



**OCT 09 2013**

Mr. Rob Sanch  
Mt Poso Cogeneration Company, LLC  
P.O. Box 81256  
Bakersfield, CA 93380-1256

**Re: Notice of Minor Title V Permit Modification**  
**District Facility # S-91**  
**Project # S-1123373**

Dear Mr. Sanch:

Enclosed is the District's analysis of your application for minor Title V permit modification for the facility identified above. You proposed a Title V minor permit modification to incorporate recently issued ATC # S-91-3-18 into the Title V operating permit. This modification revises the exhaust O<sub>2</sub> range, limestone injection ratio requirements, steady state NO<sub>x</sub> and CO hourly emission limits, and startup/shutdown conditions.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued ATC # S-91-3-18, 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.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,



David Warner  
Director of Permit Services

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email

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

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

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

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

# TITLE V APPLICATION REVIEW

Minor Modification  
Project #: S-1123373

Engineer: Kris Rickards  
Date: September 17, 2013

Facility Number: S-91  
Facility Name: Mt Poso Cogeneration Company, LLC  
Mailing Address: P.O. Box 81256  
Bakersfield, CA 93380-1256

*Reviewed by AP sure ARE*

OCT 08 2013

Contact Name: Robert Sanch  
Phone: 734-302-5383

Responsible Official: Michael Blakey  
Title: Plant Manager

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## I. PROPOSAL

Mt Poso Cogeneration Company, LLC is proposing a Title V minor permit modification to incorporate the recently issued ATC # S-91-3-18 into the Title V operating permit. This modification revises the exhaust O2 range, limestone injection ratio requirements, steady state NOx and CO hourly emission limits, and startup/shutdown conditions.

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

The facility is located at 36157 Famoso Road in Bakersfield, CA.

## III. EQUIPMENT DESCRIPTION

**S-91-3-20:** 49.9 MW COAL/PETROLEUM COKE/BIOMASS AND TIRE DERIVED FUEL (TDF) FIRED ATMOSPHERIC CIRCULATING FLUIDIZED BED COMBUSTOR COGENERATION POWER PLANT

#### 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

Modifications authorized by ATC S-91-3-18 are explained below.

Current PTO condition 12 was combined with condition 17 as follows:

- Operation shall be equipped with the following indicators: combustion temperature, combustion air system pressure, primary and secondary fan air flow, ammonia injection flow, fuel use rate and limestone/lime cake use rate. The permittee shall operate and maintain instrumentation to continuously monitor and record levels of combustion temperature, consumption of fuel, ammonia, and limestone/lime cake in boiler. [District Rules 2201 and 2410]

Current PTO condition 20 was modified to allow flexibility when combusting biomass as the fuel has nonuniform combustion characteristics:

- Flue gas O<sub>2</sub> content shall be maintained at a level (3-5% or 2.5-8.0% when combusting biomass) which shows compliance with all emission limits and which minimizes NO<sub>x</sub> emissions. [District Rule 2201]

Current PTO condition 22 was removed due to authorized fuels being listed in the equipment description and on draft PTO condition 21 with natural gas combustion allowed by draft PTO condition 5:

- ~~Combustor shall be fired only on natural gas, coal, petroleum coke, biomass, tire derived fuel (TDF) or combinations thereof as allowed for by this permit. [PSD ATC SJ-86-09]~~

Current PTO condition 27 was modified to allow some operational flexibility when combusting the nonuniform biomass fuel and when operating start up gas fired burners without affecting the permitted emission limits:

- Limestone/lime cake shall be introduced into combustor at a rate sufficient to maintain a minimum Ca/S molar ratio of 3, except when combusting biomass and/or natural gas. [District Rule 2201]

Current PTO condition 33 was modified to clarify that the hourly mass emissions rate for NO<sub>x</sub> does not apply during startup and shutdown periods:

- Emission rate of oxides of nitrogen as NO<sub>2</sub> shall not exceed 58.60 lb/hr, except during startup and shutdown as defined in Rule 4352, based on three hour rolling average. [District Rules 2201 and 2410]

Current PTO condition 34 was modified for compliance with the reduced NO<sub>x</sub> limit of Rule 4352:

- NO<sub>x</sub> emissions shall not exceed 44565 ppmv @ 3% O<sub>2</sub> at any time, except during startup and shutdown (as defined in Rule 4352), based on a 24 hour averaging period. [District Rule 4352, 5.1]

Current PTO condition 37 was modified to clarify that the hourly mass emissions rate for CO does not apply during startup and shutdown periods:

- Emission rate of carbon monoxide shall not exceed 50.30 lb/hr, except during startup and shutdown as defined in Rule 4352, based on three hour rolling average. [District Rules 2201 and 2410]

Draft PTO condition 37 was added to ensure compliance with Rule 4301, which does not contain a provision for exceeding the limit during startup and shutdown periods:

- Nitrogen oxides (NO<sub>x</sub>) shall not exceed 140 lb/hr, calculated as NO<sub>2</sub>. [District Rule 4301]

## 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 S-91-3-20
- B. Authority to Construct S-91-3-18
- C. Emissions Increases
- D. Application
- E. Previous Title V Operating Permit S-91-3-15

# ATTACHMENT A

Proposed Modified Title V Operating Permit  
(S-91-3-20)

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-91-3-20

**EXPIRATION DATE:** 08/31/2016

**SECTION:** 18 **TOWNSHIP:** 27S **RANGE:** 28E

**EQUIPMENT DESCRIPTION:**

49.9 MW COAL/PETROLEUM COKE/BIOMASS AND TIRE DERIVED FUEL (TDF) FIRED ATMOSPHERIC CIRCULATING FLUIDIZED BED COMBUSTOR COGENERATION POWER PLANT

## PERMIT UNIT REQUIREMENTS

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1. Biomass introduced into the combustor shall not contain more than 2% by weight non-biomass material (plastics, metal, painted and preservative-treated wood, roofing material, fiberglass, etc.). [District Rule 4102]
2. At least once per quarter, operator shall collect a representative sample of the biomass material combusted and determine the weight percent of non-biomass material contained in that sample. Prior to collecting the first quarterly sample, operator shall submit a sampling plan to the District's compliance division for approval and shall follow the approved plan for all subsequent sampling, unless a revised plan is submitted and approved. [District Rules 1081 and 4102] Federally Enforceable Through Title V Permit
3. Operation shall include Ahlstrom Pyroflow atmospheric fluidized bed combustor incorporating low temperature staged combustion and ammonia injection (NOx control), and pulverized limestone/lime cake injection (SOx control). [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operation shall include enclosed gravimetric belt weigh feeder discharging to fuel feed chutes and enclosed limestone/lime cake volumetric feeder with air lock system. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operation shall include four natural gas fired 62 MMBtu/hr Coen startup burners and two natural gas fired 23 MMBtu/hr Coen duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operation shall include two fly ash recycle cyclones, air heater with two fly ash hoppers, economizer and ash handling system. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Operation shall include 1250 HP primary combustion air fan, 500 HP secondary combustion air fan and 150 HP multi-staged centrifugal fluidizing air blower. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Operation shall include 12 compartment fabric collector with 1750 HP induced draft fan, reverse air cleaning mechanism and 100 HP reverse air fan. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Fabric collector shall include a minimum of 134,230 sq. ft. of filtering area, fly ash hopper, with 8 KW electric heater, d.p. transmitter, capacitance type high level detector, vibrator and aeration pad. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Fly ash collected at fabric collector shall be discharged only to fly ash handling system. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Ash shall only be removed from combustion system by means authorized to Permit to Operate S-91-4. [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.

12. Operation shall be equipped with the following indicators: combustion temperature, combustion air system pressure, primary and secondary fan air flow, ammonia injection flow, fuel use rate and limestone/lime cake use rate. The permittee shall operate and maintain instrumentation to continuously monitor and record levels of combustion temperature, consumption of fuel, ammonia, and limestone/lime cake in boiler. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit
13. Each fabric collector compartment shall be equipped with access door and differential pressure indicator. The differential pressure across each compartment shall be maintained between 2" and 9.5" water column. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Fabric collector inlet shall be equipped with operational pressure indicator and high temperature alarm which activates prior to high temperature failure. The pressure shall not exceed negative 35" water column. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Fabric collector shall be equipped with automatic cleaning mechanism. [District Rule 2201] Federally Enforceable Through Title V Permit
16. All combustor exhaust gas shall pass through fabric collector prior to being emitted to atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Unit shall be operated as a low temperature combustor with a peak temperature range of 1550 to 1750 deg F. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Unit shall be operated as a staged combustion device by introducing a substoichiometric amount of combustion air into primary combustion zone. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Flue gas O2 content shall be maintained at a level (3-5% or 2.5-8.0% when combusting biomass) which shows compliance with all emission limits and which minimizes NOx emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
20. There shall be no provisions for introduction of air into combustion system or exhaust system downstream of the combustion chamber except for air utilized for cyclone center pipe supports and cooling. [District Rule 2201] Federally Enforceable Through Title V Permit
21. The sum of the combined coal, coke, and tire derived fuel throughput and 1/2 times the throughput of biomass introduced into the combustor shall not exceed 1,400,000 lbs/day and 58,333 lbs/hr (on a dry basis). Solid fuel introduced into the combustor shall contain no more than 4.0% by weight sulfur. [District Rule 2201 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
22. Of the total fuel introduced into the combustor, no more than 154,000 lbs per day (on a dry basis) shall be TDF. [District Rule 2201] Federally Enforceable Through Title V Permit
23. "Biomass" means any organic material not derived from fossil fuels, such as agricultural crop residue, orchard prunings and removal, stone fruit pits, nut shells, cotton gin trash, cotton stalks, vineyard prunings, cull logs, eucalyptus logs, bark, lawn, yard and garden clippings, leaves, silvicultural residue, tree and brush pruning, wood and wood chips, and wood waste. Biomass does not include material containing sewage sludge or industrial, hazardous, radioactive or municipal solid waste. [District Rules 2201 and Rule 4102] Federally Enforceable Through Title V Permit
24. Wood waste includes clean, chipped wood products, plywood, wood products manufacturing wood materials, construction and demolition wood materials, and wood pallets, crates and boxes. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
25. Limestone/lime cake shall be introduced into combustor at a rate sufficient to maintain a minimum Ca/S molar ratio of 3, except when combusting biomass and/or natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Ammonia breakthrough shall not result in ground level odors and exhaust stack concentrations, except during periods of start-up/shutdown, shall not exceed 20.0 ppmv based on three hour rolling average. [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.

27. Emissions rates from boiler exhaust shall not exceed the following: PM10: 190.0 lb/day, VOC: 149.9 lb/day, NOx (as NO2): 1406.4 lb/day nor 463,084 lbs/yr, SOx (as SO2): 699.4 lb/day nor 118,113 lb/yr, or CO: 1207.2 lb/day nor 371,312 lb/yr. [District Rules 2201 and 4301] Federally Enforceable Through Title V Permit
28. Emission rate of PM-10 shall not exceed 7.92 lb/hr and 0.012 lb/MMBtu. Particulate Matter (PM) emissions shall not exceed 0.01 gr/dscf @ 12% CO2. [District Rules 2201, 4201, and 4301 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
29. Emission rate of SOx (as SO2) shall not exceed 25.0 lb/hr, based on three hour rolling average. [District Rules 2201 and 4301 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
30. SOx emissions (as SO2) shall not exceed 0.04 lb/MMBtu, based on a three hour rolling average, during any period in which the power output exceeds 40 MW. [District Rules 2201 and 4801 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
31. Emission rate of oxides of nitrogen as NO2 shall not exceed 58.60 lb/hr, except during startup and shutdown as defined in Rule 4352, based on three hour rolling average. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit
32. NOx emissions shall not exceed 0.092 lb/MMBtu, based on a three hour rolling average, during any period in which the power output exceeds 40 MW. [District Rule 2201 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
33. Emission rate of volatile organic compounds shall not exceed 6.25 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Emission rate of carbon monoxide shall not exceed 50.30 lb/hr, except during startup and shutdown as defined in Rule 4352, based on three hour rolling average. [District Rules 2201 and 2410] Federally Enforceable Through Title V Permit
35. NOx emissions shall not exceed 65 ppmv @ 3% O2 at any time, except during startup and shutdown (as defined in Rule 4352), based on a 24 hour averaging period. [District Rule 4352, 5.1] Federally Enforceable Through Title V Permit
36. Except during periods of startup and shutdown (as defined in Rule 4352) the emission rate of carbon monoxide shall not exceed 183 ppmv @ 3% O2. Compliance with the carbon monoxide emission limit shall be based on a block 24 hour average. [District Rules 2201 and 4352] Federally Enforceable Through Title V Permit
37. Nitrogen oxides (NOx) shall not exceed 140 lb/hr, calculated as NO2. [District Rule 4301] Federally Enforceable Through Title V Permit
38. The main exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples using approved EPA test methods. [District Rule 1081, 3.0] Federally Enforceable Through Title V Permit
39. Performance testing at maximum operating capacity shall be conducted annually for NOx, SOx, CO, PM-10, PM, and VOCs at the maximum operating capacity using following test methods; for NOx EPA Methods 1-4 and 7 or ARB Method 100; for SOx EPA Methods 1-4 and 6 or ARB Method 100; for CO EPA Method 1-4 and 10 or ARB Method 100; for PM(10) EPA Method 201A in combination with EPA Method 202; for PM EPA Methods 1-4 and 5; and for VOCs EPA Method 25 or 18. [District Rules 2520 and 4352, 6.4 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
40. The District and EPA must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
41. Performance testing shall be witnessed or authorized District personnel and EPA. Test results must be submitted to the District within 60 day of performance testing. [District Rule 1081, 7.2, 7.3 and PSD ATC SJ 86-09] 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.

42. Permittee shall report the following emission exceedences to the District: SO<sub>2</sub>, NO<sub>x</sub>, and CO hourly emission rates on a three hour rolling average and daily emissions limitations. Excess emissions shall be defined as any consecutive 3-hour period during which the average emissions for CO, SO<sub>2</sub>, and NO<sub>x</sub> as measured by continuous monitoring system, exceeds the mass or concentration limit set for each pollutant. [District Rule 2201 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
43. At the time of performance testing fuel being burned shall be tested for sulfur, nitrogen, ash content and heating value. [District Rule 2201] Federally Enforceable Through Title V Permit
44. Operator shall operate and maintain in calibration a system which continuously measures and records control system operating parameters; elapsed time of operation; exhaust gas Opacity, NO<sub>x</sub>, SO<sub>2</sub>, CO, and NH<sub>3</sub> concentrations. [District Rules 1080, 4.0 and 2201 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
45. The continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix B; 40 CFR 60, Appendix F; and 40 CFR 51, Appendix P, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
46. Operator shall operate and maintain in calibration a system which continuously measures and records stack gas volumetric flow rates meeting the performance specifications of 40 CFR Part 52, Appendix E. [PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
47. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit
48. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEMs that have been installed pursuant to District Rule 1080, and emission measurements. [District Rule 1080, 7.3 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
49. Permittee shall submit a CEMs written report for each calendar quarter to the District and to EPA. The report is due on the 30th day following the end of the calendar quarter. [District Rule 1080, 8.0 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
50. Quarterly report shall include: 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; and a negative declaration when no excess emissions occurred. [District Rules 1080, 8.0 and 2520, 9.6.1 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
51. Any violation of emission standards, as indicated by the CEM, shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit
52. Operator shall notify the District no later than one hour after the detection of a breakdown of the CEM. The operator shall inform the District of the intent to shut down the CEM at least 24 hours prior to the event. [District Rules 1080 and 1100] Federally Enforceable Through Title V Permit
53. Permittee shall maintain an operating log containing type and quantity of fuel used and higher heating value of such fuels on daily basis. [District Rules 2520, 9.4.2 and 4352, 6.2] Federally Enforceable Through Title V Permit
54. Sulfur content of each type of fuel shall be measured and recorded at least every calendar quarter using current ASTM Methods or shall be certified by supplier for each shipment. [District Rule 2520, 9.3.2 and PSD ATC SJ 86-09] 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.

55. The differential pressure across each compartment of the fabric collectors shall be checked and the results recorded quarterly. If the differential pressure across each compartment of the fabric collectors is not between 2" and 9.5" water column, corrective action is required prior to further operation of the equipment. Corrective action means that the cause of the improper pressure differential is corrected before operation of the equipment is resumed. [District Rule 2520, 9.3.2 and 9.4.2] Federally Enforceable Through Title V Permit
56. The pressure at the fabric collector inlet shall be checked and the results recorded quarterly. If the pressure at the fabric collector inlet is greater than negative 35" water column, corrective action is required prior to further operation of the equipment. Corrective action means that the cause of the improper pressure is corrected before operation of the equipment is resumed. [District Rule 2520, 9.3.2 and 9.4.2] Federally Enforceable Through Title V Permit
57. Fabric collection system shall be completely inspected annually while in operation for evidence of particulate matter breakthrough and shall be repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
58. Fabric collector filters shall be completely inspected annually while not in operation for tears, scuffs, abrasives or holes which might interfere with PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
59. Records of fabric collector filter maintenance, inspection, and repairs shall be maintained. The records shall include identification of equipment, date of inspection, corrective action taken, and identification of individual performing inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
60. Permittee shall maintain monthly records of NO<sub>x</sub>, SO<sub>x</sub>, and CO to ensure that emissions limits on an annual rolling average are met. [District Rule 2201] Federally Enforceable Through Title V Permit

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

DRAFT

# ATTACHMENT B

Authority to Construct  
(S-91-3-18)

# AUTHORITY TO CONSTRUCT

PERMIT NO: S-91-3-18

ISSUANCE DATE: 02/01/2013

LEGAL OWNER OR OPERATOR: MT POSO COGENERATION COMPANY, LLC  
MAILING ADDRESS: P.O. BOX 81256  
BAKERSFIELD, CA 93380-1256

LOCATION: HEAVY OIL CENTRAL  
CA

SECTION: 18 TOWNSHIP: 27S RANGE: 28E

## EQUIPMENT DESCRIPTION:

MODIFICATION OF 49.9 MW COAL/PETROLEUM COKE/BIOMASS AND TIRE DERIVED FUEL (TDF) FIRED ATMOSPHERIC CIRCULATING FLUIDIZED BED COMBUSTOR COGENERATION POWER PLANT: REVISE EXHAUST O2 RANGE, CA/S MOLAR RATIO, STEADY STATE NOX AND CO HOURLY EMISSION LIMITS, AND STARTUP/SHUTDOWN CONDITIONS

## 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. Authority to Construct (ATC) S-91-3-15 shall be implemented prior to or concurrently with this ATC [District Rule 2201]
3. Biomass introduced into the combustor shall not contain more than 2% by weight non-biomass material (plastics, metal, painted and preservative-treated wood, roofing material, fiberglass, etc.). [District Rule 4102]
4. At least once per quarter, operator shall collect a representative sample of the biomass material combusted and determine the weight percent of non-biomass material contained in that sample. Prior to collecting the first quarterly sample, operator shall submit a sampling plan to the District's compliance division for approval and shall follow the approved plan for all subsequent sampling, unless a revised plan is submitted and approved. [District Rules 1081 and 4102]
5. Operation shall include Ahlstrom Pyroflow atmospheric fluidized bed combustor incorporating low temperature staged combustion and ammonia injection (NOx control), and pulverized limestone/lime cake injection (SOx control). [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

S-91-3-18 : Sep 12 2013 2:38PM - RICKARDK : Joint Inspection NOT Required

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

6. Operation shall include enclosed gravimetric belt weigh feeder discharging to fuel feed chutes and enclosed limestone/lime cake volumetric feeder with air lock system. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Operation shall include four natural gas fired 62 MMBtu/hr Coen startup burners and two natural gas fired 23 MMBtu/hr Coen duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Operation shall include two fly ash recycle cyclones, air heater with two fly ash hoppers, economizer and ash handling system. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Operation shall include 1250 HP primary combustion air fan, 500 HP secondary combustion air fan and 150 HP multi-staged centrifugal fluidizing air blower. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operation shall include 12 compartment fabric collector with 1750 HP induced draft fan, reverse air cleaning mechanism and 100 HP reverse air fan. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Fabric collector shall include a minimum of 134,230 sq. ft. of filtering area, fly ash hopper, with 8 KW electric heater, d.p. transmitter, capacitance type high level detector, vibrator and aeration pad. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Fly ash collected at fabric collector shall be discharged only to fly ash handling system. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Ash shall only be removed from combustion system by means authorized to Permit to Operate S-91-4. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Operation shall be equipped with the following indicators: combustion temperature, combustion air system pressure, primary and secondary fan air flow, ammonia injection flow, fuel use rate and limestone/lime cake use rate. The permittee shall operate and maintain instrumentation to continuously monitor and record levels of combustion temperature, consumption of fuel, ammonia, and limestone/lime cake in boiler. [District Rules 2201 and 2410]
15. Each fabric collector compartment shall be equipped with access door and differential pressure indicator. The differential pressure across each compartment shall be maintained between 2" and 9.5" water column. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Fabric collector inlet shall be equipped with operational pressure indicator and high temperature alarm which activates prior to high temperature failure. The pressure shall not exceed negative 35" water column. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Fabric collector shall be equipped with automatic cleaning mechanism. [District Rule 2201] Federally Enforceable Through Title V Permit
18. All combustor exhaust gas shall pass through fabric collector prior to being emitted to atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Unit shall be operated as a low temperature combustor with a peak temperature range of 1550 to 1750 deg F. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Unit shall be operated as a staged combustion device by introducing a substoichiometric amount of combustion air into primary combustion zone. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Flue gas O<sub>2</sub> content shall be maintained at a level (3-5% or 2.5-8.0% when combusting biomass) which shows compliance with all emission limits and which minimizes NO<sub>x</sub> emissions. [District Rule 2201]
22. There shall be no provisions for introduction of air into combustion system or exhaust system downstream of the combustion chamber except for air utilized for cyclone center pipe supports and cooling. [District Rule 2201] Federally Enforceable Through Title V Permit
23. The sum of the combined coal, coke, and tire derived fuel throughput and 1/2 times the throughput of biomass introduced into the combustor shall not exceed 1,400,000 lbs/day and 58,333 lbs/hr (on a dry basis). Solid fuel introduced into the combustor shall contain no more than 4.0% by weight sulfur. [District Rule 2201 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

24. Of the total fuel introduced into the combustor, no more than 154,000 lbs per day (on a dry basis) shall be TDF. [District Rule 2201] Federally Enforceable Through Title V Permit
25. "Biomass" means any organic material not derived from fossil fuels, such as agricultural crop residue, orchard prunings and removal, stone fruit pits, nut shells, cotton gin trash, cotton stalks, vineyard prunings, cull logs, eucalyptus logs, bark, lawn, yard and garden clippings, leaves, silvicultural residue, tree and brush pruning, wood and wood chips, and wood waste. Biomass does not include material containing sewage sludge or industrial, hazardous, radioactive or municipal solid waste. [District Rules 2201 and Rule 4102] Federally Enforceable Through Title V Permit
26. Wood waste includes clean, chipped wood products, plywood, wood products manufacturing wood materials, construction and demolition wood materials, and wood pallets, crates and boxes. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
27. Limestone/lime cake shall be introduced into combustor at a rate sufficient to maintain a minimum Ca/S molar ratio of 3, except when combusting biomass and/or natural gas. [District Rule 2201]
28. Ammonia breakthrough shall not result in ground level odors and exhaust stack concentrations, except during periods of start-up/shutdown, shall not exceed 20.0 ppmv based on three hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
29. Emissions rates from boiler exhaust shall not exceed the following: PM10: 190.0 lb/day, VOC: 149.9 lb/day, NOx (as NO2): 1406.4 lb/day nor 463,084 lbs/yr, SOx (as SO2): 699.4 lb/day nor 118,113 lb/yr, or CO: 1207.2 lb/day nor 371,312 lb/yr. [District Rules 2201 and 4301] Federally Enforceable Through Title V Permit
30. Emission rate of PM-10 shall not exceed 7.92 lb/hr and 0.012 lb/MMBtu. Particulate Matter (PM) emissions shall not exceed 0.01 gr/dscf @ 12% CO2. [District Rules 2201, 4201, and 4301 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
31. Emission rate of SOx (as SO2) shall not exceed 25.0 lb/hr, based on three hour rolling average. [District Rules 2201 and 4301 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
32. SOx emissions (as SO2) shall not exceed 0.04 lb/MMBtu, based on a three hour rolling average, during any period in which the power output exceeds 40 MW. [District Rules 2201 and 4801 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
33. Emission rate of oxides of nitrogen as NO2 shall not exceed 58.60 lb/hr, except during startup and shutdown as defined in Rule 4352, based on three hour rolling average. [District Rules 2201 and 2410]
34. NOx emissions shall not exceed 0.092 lb/MMBtu, based on a three hour rolling average, during any period in which the power output exceeds 40 MW. [District Rule 2201 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
35. Emission rate of volatile organic compounds shall not exceed 6.25 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
36. Emission rate of carbon monoxide shall not exceed 50.30 lb/hr, except during startup and shutdown as defined in Rule 4352, based on three hour rolling average. [District Rules 2201 and 2410]
37. NOx emissions shall not exceed 65 ppmv @ 3% O2 at any time, except during startup and shutdown (as defined in Rule 4352), based on a 24 hour averaging period. [District Rule 4352, 5.1]
38. Except during periods of startup and shutdown (as defined in Rule 4352) the emission rate of carbon monoxide shall not exceed 183 ppmv @ 3% O2. Compliance with the carbon monoxide emission limit shall be based on a block 24 hour average. [District Rules 2201 and 4352] Federally Enforceable Through Title V Permit
39. Nitrogen oxides (NOx) shall not exceed 140 lb/hr, calculated as NO2. [District Rule 4301]
40. The main exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples using approved EPA test methods. [District Rule 1081, 3.0] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

41. Performance testing at maximum operating capacity shall be conducted annually for NO<sub>x</sub>, SO<sub>x</sub>, CO, PM-10, PM, and VOCs at the maximum operating capacity using following test methods; for NO<sub>x</sub> EPA Methods 1-4 and 7 or ARB Method 100; for SO<sub>x</sub> EPA Methods 1-4 and 6 or ARB Method 100; for CO EPA Method 1-4 and 10 or ARB Method 100; for PM(10) EPA Method 201A in combination with EPA Method 202; for PM EPA Methods 1-4 and 5; and for VOCs EPA Method 25 or 18. [District Rules 2520 and 4352, 6.4 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
42. The District and EPA must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
43. Performance testing shall be witnessed or authorized District personnel and EPA. Test results must be submitted to the District within 60 day of performance testing. [District Rule 1081, 7.2, 7.3 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
44. Permittee shall report the following emission exceedences to the District: SO<sub>2</sub>, NO<sub>x</sub>, and CO hourly emission rates on a three hour rolling average and daily emissions limitations. Excess emissions shall be defined as any consecutive 3-hour period during which the average emissions for CO, SO<sub>2</sub>, and NO<sub>x</sub> as measured by continuous monitoring system, exceeds the mass or concentration limit set for each pollutant. [District Rule 2201 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
45. At the time of performance testing fuel being burned shall be tested for sulfur, nitrogen, ash content and heating value. [District Rule 2201] Federally Enforceable Through Title V Permit
46. Operator shall operate and maintain in calibration a system which continuously measures and records control system operating parameters; elapsed time of operation; exhaust gas Opacity, NO<sub>x</sub>, SO<sub>2</sub>, CO, and NH<sub>3</sub> concentrations. [District Rules 1080, 4.0 and 2201 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
47. The continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix B; 40 CFR 60, Appendix F; and 40 CFR 51, Appendix P, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
48. Operator shall operate and maintain in calibration a system which continuously measures and records stack gas volumetric flow rates meeting the performance specifications of 40 CFR Part 52, Appendix E. [PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
49. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit
50. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEMs that have been installed pursuant to District Rule 1080, and emission measurements. [District Rule 1080, 7.3 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
51. Permittee shall submit a CEMs written report for each calendar quarter to the District and to EPA. The report is due on the 30th day following the end of the calendar quarter. [District Rule 1080, 8.0 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
52. Quarterly report shall include: 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; and a negative declaration when no excess emissions occurred. [District Rules 1080, 8.0 and 2520, 9.6.1 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
53. Any violation of emission standards, as indicated by the CEM, shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

54. Operator shall notify the District no later than one hour after the detection of a breakdown of the CEM. The operator shall inform the District of the intent to shut down the CEM at least 24 hours prior to the event. [District Rules 1080 and 1100] Federally Enforceable Through Title V Permit
55. Permittee shall maintain an operating log containing type and quantity of fuel used and higher heating value of such fuels on daily basis. [District Rules 2520, 9.4.2 and 4352, 6.2] Federally Enforceable Through Title V Permit
56. Sulfur content of each type of fuel shall be measured and recorded at least every calendar quarter using current ASTM Methods or shall be certified by supplier for each shipment. [District Rule 2520, 9.3.2 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
57. The differential pressure across each compartment of the fabric collectors shall be checked and the results recorded quarterly. If the differential pressure across each compartment of the fabric collectors is not between 2" and 9.5" water column, corrective action is required prior to further operation of the equipment. Corrective action means that the cause of the improper pressure differential is corrected before operation of the equipment is resumed. [District Rule 2520, 9.3.2 and 9.4.2] Federally Enforceable Through Title V Permit
58. The pressure at the fabric collector inlet shall be checked and the results recorded quarterly. If the pressure at the fabric collector inlet is greater than negative 35" water column, corrective action is required prior to further operation of the equipment. Corrective action means that the cause of the improper pressure is corrected before operation of the equipment is resumed. [District Rule 2520, 9.3.2 and 9.4.2] Federally Enforceable Through Title V Permit
59. Fabric collection system shall be completely inspected annually while in operation for evidence of particulate matter breakthrough and shall be repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
60. Fabric collector filters shall be completely inspected annually while not in operation for tears, scuffs, abrasives or holes which might interfere with PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
61. Records of fabric collector filter maintenance, inspection, and repairs shall be maintained. The records shall include identification of equipment, date of inspection, corrective action taken, and identification of individual performing inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
62. Permittee shall maintain monthly records of NO<sub>x</sub>, SO<sub>x</sub>, and CO to ensure that emissions limits on an annual rolling average are met. [District Rule 2201] Federally Enforceable Through Title V Permit

# ATTACHMENT C

Emissions Increases

	SSIPE (lb/yr)				
	NOx	VOC	CO	SOx	PM10
S-91-3	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

# ATTACHMENT D

Application

# San Joaquin Valley Air Pollution Control District

www.valleyair.org

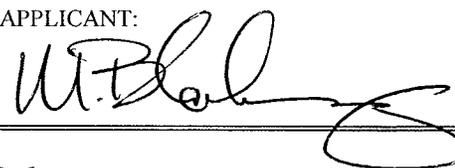
**RECEIVED**

**AUG 23 2012**

## Permit Application For:

**SJVAPCD  
Southern Region**

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

1. PERMIT TO BE ISSUED TO: <p style="text-align: center;">Mt. Poso Cogeneration Company, LLC</p>	
2. MAILING ADDRESS:  STREET/P.O. BOX: <u>PO Box 81256</u>  CITY: <u>Bakersfield</u> STATE: <u>CA</u> 9-DIGIT ZIP CODE: <u>93380-1256</u>	
3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED:  STREET: <u>36157 Famoso Road</u> CITY: <u>Bakersfield</u>  <u>      </u> ¼ SECTION <u>18</u> TOWNSHIP <u>27S</u> RANGE <u>28E</u>	INSTALLATION DATE:  <u>9/2012</u>
4. GENERAL NATURE OF BUSINESS: <u>Generation of steam and electricity</u>	
5. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE (include Permit #'s if known, and use additional sheets if necessary)  <u>Modify Permit NO. S-91-3-15 as follows:</u> <u>Condition 24 See attached reference sheet.</u> <u>Condition 31 See attached reference sheet.</u> <u>Condition 37 See attached reference sheet.</u> <u>Condition 41 See attached reference sheet.</u> <u>Add conditions containing definitions of Startup and Shutdown (See attached letter)</u>	
6. TYPE OR PRINT NAME OF APPLICANT:  <u>Michael J. Blakey</u>	TITLE OF APPLICANT: <u>General Manager</u>
7. SIGNATURE OF APPLICANT:  	DATE: <u>8/16/2012</u>  PHONE: (661) 393-8891 FAX: (661) 393-6865 EMAIL:

**For APCD Use Only:**

DATE STAMP	FILING FEE RECEIVED: \$ _____ CHECK#: _____
	DATE PAID: _____
	PROJECT NO: <u>S-1123373</u> FACILITY ID: <u>S-91</u>

**TV MM**

San Joaquin Valley  
Unified Air Pollution Control District

RECEIVED  
AUG 23 2012  
SJVAPCD  
Southern Region

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

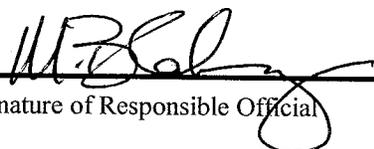
- SIGNIFICANT PERMIT MODIFICATION                       ADMINISTRATIVE  
 MINOR PERMIT MODIFICATION                                       AMENDMENT

COMPANY NAME: Mt. Poso Cogeneration Company, LLC	FACILITY ID: S- 91
1. Type of Organization: <input type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input checked="" type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Mt. Poso Cogeneration Company, LLC	
3. Agent to the Owner: DTE	

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

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

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

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

8/23/12  
\_\_\_\_\_  
Date

Michael J. Blakey

\_\_\_\_\_  
Name of Responsible Official (please print)

Plant Manager

\_\_\_\_\_  
Title of Responsible Official (please print)

# ATTACHMENT E

Previous Title V Operating Permit  
(S-91-3-15)

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-91-3-15

**EXPIRATION DATE:** 08/31/2016

**SECTION:** 18 **TOWNSHIP:** 27S **RANGE:** 28E

**EQUIPMENT DESCRIPTION:**

49.9 MW COAL/PETROLEUM COKE/BIOMASS AND TIRE DERIVED FUEL (TDF) FIRED ATMOSPHERIC CIRCULATING FLUIDIZED BED COMBUSTOR COGENERATION POWER PLANT

## PERMIT UNIT REQUIREMENTS

---

1. Biomass introduced into the combustor shall not contain more than 2% by weight non-biomass material (plastics, metal, painted and preservative-treated wood, roofing material, fiberglass, etc.). [District Rule 4102]
2. At least once per quarter, operator shall collect a representative sample of the biomass material combusted and determine the weight percent of non-biomass material contained in that sample. Prior to collecting the first quarterly sample, operator shall submit a sampling plan to the District's compliance division for approval and shall follow the approved plan for all subsequent sampling, unless a revised plan is submitted and approved. [District Rules 1081 and 4102]
3. Operation shall include Ahlstrom Pyroflow atmospheric fluidized bed combustor incorporating low temperature staged combustion and ammonia injection (NOx control), and pulverized limestone/lime cake injection (SOx control). [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operation shall include enclosed gravimetric belt weigh feeder discharging to fuel feed chutes and enclosed limestone/lime cake volumetric feeder with air lock system. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operation shall include four natural gas fired 62 MMBtu/hr Coen startup burners and two natural gas fired 23 MMBtu/hr Coen duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operation shall include two fly ash recycle cyclones, air heater with two fly ash hoppers, economizer and ash handling system. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Operation shall include 1250 HP primary combustion air fan, 500 HP secondary combustion air fan and 150 HP multi-staged centrifugal fluidizing air blower. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Operation shall include 12 compartment fabric collector with 1750 HP induced draft fan, reverse air cleaning mechanism and 100 HP reverse air fan. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Fabric collector shall include a minimum of 134,230 sq. ft. of filtering area, fly ash hopper, with 8 KW electric heater, d.p. transmitter, capacitance type high level detector, vibrator and aeration pad. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Fly ash collected at fabric collector shall be discharged only to fly ash handling system. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Ash shall only be removed from combustion system by means authorized to Permit to Operate S-91-4. [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.

12. Operation shall be equipped with the following indicators: combustion temperature, combustion air system pressure, primary and secondary fan air flow, ammonia injection flow, fuel use rate and limestone use rate. The permittee shall operate and maintain instrumentation to continuously monitor and record levels of combustion temperature, consumption of fuel, ammonia, and limestone in boiler. [PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
13. Operation shall be equipped with the following indicators: combustion temperature, combustion air system pressure, primary and secondary fan air flow, ammonia injection flow, fuel use rate and limestone/lime cake use rate. The permittee shall operate and maintain instrumentation to continuously monitor and record levels of combustion temperature, consumption of fuel, ammonia, and limestone/lime cake in boiler. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Each fabric collector compartment shall be equipped with access door and differential pressure indicator. The differential pressure across each compartment shall be maintained between 2" and 9.5" water column. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Fabric collector inlet shall be equipped with operational pressure indicator and high temperature alarm which activates prior to high temperature failure. The pressure shall not exceed negative 35" water column. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Fabric collector shall be equipped with automatic cleaning mechanism. [District Rule 2201] Federally Enforceable Through Title V Permit
17. All combustor exhaust gas shall pass through fabric collector prior to being emitted to atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Unit shall be operated as a low temperature combustor with a peak temperature range of 1550 to 1750 deg F. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Unit shall be operated as a staged combustion device by introducing a substoichiometric amount of combustion air into primary combustion zone. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Flue gas O2 content shall be maintained at a level (3%-5%) which shows compliance with all emission limits and which minimizes NOx emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
21. There shall be no provisions for introduction of air into combustion system or exhaust system downstream of the combustion chamber except for air utilized for cyclone center pipe supports and cooling. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Combustor shall be fired only on natural gas, coal, petroleum coke, biomass, tire derived fuel (TDF) or combinations thereof as allowed for by this permit. [PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
23. The sum of the combined coal, coke, and tire derived fuel throughput and 1/2 times the throughput of biomass introduced into the combustor shall not exceed 1,400,000 lbs/day and 58,333 lbs/hr (on a dry basis). Solid fuel introduced into the combustor shall contain no more than 4.0% by weight sulfur. [District Rule 2201 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
24. Of the total fuel introduced into the combustor, no more than 154,000 lbs per day (on a dry basis) shall be TDF. [District Rule 2201] Federally Enforceable Through Title V Permit
25. "Biomass" means any organic material not derived from fossil fuels, such as agricultural crop residue, orchard prunings and removal, stone fruit pits, nut shells, cotton gin trash, cotton stalks, vineyard prunings, cull logs, eucalyptus logs, bark, lawn, yard and garden clippings, leaves, silvicultural residue, tree and brush pruning, wood and wood chips, and wood waste. Biomass does not include material containing sewage sludge or industrial, hazardous, radioactive or municipal solid waste. [District Rules 2201 and Rule 4102] Federally Enforceable Through Title V Permit
26. Wood waste includes clean, chipped wood products, plywood, wood products manufacturing wood materials, construction and demolition wood materials, and wood pallets, crates and boxes. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. Limestone/lime cake shall be introduced into combustor at a rate sufficient to maintain a minimum Ca/S molar ratio of 3. [District Rule 2201] Federally Enforceable Through Title V Permit
28. Ammonia breakthrough shall not result in ground level odors and exhaust stack concentrations, except during periods of start-up/shutdown, shall not exceed 20.0 ppmv based on three hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
29. Emissions rates from boiler exhaust shall not exceed the following: PM10: 190.0 lb/day, VOC: 149.9 lb/day, NOx (as NO2): 1406.4 lb/day nor 463,084 lbs/yr, SOx (as SO2): 699.4 lb/day nor 118,113 lb/yr, or CO: 1207.2 lb/day nor 371,312 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
30. Emission rate of PM-10 shall not exceed 7.92 lb/hr and 0.012 lb/MMBtu. Particulate Matter (PM) emissions shall not exceed 0.01 gr/dscf @ 12% CO2. [District Rule 2201 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
31. Emission rate of SOx (as SO2) shall not exceed 25.0 lb/hr, based on three hour rolling average. [District Rule 2201 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
32. SOx emissions (as SO2) shall not exceed 0.04 lb/MMBtu, based on a three hour rolling average, during any period in which the power output exceeds 40 MW. [District Rules 2201 and 4801 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
33. Emission rate of oxides of nitrogen as NO2 shall not exceed 58.60 lb/hr, based on three hour rolling average. [District Rule 2201 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
34. NOx emissions shall not exceed 115 ppmv at any time, except during startup and shutdown (as defined in Rule 4352), based on a 24 hour averaging period. [District Rule 4352, 5.1] Federally Enforceable Through Title V Permit
35. NOx emissions shall not exceed 0.092 lb/MMBtu, based on a three hour rolling average, during any period in which the power output exceeds 40 MW. [District Rule 2201 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
36. Emission rate of volatile organic compounds shall not exceed 6.25 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
37. Emission rate of carbon monoxide shall not exceed 50.30 lb/hr based on three hour rolling average. [District Rule 2201 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
38. Except during periods of startup and shutdown (as defined in Rule 4352) the emission rate of carbon monoxide shall not exceed 183 ppmv @ 3% O2. Compliance with the carbon monoxide emission limit shall be based on a block 24 hour average. [District Rules 2201 and 4352] Federally Enforceable Through Title V Permit
39. The main exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples using approved EPA test methods. [District Rule 1081, 3.0] Federally Enforceable Through Title V Permit
40. Performance testing at maximum operating capacity shall be conducted annually for NOx, SOx, CO, PM-10, PM, and VOCs at the maximum operating capacity using following test methods; for NOx EPA Methods 1-4 and 7 or ARB Method 100; for SOx EPA Methods 1-4 and 6 or ARB Method 100; for CO EPA Method 1-4 and 10 or ARB Method 100; for PM(10) EPA Method 201A in combination with EPA Method 202; for PM EPA Methods 1-4 and 5; and for VOCs EPA Method 25 or 18. [District Rule 4352, 6.4; District Rule 2520, 9.4.2; PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
41. The District and EPA must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1 & PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
42. Performance testing shall be witnessed or authorized District personnel and EPA. Test results must be submitted to the District within 60 day of performance testing. [District Rule 1081, 7.2, 7.3 & PSD ATC SJ 86-09] 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. Permittee shall report the following emission exceedences to the District: SO<sub>2</sub>, NO<sub>x</sub>, and CO hourly emission rates on a three hour rolling average and daily emissions limitations. Excess emissions shall be defined as any consecutive 3-hour period during which the average emissions for CO, SO<sub>2</sub>, and NO<sub>x</sub> as measured by continuous monitoring system, exceeds the mass or concentration limit set for each pollutant. [District Rule 2201 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
44. At the time of performance testing fuel being burned shall be tested for sulfur, nitrogen, ash content and heating value. [District Rule 2201] Federally Enforceable Through Title V Permit
45. Operator shall operate and maintain in calibration a system which continuously measures and records control system operating parameters; elapsed time of operation; exhaust gas Opacity, NO<sub>x</sub>, SO<sub>2</sub>, CO, and NH<sub>3</sub> concentrations. [District Rule 2201; District Rule 1080, 4.0; & PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
46. The continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix B; 40 CFR 60, Appendix F; and 40 CFR 51, Appendix P, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
47. Operator shall operate and maintain in calibration a system which continuously measures and records stack gas volumetric flow rates meeting the performance specifications of 40 CFR Part 52, Appendix E. [PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
48. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit
49. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEMs that have been installed pursuant to District Rule 1080, and emission measurements. [District Rule 1080, 7.3 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
50. Permittee shall submit a CEMs written report for each calendar quarter to the District and to EPA. The report is due on the 30th day following the end of the calendar quarter. [District Rule 1080, 8.0 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
51. Quarterly report shall include: 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; and a negative declaration when no excess emissions occurred. [District Rule 2520, 9.6.1; Rule 1080, 8.0; and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit
52. Any violation of emission standards, as indicated by the CEM, shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit
53. Operator shall notify the District no later than one hour after the detection of a breakdown of the CEM. The operator shall inform the District of the intent to shut down the CEM at least 24 hours prior to the event. [District Rules 1080 and 1100] Federally Enforceable Through Title V Permit
54. Permittee shall maintain an operating log containing type and quantity of fuel used and higher heating value of such fuels on daily basis. [District Rule 2520, 9.4.2; District Rule 4352, 6.2] Federally Enforceable Through Title V Permit
55. Sulfur content of each type of fuel shall be measured and recorded at least every calender quarter using current ASTM Methods or shall be certified by supplier for each shipment. [District Rule 2520, 9.3.2 and PSD ATC SJ 86-09] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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56. The differential pressure across each compartment of the fabric collectors shall be checked and the results recorded quarterly. If the differential pressure across each compartment of the fabric collectors is not between 2" and 9.5" water column, corrective action is required prior to further operation of the equipment. Corrective action means that the cause of the improper pressure differential is corrected before operation of the equipment is resumed. [District Rule 2520, 9.3.2 and 9.4.2] Federally Enforceable Through Title V Permit
57. The pressure at the fabric collector inlet shall be checked and the results recorded quarterly. If the pressure at the fabric collector inlet is greater than negative 35" water column, corrective action is required prior to further operation of the equipment. Corrective action means that the cause of the improper pressure is corrected before operation of the equipment is resumed. [District Rule 2520, 9.3.2 and 9.4.2] Federally Enforceable Through Title V Permit
58. Fabric collection system shall be completely inspected annually while in operation for evidence of particulate matter breakthrough and shall be repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
59. Fabric collector filters shall be completely inspected annually while not in operation for tears, scuffs, abrasives or holes which might interfere with PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
60. Records of fabric collector filter maintenance, inspection, and repairs shall be maintained. The records shall include identification of equipment, date of inspection, corrective action taken, and identification of individual performing inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
61. Permittee shall maintain monthly records of NO<sub>x</sub>, SO<sub>x</sub>, and CO to ensure that emissions limits on an annual rolling average are met. [District Rule 2201] Federally Enforceable Through Title V Permit

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