafter. [District Rule 2201]
22. Permittee shall perform a source test to measure the NO_x and CO emission concentrations and to correlate the amount of water injected to the amount of fuel consumed, to the associated measured NO_x emissions levels at least once every 12 months. [District Rule 4703] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. When the continuous emission monitoring system (CEMS) for NO_x 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_x 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
26. 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
27. If the NO_x 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_x 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
28. When no continuous emission monitoring data for NO_x is available or when the NO_x 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_x emissions limits for any water injection system ratios beyond the water-to-fuel ratio range determined during the annual source test. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

29. The following test methods shall be used: NO_x - EPA Method 7E or 20 or ARB Method 100, CO - EPA Method 10 or 10B or ARB Method 100, O₂ - EPA Method 3, 3A, or 20 or ARB Method 100, and ammonia - BAAQMD Method ST-1B. NO_x 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 and 4703 and 40 CFR 60.335]
30. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703]
31. When the unit is fired solely on PUC-regulated natural gas, maintain on file copies of the natural gas bills. [District Rule 2520 and 40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit
32. 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 and 40 CFR 60.334(i)(3)] Federally Enforceable Through Title V Permit
33. 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 and 40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit
34. 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(j)] Federally Enforceable Through Title V Permit
35. 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. [District Rules 2201 and 4703]
36. 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] Federally Enforceable Through Title V Permit
37. 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 and 4703] Federally Enforceable Through Title V Permit
38. Records shall be maintained on the quality and accuracy of all instruments to verify compliance. [District Rules 1070 and 2520] Federally Enforceable Through Title V Permit
39. When no continuous emission monitoring data for NO_x is available or when the NO_x 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_x 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(j)(1)] Federally Enforceable Through Title V Permit
40. 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
41. 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

CONDITIONS CONTINUE ON NEXT PAGE

42. For the NO_x, CO, and O₂ 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
43. 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] Federally Enforceable Through Title V Permit
44. 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] Federally Enforceable Through Title V Permit



AUTHORITY TO CONSTRUCT

PERMIT NO: C-535-19-9

ISSUANCE DATE: 06/11/2012

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 ALLISON MODEL 501 KB-5 DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #1 WITH WATER INJECTION AND SELECTIVE CATALYTIC REDUCTION, HEAT RECOVERY STEAM GENERATOR, AND A 2.25 MW STEAM TURBINE SHARED WITH C-535-18: INCREASE ALLOWABLE DIGESTER GAS FUEL FROM 50% TO 100%

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 Rule 2201] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. The gas-fired turbines shall be fired on natural gas or digester gas or any combination (blend) of natural gas and digester gas. [District Rule 2201]
5. The total sulfur content of the natural gas combusted by this unit shall not exceed 1.0 gr/100 scf. [District Rule 2201]
6. The H2S content of the digester gas combusted by this unit shall not exceed 200 ppmv. [District Rule 2201]
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

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-535-19-9: Jun 11 2012 10:38AM - TOMS : Jobs Inspection NOT Request

8. The exhaust stack shall be equipped with a continuous emissions monitor (CEM) for NO_x, CO, and O₂. 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, and 4703 and 40 CFR 60.334(b)] 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_x, CO, and O₂ 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. During periods of start-up or shutdown, turbine exhaust emission rates shall not exceed any of the following limits: NO_x (as NO₂) - 5.74 lb/hr, SO_x - 2.07 lb/hr, PM₁₀ 1.34 lb/hr, CO - 27.95 lb/hr, or VOC - 0.02 lb/hr. [District Rule 2201]
13. Emission rates from this unit, except during start-up and shutdown, shall not exceed any of the following limits: NO_x (as NO₂) - 0.95 lb/hr and 5 ppmvd @ 15% O₂; SO_x (as SO₂) - 2.07 lb/hr; PM₁₀ - 1.34 lb/hr; CO - 27.95 lb/hr and 188.0 ppmvd @ 15% O₂; or VOC (as methane) - 0.02 lb/hr. [District Rules 2201 and 4703, 40 CFR 60.332(a)(2) and 40 CFR 60.333(a) & (b)]
14. Emissions from this unit (including emissions during start-up and shutdown), shall not exceed any of the following limits: NO_x (as NO₂) - 51.5 lb/day; SO_x (as SO₂) - 49.7 lb/day; PM₁₀ - 32.2 lb/day; CO - 670.8 lb/day; or VOC - 0.5 lb/day. [District Rule 2201]
15. Emissions from this unit (including emissions during start-up and shutdown), shall not exceed any of the following limits: NO_x (as NO₂) - 9,299 lb/year; SO_x (as SO₂) - 18,141 lb/year; PM₁₀ - 11,753 lb/year; CO - 244,842 lb/year; or VOC - 183 lb/year. [District Rule 2201]
16. Ammonia (NH₃) emissions shall not exceed either of the following limits: 1.37 lb/hr or 10 ppmvd @ 15% O₂ (based on a 24 hour rolling average). [District Rule 2201]
17. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1.) calculate the daily ammonia emissions using the following equation: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c / 1,000,000)) \times (1,000,000 / b)) \times d$, where a = average ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO_x concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation; 4.) The permittee may utilize draeger tubes to measure the ammonia in the exhaust stack. If this option is chosen, the permittee shall monitor and record the stack concentration weekly using a portable emissions monitor that meets District specifications. If compliance with the ammonia emissions is demonstrated for eight consecutive weeks, then the monitoring frequency will be reduced to monthly. If deviations are observed in two consecutive months, monitoring shall revert to weekly until eight consecutive weeks show no deviations. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within one day of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the week if on a weekly monitoring schedule. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

18. The duration of each startup or shutdown event shall not exceed two hours. Start-up and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703]
19. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703]
20. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703]
21. Source testing to measure the NO_x, CO, and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) shall be conducted within 60 days of startup and at least once every twelve months thereafter. [District Rule 2201]
22. Permittee shall perform a source test to measure the NO_x and CO emission concentrations and to correlate the amount of water injected to the amount of fuel consumed, to the associated measured NO_x emissions levels at least once every 12 months. [District Rule 4703] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. When the continuous emission monitoring system (CEMS) for NO_x 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_x 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
26. 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
27. If the NO_x 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_x 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
28. When no continuous emission monitoring data for NO_x is available or when the NO_x 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_x emissions limits for any water injection system ratios beyond the water-to-fuel ratio range determined during the annual source test. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

29. The following test methods shall be used: NO_x - EPA Method 7E or 20 or ARB Method 100, CO - EPA Method 10 or 10B or ARB Method 100, O₂ - EPA Method 3, 3A, or 20 or ARB Method 100, and ammonia - BAAQMD Method ST-1B. NO_x 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 and 4703 and 40 CFR 60.335]
30. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703]
31. When the unit is fired solely on PUC-regulated natural gas, maintain on file copies of the natural gas bills. [District Rule 2520 and 40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit
32. 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 and 40 CFR 60.334(i)(3)] Federally Enforceable Through Title V Permit
33. 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 and 40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit
34. 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(j)] Federally Enforceable Through Title V Permit
35. 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. [District Rules 2201 and 4703]
36. 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] Federally Enforceable Through Title V Permit
37. 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 and 4703] Federally Enforceable Through Title V Permit
38. Records shall be maintained on the quality and accuracy of all instruments to verify compliance. [District Rules 1070 and 2520] Federally Enforceable Through Title V Permit
39. When no continuous emission monitoring data for NO_x is available or when the NO_x 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_x 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(j)(1)] Federally Enforceable Through Title V Permit
40. 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
41. 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

CONDITIONS CONTINUE ON NEXT PAGE

42. For the NO_x, CO, and O₂ 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
43. 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] Federally Enforceable Through Title V Permit
44. 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] Federally Enforceable Through Title V Permit

ATTACHMENT C

Emissions Increases

	SSIPE (lb/yr)				
	NOx	VOC	CO	SOx	PM10
C-535-18-9	0	0	0	0	0
C-535-19-9	0	0	0	0	0
TOTAL	0	0	0	0	0

ATTACHMENT D

Application

San Joaquin Valley Air Pollution Control District

www.valleyair.org

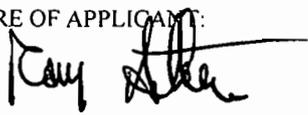
RECEIVED

JUN 13 2012

Permit Application For:

Permits Srvc
SJVAPCD

[] ADMINISTRATIVE AMENDMENT [X] MINOR MODIFICATION [] SIGNIFICANT MODIFICATION

1. PERMIT TO BE ISSUED TO: Fresno/Clovis Regional WWTP	
2. MAILING ADDRESS:	
STREET/P.O. BOX: 5607 W Jensen Ave.	
CITY: Fresno	STATE: CA 9-DIGIT ZIP CODE: 93706
3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED:	
STREET: 5607 W. Jensen Ave. CITY: Fresno	INSTALLATION DATE: 5/9/12
¼ SECTION _____ TOWNSHIP _____ RANGE _____	
4. GENERAL NATURE OF BUSINESS: Wastewater Treatment Plant	
5. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE (include Permit #'s if known, and use additional sheets if necessary)	
C-535-18-8, C-535-19-8 – Requested modification through ATC to increase the Digester Gas Ratio Flow:	
From current: Zero percent – 50 percent Digester Gas	
To: Zero percent to 100 percent Digester gas.	
6. TYPE OR PRINT NAME OF APPLICANT: Ray Arthur	TITLE OF APPLICANT: Project Manager – Air Resources
7. SIGNATURE OF APPLICANT: 	DATE: _____
	PHONE: (559) 621-5266 FAX: (559) 498-1700 EMAIL: ray.arthur@fresno.gov

For APCD Use Only:

DATE STAMP	FILING FEE RECEIVED: \$ _____ CHECK#: _____
	DATE PAID: _____
	PROJECT NO: C-1121656 FACILITY ID: C-535

**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: Fresno/Clovis Regional WWTP	FACILITY ID: C -535
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: City of Fresno	
3. Agent to the Owner: N/A	

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:

Ray Arthur

Signature of Responsible Official

6.12.12

Date

Ray Arthur

Name of Responsible Official (please print)

Project Manager – Air Resources

Title of Responsible Official (please print)

ATTACHMENT E

Previous Title V Operating Permit No.'s C-
535-18-10 and '19-10

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-535-18-10

EXPIRATION DATE: 01/31/2016

EQUIPMENT DESCRIPTION:

3.377 MW ALLISON MODEL 501 KB-5 DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #1 WITH WATER INJECTION AND SELECTIVE CATALYTIC REDUCTION, HEAT RECOVERY STEAM GENERATOR, AND A 2.25 MW STEAM TURBINE SHARED WITH C-535-19

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 Rule 2201] Federally Enforceable Through Title V Permit
2. {2256} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
3. The gas-fired turbines shall be fired exclusively on natural gas or a blend (combination) of natural gas and digester gas with a sulfur content of no greater than 200 ppmv H₂S. When fired on digester gas, the turbine shall use a combination of digester gas and at least 50% PUC-regulated natural gas. [District NSR Rule and 4102] Federally Enforceable Through Title V Permit
4. 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
5. The exhaust stack shall be equipped with a continuous emissions monitor (CEM) for NO_x, CO, and O₂. 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 NSR Rule, 1080, 40 CFR 60.334(b), and 4703] Federally Enforceable Through Title V Permit
6. 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
7. 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
8. 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_x, CO, and O₂ 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
9. During periods of start-up or shutdown, turbine exhaust emission rates shall not exceed any of the following limits: NO_x (as NO₂) - 5.74 lb/hr, SO_x - 2.81 lb/hr, PM₁₀ 1.34 lb/hr, CO - 27.95 lb/hr, or VOC - 0.02 lb/hr. [District Rule 2201] 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.

10. Emission rates from this unit, except during start-up and shutdown, shall not exceed any of the following limits: NO_x (as NO₂) - 0.95 lb/hr and 5 ppmvd @ 15% O₂; SO_x (as SO₂) - 2.81 lb/hr; PM₁₀ - 1.34 lb/hr; CO - 27.95 lb/hr and 188.0 ppmvd @ 15% O₂; or VOC (as methane) - 0.02 lb/hr. [District NSR Rule, 4703, 5.1.1, 5.1.2, 5.1.3, & 5.2; and 40 CFR 60.332(a)(2), 40 CFR 60.333(a) & (b)] Federally Enforceable Through Title V Permit
11. Emissions from this unit (including emissions during start-up and shutdown), shall not exceed any of the following limits: NO_x (as NO₂) - 51.5 lb/day; SO_x (as SO₂) - 67.4 lb/day; PM₁₀ - 32.2 lb/day; CO - 670.8 lb/day; or VOC - 0.5 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Emissions from this unit (including emissions during start-up and shutdown), shall not exceed any of the following limits: NO_x (as NO₂) - 9,299 lb/year; SO_x (as SO₂) - 24,601 lb/year; PM₁₀ - 11,753 lb/year; CO - 244,842 lb/year; or VOC - 183 lb/year. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Ammonia (NH₃) emissions shall not exceed either of the following limits: 1.28 lb/hr or 10 ppmvd @ 15% O₂ (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1.) calculate the daily ammonia emissions using the following equation: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c/1,000,000)) \times (1,000,000 / b)) \times d$, where a = average ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO_x concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation; 4.) The permittee may utilize draeger tubes to measure the ammonia in the exhaust stack. If this option is chosen, the permittee shall monitor and record the stack concentration weekly using a portable emissions monitor that meets District specifications. If compliance with the ammonia emissions is demonstrated for eight consecutive weeks, then the monitoring frequency will be reduced to monthly. If deviations are observed in two consecutive months, monitoring shall revert to weekly until eight consecutive weeks show no deviations. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within one day of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the week if on a weekly monitoring schedule. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The duration of each startup or shutdown event shall not exceed two hours. Start-up and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
16. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
17. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
18. Source testing to measure the NO_x, CO, and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) shall be conducted at least once every twelve months. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Permittee shall perform a source test to measure the NO_x and CO emission concentrations and to correlate the amount of water injected to the amount of fuel consumed, to the associated measured NO_x emissions levels at least once every 12 months. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit
20. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. 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
22. When the continuous emission monitoring system (CEMS) for NO_x 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_x 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 NSR Rule and 4703] Federally Enforceable Through Title V Permit
23. 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 NSR Rule and 4703] Federally Enforceable Through Title V Permit
24. If the NO_x 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_x 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 NSR Rule and 4703] Federally Enforceable Through Title V Permit
25. When no continuous emission monitoring data for NO_x is available or when the NO_x 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_x emissions limits for any water injection system ratios beyond the water-to-fuel ratio range determined during the annual source test. [District NSR Rule and 1070] Federally Enforceable Through Title V Permit
26. The following test methods shall be used: NO_x - EPA Method 7E or 20, CO - EPA Method 10 or 10B, O₂ - EPA Method 3, 3A, or 20, and ammonia - BAAQMD Method ST-1B. NO_x 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, 40 CFR 60.335, and 4703, 6.4.1, 6.4.2, & 6.4.3] Federally Enforceable Through Title V Permit
27. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703] Federally Enforceable Through Title V Permit
28. 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(h)(3)] Federally Enforceable Through Title V Permit
29. 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(i)(3)] Federally Enforceable Through Title V Permit
30. 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(b)(10)] 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.

31. 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(j)] Federally Enforceable Through Title V Permit
32. 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 NSR Rule and 4703, 6.2.6] Federally Enforceable Through Title V Permit
33. {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
34. 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 NSR Rule and 4703, 6.2.4] Federally Enforceable Through Title V Permit
35. Records shall be maintained on the quality and accuracy of all instruments to verify compliance. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When no continuous emission monitoring data for NO_x is available or when the NO_x 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_x 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(j)(1)] Federally Enforceable Through Title V Permit
37. 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
38. 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
39. For the NO_x, CO, and O₂ 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
40. {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
41. {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-535-19-10

EXPIRATION DATE: 01/31/2016

EQUIPMENT DESCRIPTION:

3.377 MW ALLISON MODEL 501 KB-5 DIGESTER/NATURAL GAS-FIRED TURBINE GENERATOR #2 WITH WATER INJECTION AND SELECTIVE CATALYTIC REDUCTION, HEAT RECOVERY STEAM GENERATOR, AND A 2.25 MW STEAM TURBINE SHARED WITH C-535-18

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 Rule 2201] Federally Enforceable Through Title V Permit
2. {2256} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
3. The gas-fired turbines shall be fired exclusively on natural gas or a blend (combination) of natural gas and digester gas with a sulfur content of no greater than 200 ppmv H₂S. When fired on digester gas, the turbine shall use a combination of digester gas and at least 50% PUC-regulated natural gas. [District NSR Rule and 4102] Federally Enforceable Through Title V Permit
4. 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
5. The exhaust stack shall be equipped with a continuous emissions monitor (CEM) for NO_x, CO, and O₂. 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 NSR Rule, 1080, 40 CFR 60.334(b), and 4703] Federally Enforceable Through Title V Permit
6. 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
7. 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
8. 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_x, CO, and O₂ 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
9. During periods of start-up or shutdown, turbine exhaust emission rates shall not exceed any of the following limits: NO_x (as NO₂) - 5.74 lb/hr, SO_x - 2.81 lb/hr, PM₁₀ 1.34 lb/hr, CO - 27.95 lb/hr, or VOC - 0.02 lb/hr. [District Rule 2201] 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.

10. Emission rates from this unit, except during start-up and shutdown, shall not exceed any of the following limits: NO_x (as NO₂) - 0.95 lb/hr and 5 ppmvd @ 15% O₂; SO_x (as SO₂) - 2.81 lb/hr; PM₁₀ - 1.34 lb/hr; CO - 27.95 lb/hr and 188.0 ppmvd @ 15% O₂; or VOC (as methane) - 0.02 lb/hr. [District NSR Rule, 4703, 5.1.1, 5.1.2, 5.1.3, & 5.2; and 40 CFR 60.332(a)(2), 40 CFR 60.333(a) & (b)] Federally Enforceable Through Title V Permit
11. Emissions from this unit (including emissions during start-up and shutdown), shall not exceed any of the following limits: NO_x (as NO₂) - 51.5 lb/day; SO_x (as SO₂) - 67.4 lb/day; PM₁₀ - 32.2 lb/day; CO - 670.8 lb/day; or VOC - 0.5 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Emissions from this unit (including emissions during start-up and shutdown), shall not exceed any of the following limits: NO_x (as NO₂) - 9,299 lb/year; SO_x (as SO₂) - 24,601 lb/year; PM₁₀ - 11,753 lb/year; CO - 244,842 lb/year; or VOC - 183 lb/year. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Ammonia (NH₃) emissions shall not exceed either of the following limits: 1.28 lb/hr or 10 ppmvd @ 15% O₂ (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1.) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O₂) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = average ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO_x concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation; 4.) The permittee may utilize draeger tubes to measure the ammonia in the exhaust stack. If this option is chosen, the permittee shall monitor and record the stack concentration weekly using a portable emissions monitor that meets District specifications. If compliance with the ammonia emissions is demonstrated for eight consecutive weeks, then the monitoring frequency will be reduced to monthly. If deviations are observed in two consecutive months, monitoring shall revert to weekly until eight consecutive weeks show no deviations. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within one day of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the week if on a weekly monitoring schedule. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The duration of each startup or shutdown event shall not exceed two hours. Start-up and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
16. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
17. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
18. Source testing to measure the NO_x, CO, and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) shall be conducted at least once every twelve months. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Permittee shall perform a source test to measure the NO_x and CO emission concentrations and to correlate the amount of water injected to the amount of fuel consumed, to the associated measured NO_x emissions levels at least once every 12 months. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit
20. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. 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
22. When the continuous emission monitoring system (CEMS) for NOx 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 NOx 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 NSR Rule and 4703] Federally Enforceable Through Title V Permit
23. 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 NSR Rule and 4703] Federally Enforceable Through Title V Permit
24. If the NOx 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 NOx 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 NSR Rule and 4703] Federally Enforceable Through Title V Permit
25. 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 NSR Rule and 1070] Federally Enforceable Through Title V Permit
26. The following test methods shall be used: NOx - EPA Method 7E or 20, CO - EPA Method 10 or 10B, O2 - EPA Method 3, 3A, or 20, and ammonia - BAAQMD Method ST-1B. 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, 40 CFR 60.335, and 4703, 6.4.1, 6.4.2, & 6.4.3] Federally Enforceable Through Title V Permit
27. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703] Federally Enforceable Through Title V Permit
28. 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(h)(3)] Federally Enforceable Through Title V Permit
29. 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(i)(3)] Federally Enforceable Through Title V Permit
30. 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(b)(10)] 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.

31. 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(j)] Federally Enforceable Through Title V Permit
32. 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 NSR Rule and 4703, 6.2.6] Federally Enforceable Through Title V Permit
33. {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
34. 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 NSR Rule and 4703, 6.2.4] Federally Enforceable Through Title V Permit
35. Records shall be maintained on the quality and accuracy of all instruments to verify compliance. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When no continuous emission monitoring data for NO_x is available or when the NO_x 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_x 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(j)(1)] Federally Enforceable Through Title V Permit
37. 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
38. 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
39. For the NO_x, CO, and O₂ 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
40. {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
41. {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