



JAN 23 2014

Mr. Larry Osborne
Madera Power, LLC
P.O. Box 305
Firebaugh, CA 93622-0305

Re: Notice of Minor Title V Permit Modification
District Facility # C-799
Project # C-1133097

Dear Mr. Osborne:

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 C-799-3-6 into the Title V operating permit. The purpose is remove urban wood waste combustion operating limitation. The permit unit is currently in dormant status and will remain in dormant status after this permit modification.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued C-799-3-6, 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. Jim Swaney, Permit Services Manager, at (559) 230-5900.

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

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-1133097

Engineer: Sandra Lowe-Leseth
Date: January 9, 2014

Facility Number: C-799
Facility Name: Madera Power, LLC
Mailing Address: P.O. Box 305
Firebaugh, CA 93622-0305

Contact Name: Larry Osborne
Phone: 559-659-4791

Responsible Official: Larry Osborne
Title: General Manager

I. PROPOSAL

Madera Power, LLC is proposing a Title V minor permit modification to incorporate Authority to Construct (ATC) C-799-3-6 into the Title V operating permit. The purpose of the project is to add a maximum limit on the amount urban wood waste burned as a portion of the boiler's fuel.

The permit unit is currently in dormant status. This permit modification does not change the operating status of the boiler/generator.

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 11427 Firebaugh Blvd in Firebaugh, CA.

III. EQUIPMENT DESCRIPTION

C-799-3-24: 32.85 MW RESOURCE RECOVERY FACILITY
BOILER/GENERATOR INCLUDING: 460 MMBTU/HR
ATMOSPHERIC FLUIDIZED BED BOILER, MULTICLONE,
BAGHOUSE, REAGENT INJECTION SYSTEM, AMMONIA
INJECTION SYSTEM, PROPANE OR NATURAL GAS-FIRED
START-UP PREHEATER, WITH CONTINUOUS EMISSION
MONITORS

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

Background

ATC C-799-3-6 was issued in 2002 to include a maximum limit on urban wood waste combustion. The condition for how the limit would be determined was incorporated into the ATC permit. The condition is as follows:

- Urban wood waste combustion shall cease within 462 days of operation, beginning the date of facility restart, unless an application for Authority to Construct (ATC), based on refined health risk assessment is filed and approved. [District Rule 4102]

A source test was conducted with urban wood waste comprising 75% of the boiler's fuel. Laboratory testing for toxics, heavy metals and other compounds was performed on samples of the stack exhaust. The operator submitted the ATC application and source test results were received by the District. According to the refined Health Risk Assessment (included as Attachment A), the carcinogenic risk is above the 1.0 in a million but below 10.0 in a million limit; therefore, per the District's policy on health risk assessment, the operator would be allowed to include up to 75% urban wood waste in the boiler's fuel.

Because there have been several ATCs which do not have an urban wood waste limit have been incorporated into the Title V permit since the District determination, District staff has reviewed the effect of incorporating a wood waste limit on subsequent modifications of the Title V permit. The purpose of the assessment is to determine if the engineering evaluation for later ATCs would have come to a different conclusion about the combustor/boiler operation if the use of urban wood waste was an explicit permit condition at the time of the evaluation. The affected ATCs are C-799-3-7 through C-799-3-23. The following table summarizes the purpose of these ATCs and the District staff's conclusion as to whether an urban wood waste limit would have affected the engineering evaluation.

ATC modification C-799-3-X	Project Purpose	Project Affected by Wood Waste Limit? (Y/N)
7	Allow combustion of paper	N
8	Limit SOx emissions	N
9	Increase grain loading concentration and PM ₁₀ emissions rate	N
10	Replace the combustor bed sand cleaning system	N
11	Implement ATC C-799-3-8 and C-799-3-9	N
12	Replace Turbine and Generator set; increase power rating; increase steam production	N
13	Title V permit renewal	N
14	Add specific limiting condition for units C-799-3, '-6, '-7 and '-8	N
15	Add unit C-799-1 to specific limiting condition (SLC)	N
16	Implement multiple ATCs, including C-799-3-14 and C-799-3-15	N
17	Project cancelled	N
18	Add unit C-799-11 to SLC	N
19	Project cancelled	N
20	Title V permit renewal	N
21	Implement multiple ATCs, including C-799-3-23	N
22	Designate unit C-799-3-2 and C-799-3 as dormant units	N
23	Implement C-799-3-12	N

As demonstrated in the table above, including an urban wood waste limit would not affect the permit modifications made subsequent to the District's assessment of the wood waste's health risk. For this reason, the District proposes to incorporate the limit into the Title V permit.

Comparison of ATC and Current PTO Conditions

Condition #1 and Condition #43 of the ATC will not be included in the proposed permit. Condition #1 requires the submission of an application for a minor modification in order to implement the changes authorized by the ATC. Condition #43 requires that ATC C-799-3-7 be implemented prior to the implementation of the current ATC. Both of these conditions have been fulfilled.

The current permit, C-799-3-20, serves as the basis for the proposed permit. There have been several revisions to the boiler's permit conditions since ATC C-799-3-6 was issued. Where an ATC condition and the corresponding current permit condition have differences unrelated to urban wood waste, the current permit's condition will be included in the proposed Title V permit.

The current permit contains a specific limiting condition (SLC) which includes six units. The permits for four of the six units have been cancelled and the equipment removed from the facility; therefore, the proposed permit will remove these units from the SLC to conform to the equipment remaining at the facility.

The following table compares the ATC with the current permit.

ATC Condition #	ATC Condition Text	Current PTO Condition #	Comments
---	Specific Limiting Condition (SLC) limiting the annual emissions from the fuel handling listed under permit C-799-1, boiler/generator listed under permit C-799-3, the screening operation listed under permit C-799-6, the grinding operation listed under permit C-799-7, the transportable IC engine listed under permit C-799-8, and the transportable IC engine listed under permit C-799-11, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: 417,600 lb-NOx/year, 54,000 lb-SOx/year, 83,520 lb-PM10/year, 501,120 lb-CO/year, or 200,448 lb-VOC/year.	7	The following permits have been cancelled: C-799-6; C-799-7; C-799-8; and C-799-11. The current permit does not include these units in the Specific Limiting Condition (SLC). Condition will be revised in proposed permit to reflect the change.
2	The APCO or any authorized representative, upon request, shall have access to, and copies of, any records required to be kept under the terms and conditions of this permit.	8	No change proposed.

ATC Condition #	ATC Condition Text	Current PTO Condition #	Comments
3	The APCO or any authorized representative, upon request, shall have access to inspect any equipment, operation, or method required in this permit, and to sample emissions from the source or require samples to be take	9	No change proposed.
4	No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity.	---	This condition is already included in facility-wide permit C-799-0-3. This condition will not be included in the proposed permit.
5	No air contaminant shall be released into the atmosphere which causes a public nuisance.	---	This condition is already included in facility-wide permit C-799-0-3. This condition will not be included in the proposed permit.
6	Source testing for PM10, SOx, NOx, CO, VOC, and ammonia slip shall be performed at least once every 12 calendar months.	77	No change proposed.
7	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.	78	No change proposed.
8	The results of each source test shall be submitted to the District within 60 days thereafter.	82	No change proposed.
9	The atmospheric fluidized bed (AFB) boiler shall not operate in excess of 348 days per calendar year.	10	No change proposed.
10	Natural gas or propane burners shall be used during start-up and for combustor stabilization throughout the chamber prior to the introduction of solid fuel.	11	No change proposed.
11	Ammonia emissions shall not exceed 100 parts per million.	19	No change proposed.

ATC Condition #	ATC Condition Text	Current PTO Condition #	Comments
12	Particulate matter concentrations shall not exceed 0.01 grains/dscf.	12	Current permit allows up to 0.024 grains/dscf. No change to current permit condition is proposed.
13	Emissions shall not exceed any of the following limits: 50 lb NO ₂ /hr (1200 lb NO ₂ /day), 24 lb ROG/hr (576 lb ROG/day), 29 lb SO ₂ /hr (696 lb SO ₂ /day), 10 lb PM/hr (240 lb PM/day), or 60 lb CO/hr (1440 lb/day).	18	Current permit has no hourly limit for PM. No change to current permit condition is proposed.
14	The continuous emission monitors (CEM) shall be operated and maintained in accordance with 40 CFR Part 60, Appendix B, Performance Specifications 2, 3, and 4.	61	Current permit cites all applicable CFR subparts. No change to current permit condition is proposed.
15	Hourly emissions for NO _x (as NO ₂), SO ₂ , and CO shall be based on a consecutive three-hour average as determined by the CEM system.	63	No change proposed.
16	A quarterly report of the daily fuel usage and type shall be submitted to the District by the 30th day of the following month	20	No change proposed.
17	Offset creditable fuels are limited to the following: alfalfa straw, almond prunings, apple prunings, apricot prunings, barley straw, bean straw/stalks, cherry prunings, citrus prunings, corn stalks, fig prunings, forest slash/cull, grape prunings, generic orchard prunings, milo sorghum, nectarine prunings, olive prunings, peach prunings, pecan prunings, pistachio prunings, plum prunings, rice straw, wheat straw, walnut prunings, and generic field crops historically open burned in the San Joaquin Valley air basin.	21	No change proposed.

ATC Condition #	ATC Condition Text	Current PTO Condition #	Comments
18	Fuels for the AFB boiler are limited to the following: alfalfa straw, almond prunings, almond shells, apple prunings, apricot prunings, barley straw, bean straw/stalks, cedar bark, cherry pits, cherry prunings, citrus prunings, coffee grounds, corn stalks, cotton gin trash, cotton stalks, ditchbank or canal weeds, fig prunings, forest slash/cull, grape pomace, grape prunings, generic orchard prunings, hog fuel (mill residue), landscape tree trimmings, milo sorghum, nectarine pits, nectarine prunings, olive pits, olive pomace, olive prunings, pallet/bins wood, peach pits, peach prunings, peanut shells, pecan prunings, pecan shells, pistachio prunings, pistachio shells, plum prunings, prune pits, raisin pomace, rice straw, sawdust, tomato pomace, tumbleweeds, turkey (wood) shavings, urban development clearing trees, walnut prunings, walnut shells, wheat straw, unburned fuel, and paper.	22	No change proposed.
19	Urban wood waste (construction, demolition, and landfill derived wood wastes) is approved as fuel so long as there is less than 1% by weight, of plastic, rubber and other non-wood combustibles (other than dirt or ash).	23	No change proposed
20	All stack emissions shall be offset with creditable biomass on an annual basis, based on a calendar year.	24	No change proposed
21	Emission offset credits shall be calculated using the following formula: $EC(y) = \text{Summation}[1/DF(i) \times T(i) \times EF(i)]$, where $EC(y)$ = the amount of offset credit available for the year, i = the i th load of biomass combusted for the offset year, $DF(i)$ = the distance factor for the i th load of biomass, $T(i)$ = the number of tons of biomass in the i th load, and $EF(i)$ = the emission factor for the type of biomass in the i th load.	25	No change proposed
22	The biomass offset Distance Factor shall be 1.2 for sources within a 15-mile radius and 2.0 for sources outside the 15-mile radius.	26	No change proposed

ATC Condition #	ATC Condition Text	Current PTO Condition #	Comments
23	Open burn emission factors used to determine the quantity of offsets available from the diversion of biomass from open-burning shall be obtained from District Policy SSP 2005 "Open Burn Emission Factors."	27	No change proposed.
24	Daily records of biomass consumption shall be maintained which include the type, mass and geographic origin of all creditable biomass received and used. Records shall include certifications that any creditable biomass has historically been openly burned in the San Joaquin Valley air basin.	28	No change proposed.
25	Annual records, based on a calendar year shall be maintained which quantify the total amount of stack emissions and the total amount of offsets claimed from the diversion of creditable biomass from open-burning.	30	Current permit is more specific about records. No change to current permit condition is proposed.
26	Amount of paper used for fuel shall not exceed 50% of the total fuel consumption at any time.	31	No change proposed.
27	Amount of urban wood waste used for fuel shall not exceed 75% of the total fuel consumption at any time.	---	This limit will be added to the proposed permit.
28	No fuel shall be chemically treated, painted, or oil stained.	32	No change proposed.
29	Fuel feed rate shall not exceed a maximum of 460 MMBtu/hr.	33	No change proposed.
30	Gross power production shall not exceed 28.5 Megawatts.	34	Current permit allows 32.85 Megawatts. No change to current permit condition is proposed.
31	Steam production shall not exceed 6,700,000 pounds per day at 900 Deg F and 850 psig.	35	Current permit allows 7,256,000 pounds steam per day. No change to current permit condition is proposed.
32	If urban wood wastes have been burned during the 365 day period prior to October 31 of any year, fuel testing shall be conducted by December 31 of that year.	36	No change proposed.

ATC Condition #	ATC Condition Text	Current PTO Condition #	Comments
33	Fuel testing shall be conducted as follows: one truckload of urban wood waste fuel shall be weighed, dumped, and all contaminants shall be sorted from the fuel, identified and weighed. The report for this test shall be forwarded to the District by January 31 (one month after fuel testing deadline).	37	No change proposed.
34	The District shall be contacted and notified of the proposed date of any fuel testing.	38	No change proposed.
35	In addition to the scheduled annual fuel testing, testing shall also be performed on urban wood waste on-site within 24 hours of any such request of District staff.	39	No change proposed.
36	The baghouse shall consist of 2,310 bags with a rating of 226,000 acfm.	44	No change proposed.
37	The multiclone shall consist of a 1,500 hp motor with 200-11.5 inch collector tubes.	46	No change proposed.
38	The reagent injection system shall consist of a 2,540 cubic foot silo.	47	No change proposed.
39	The ammonia injection system includes 36 nozzles.	49	No change proposed.
40	All modules of the baghouse shall be equipped with a manometer which shall be calibrated on an annual or more frequent basis.	45	No change proposed.
41	The air flow rate and ammonia injection rate shall be monitored continuously and recorded.	50	No change proposed.
42	The reagent bin for the dry additive injection system shall be under negative pressure whenever reagent is being loaded into the bin	48	No change proposed.

Revisions to equipment and to operating procedures since ATC C-799-3-6 was issued have caused the current Title V permit to contain more permit conditions than the ATC. The additional conditions, which are not listed in the table above, will be carried forward, without change, into the proposed permit.

Four conditions on the current permit will be removed. These conditions are the specifications for the toxics testing to determine maximum allowable fraction of urban wood waste in the boiler fuel. The conditions removed on the current permit are Conditions #40 through #43.

The urban wood waste limit will be placed on the proposed permit as condition #32. Conditions numbered 32 and higher on the current Title V permit will be renumbered accordingly on the proposed Title V permit.

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. Health Risk Assessment
- B. Proposed Modified Title V Operating Permit No. C-799-3-24
- C. Authority to Construct No. C-799-3-6
- D. Emissions Increases
- E. Application
- F. Previous Title V Operating Permit No. C-799-3-20

ATTACHMENT A

Health Risk Assessment

California Air Resources Board
And
Office of Environmental Health Hazard Assessment
Health Risk Assessment Program
Version 2 0e

INDIVIDUAL CANCER RISK REPORT

Run Made By
medinas

Madera Power

Project 1020728

Sep 13 2002

Pollutant Database Date Nov 15 2000
Database Reference CAPCOA Risk Assessment Guidelines

DILUTION FACTOR FOR POINT UNDER EVALUATION

X/Q (ug/m3)/(g/s) 1.60E-01

ANNUAL AVERAGE EMISSION RATE INFORMATION

File NOP799 E96

Pollutant Name	Emission Rate (g/s)
ARSENIC AND COMPOUNDS (INOR	8.940E-04
BERYLLIUM AND COMPOUNDS	7.880E-07
CADMIUM AND COMPOUNDS	3.190E-05
CHROMIUM 6+	1.660E-05
COPPER AND COMPOUNDS	1.030E-03
LEAD AND COMPOUNDS	1.430E-03
MANGANESE AND COMPOUNDS	1.730E-03
NAPHTHALENE	8.300E-04
NICKEL AND COMPOUNDS	2.280E-04
PAH BENZO(B)FLUORANTHENE	2.110E-07
PAH BENZO(K)FLUORANTHENE	5.780E-08
PCDD as 2,3,7,8-TCDD	7.910E-11
PCDD as 1,2,3,7,8-PeCDD	2.990E-10
PCDD as 1,2,3,4,7,8-HxCDD	7.470E-12
PCDD as 1,2,3,6,7,8-HxCDD	1.650E-11
PCDD as 1,2,3,7,8,9-HxCDD	1.220E-11
PCDD as 1,2,3,4,6,7,8-HpCDD	1.500E-10
PCDF as 1,2,3,7,8-PeCDF	6.880E-10
PCDF as 2,3,4,7,8-PeCDF	1.450E-09
PCDF as 1,2,3,4,7,8-HxCDF	1.520E-11
PCDF as 1,2,3,6,7,8-HxCDF	1.490E-11
PCDF as 1,2,3,7,8,9-HxCDF	8.990E-12
PCDF as 1,2,3,4,6,7,8-HpCDF	4.230E-11
PCDF as 1,2,3,4,7,8,9-HpCDF	7.750E-10
SELENIUM AND COMPOUNDS (NOT	2.670E-05
ZINC COMPOUNDS	2.490E-03

EXPOSURE ROUTE INFORMATION

File ROUTE I96

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Deposition Velocity (m/s)          0 020
Fraction of Homegrown Produce      0 000
Dilution Factor for Farm/Ranch X/Q (ug/m3)/(g/s)  0 0000
Fraction of Animals Diet From Grazing  0 0000
Fraction of Animals Diet From Impacted Feed  0 0000
Fraction of Animals Water Impacted by Deposition  0 0000
  Surface Area (m2)                0 000E+00
  Volume (liters)                   0 000E+00
  Volume Changes                     0 000E+00
Fraction of Meat in Diet Impacted  0 0000
  Beef                               0 0000
  Pork                                0 0000
  Lamb/Goat                           0 0000
  Chicken                              0 0000
Fraction of Milk in Diet Impacted  0 0000
  Goat Milk Fraction                 0 0000
Fraction of Eggs in Diet Impacted  0 0000
Fraction of Impacted Drinking Water  0 0000
  X/Q at water source                0 0000
  Surface Area (m2)                  0 000E+00
  Volume (liters)                    0 000E+00
  Volume changes                      0 000E+00
Fraction of Fish from Impacted Water  0 0000
  X/Q at Fish Source                 0 0000
  Surface Area (m2)                  0 000E+00
  Volume (liters)                    0 000E+00
  Volume changes                      0 000E+00
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44 YEAR
INDIVIDUAL CANCER RISK BY POLLUTANT AND ROUTE

Pollutant	Air	Soil	Skin	Garden	MMilk	Other
ARSENIC AND COM	2 97E-07	4 81E 07	1 02E-08	0 00E+00	0 00E+00	0 00E+00
BERYLLIUM AND C	1 90E-10	0 00E+00				
CADMIUM AND COM	1 35E 08	0 00E+00				
CHROMIUM 6+	2 50E 07	2 50E 09	5 30E-10	0 00E+00	0 00E+00	0 00E+00
LEAD AND COMPOU	1 73E 09	4 36E-09	9 23E 11	0 00E+00	0 00E+00	0 00E+00
NICKEL AND COMP	5 96E-09	0 00E+00				
PAH BENZO(B)FLU	2 33E-12	3 59E 12	2 28E-12	0 00E+00	9 20E 12	0 00E+00
PAH BENZO(K)FLU	6 39E-13	9 84E-13	6 25E-13	0 00E+00	2 52E-12	0 00E+00
PCDD as 2 3 7 8	3 02E-10	5 26E 10	5 18E 10	0 00E+00	0 00E+00	0 00E+00
PCDD as 1 2 3 7	5 71E-10	9 95E 10	9 79E-10	0 00E+00	0 00E+00	0 00E+00
PCDD as 1 2 3 4	2 85E 12	4 97E 12	4 89E-12	0 00E+00	0 00E+00	0 00E+00
PCDD as 1 2 3 6	6 31E 12	1 10E-11	1 08E-11	0 00E+00	0 00E+00	0 00E+00
PCDD as 1 2 3 7	4 66E 12	8 12E-12	7 99E 12	0 00E+00	0 00E+00	0 00E+00
PCDD as 1 2 3 4	5 73E-12	9 98E-12	9 82E 12	0 00E+00	0 00E+00	0 00E+00
PCDF as 1 2 3 7	1 31E 10	2 29E 10	2 25E-10	0 00E+00	0 00E+00	0 00E+00
PCDF as 2 3 4 7	2 77E-09	4 82E 09	4 75E-09	0 00E+00	0 00E+00	0 00E+00
PCDF as 1 2 3 4	5 81E 12	1 01E 11	9 96E-12	0 00E+00	0 00E+00	0 00E+00
PCDF as 1 2 3 6	5 69E 12	9 91E-12	9 76E 12	0 00E+00	0 00E+00	0 00E+00
PCDF as 1 2 3 7	3 44E 12	5 98E-12	5 89E-12	0 00E+00	0 00E+00	0 00E+00
PCDF as 1 2 3 4	1 62E-12	2 81E 12	2 77E-12	0 00E+00	0 00E+00	0 00E+00
PCDF as 1 2 3 4	2 96E 11	5 16E-11	5 08E 11	0 00E+00	0 00E+00	0 00E+00
Route Total	5 72E-07	4 95E 07	1 74E-08	0 00E+00	1 17E 11	0 00E+00
TOTAL RISK	1 08E-06					

70 YEAR
INDIVIDUAL CANCER RISK BY POLLUTANT AND ROUTE

Pollutant	Air	Soil	Skin	Garden	MMilk	Other
ARSENIC AND COM	4 72E-07	5 58E-07	1 18E-08	0 00E+00	0 00E+00	0 00E+00
BERYLLIUM AND C	3 03E-10	0 00E+00				
CADMIUM AND COM	2 14E 08	0 00E+00				
CHROMIUM 6+	3 98E-07	2 90E-09	6 14E-10	0 00E+00	0 00E+00	0 00E+00
LEAD AND COMPOU	2 75E 09	5 06E-09	1 07E-10	0 00E+00	0 00E+00	0 00E+00
NICKEL AND COMP	9 48E-09	0 00E+00				
PAH BENZO(B)FLU	3 71E-12	5 56E-12	3 53E-12	0 00E+00	0 00E+00	0 00E+00
PAH BENZO(K)FLU	1 02E-12	1 52E-12	9 67E-13	0 00E+00	0 00E+00	0 00E+00
PCDD as 2 3 7 8	4 81E-10	6 90E-10	6 79E-10	0 00E+00	0 00E+00	0 00E+00
PCDD as 1 2 3 7	9 09E-10	1 30E-09	1 28E-09	0 00E+00	0 00E+00	0 00E+00
PCDD as 1 2 3 4	4 54E-12	6 51E-12	6 41E-12	0 00E+00	0 00E+00	0 00E+00
PCDD as 1 2 3 6	1 00E-11	1 44E-11	1 42E-11	0 00E+00	0 00E+00	0 00E+00
PCDD as 1 2 3 7	7 42E-12	1 06E-11	1 05E-11	0 00E+00	0 00E+00	0 00E+00
PCDD as 1 2 3 4	9 12E-12	1 31E-11	1 29E-11	0 00E+00	0 00E+00	0 00E+00
PCDF as 1 2 3 7	2 09E-10	3 00E-10	2 95E-10	0 00E+00	0 00E+00	0 00E+00
PCDF as 2 3 4 7	4 41E-09	6 32E-09	6 22E-09	0 00E+00	0 00E+00	0 00E+00
PCDF as 1 2 3 4	9 24E-12	1 32E-11	1 30E-11	0 00E+00	0 00E+00	0 00E+00
PCDF as 1 2 3 6	9 06E-12	1 30E-11	1 28E-11	0 00E+00	0 00E+00	0 00E+00
PCDF as 1 2 3 7	5 47E-12	7 84E-12	7 71E-12	0 00E+00	0 00E+00	0 00E+00
PCDF as 1 2 3 4	2 57E-12	3 69E-12	3 63E-12	0 00E+00	0 00E+00	0 00E+00
PCDF as 1 2 3 4	4 71E-11	6 76E-11	6 65E-11	0 00E+00	0 00E+00	0 00E+00
Route Total	9 11E-07	5 75E-07	2 12E-08	0 00E+00	0 00E+00	0 00E+00
TOTAL RISK	1 51E-06					

$$\frac{288,494.2}{1.51 \times 10^{-6}} \quad \frac{296,263.2}{1.58 \times 10^{-6}}$$

ATTACHMENT B

Proposed Modified Title V Operating Permit No.
C-799-3-24

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-799-3-24

EXPIRATION DATE: 05/31/2018

EQUIPMENT DESCRIPTION:

32.85 MW RESOURCE RECOVERY FACILITY BOILER/GENERATOR INCLUDING: 460 MMBTU/HR ATMOSPHERIC FLUIDIZED BED BOILER, MULTICLONE, BAGHOUSE, REAGENT INJECTION SYSTEM, AMMONIA INJECTION SYSTEM, PROPANE OR NATURAL GAS-FIRED START-UP PREHEATER, WITH CONTINUOUS EMISSION MONITORS

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal testing and monitoring shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal testing and monitoring shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Specific Limiting Condition (SLC) limiting the annual emissions from the fuel handling listed under permit C-799-1, boiler/generator listed under permit C-799-3, the screening operation listed under permit C-799-6, the grinding operation listed under permit C-799-7, the transportable IC engine listed under permit C-799-8, and the transportable IC engine listed under permit C-799-11, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: 417,600 lb-NOx/year, 54,000 lb-SOx/year, 83,520 lb-PM10/year, 501,120 lb-CO/year, or 200,448 lb-VOC/year. [District Rule 2201] Federally Enforceable Through Title V Permit
8. {233} The APCO or any authorized representative, upon request, shall have access to, and copies of, any records required to be kept under the terms and conditions of this permit. [CH&SC 42303]
9. The APCO or any authorized representative, upon request, shall have access to inspect any equipment, operation, or method required in this permit, and to sample emissions from the source or require samples to be taken. [District Rule 1081] Federally Enforceable Through Title V Permit
10. The atmospheric fluidized bed (AFB) boiler shall not operate in excess of 348 days per calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Natural gas or propane burners shall be used during start-up and for combustor stabilization throughout the chamber prior to the introduction of solid fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Particulate matter concentrations shall not exceed 0.024 grains/dscf. [District Rules 2201, 4201 and 4301] 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.

13. Expected emissions of combustion contaminants from the fluidized bed boiler, as particulate matter (PM), will not exceed 10 lb/hr, as measured by EPA Method 5. [District Rule 4301] Federally Enforceable Through Title V Permit
14. Ash sample testing for substances not considered to be combustion contaminants using ion chromatography shall be performed at least once every 12 calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
15. A representative sample of ash shall be collected during source testing and analyzed by ion chromatography to determine the percentage of combustion contaminants exiting the stack. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The PM source test result may be adjusted based on the fraction of combustion contaminants from the ash sample test results to determine the hourly combustion contaminant emission rate. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total PM10 shall not exceed 11.2 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Emissions from this unit shall not exceed any of the following limits: 50 lb-NO2/hr (1,200 lb-NO2/day), 24 lb-ROG/hr (576 lb-ROG/day), 29 lb-SO2/hr (696 lb-SO2/day), 240 lb-PM/day, or 60 lb-CO/hr (1,440 lb-CO/day). [District Rules 2201 and 4301] Federally Enforceable Through Title V Permit
19. Ammonia emissions shall not exceed 100 parts per million. [District Rule 2201] Federally Enforceable Through Title V Permit
20. A quarterly report of the daily fuel usage and type shall be submitted to the District by the 30th day of the following month. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Offset creditable fuels are limited to the following: alfalfa straw, almond prunings, apple prunings, apricot prunings, barley straw, bean straw/stalks, cherry prunings, citrus prunings, corn stalks, fig prunings, forest slash/cull, grape prunings, generic orchard prunings, milo sorghum, nectarine prunings, olive prunings, peach prunings, pecan prunings, pistachio prunings, plum prunings, rice straw, wheat straw, walnut prunings, and generic field crops historically open burned in the San Joaquin Valley air basin. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Fuels for the AFB boiler are limited to the following: alfalfa straw, almond prunings, almond shells, apple prunings, apricot prunings, barley straw, bean straw/stalks, cedar bark, cherry pits, cherry prunings, citrus prunings, coffee grounds, corn stalks, cotton gin trash, cotton stalks, ditchbank or canal weeds, fig prunings, forest slash/cull, grape pomace, grape prunings, generic orchard prunings, hog fuel (mill residue), landscape tree trimmings, milo sorghum, nectarine pits, nectarine prunings, olive pits, olive pomace, olive prunings, pallet/bins wood, peach pits, peach prunings, peanut shells, pecan prunings, pecan shells, pistachio prunings, pistachio shells, plum prunings, prune pits, raisin pomace, rice straw, sawdust, tomato pomace, tumbleweeds, turkey (wood) shavings, urban development clearing trees, walnut prunings, walnut shells, wheat straw, unburned fuel, and paper. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Urban wood waste (construction, demolition, and landfill derived wood wastes) is approved as fuel so long as there is less than 1% by weight, of plastic, rubber and other non-wood combustibles (other than dirt or ash). [District Rule 4102]
24. All stack emissions shall be offset with creditable biomass on an annual basis. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Emission offset credits shall be calculated using the following formula: $EC(y) = \text{Summation}[1/DF(i) \times T(i) \times EF(i)]$, where $EC(y)$ = the amount of offset credit available for the year, i = the i th load of biomass combusted for the offset year, $DF(i)$ = the distance factor for the i th load of biomass, $T(i)$ = the number of tons of biomass in the i th load, and $EF(i)$ = the emission factor for the type of biomass in the i th load. [District Rule 2201] Federally Enforceable Through Title V Permit
26. The biomass offset Distance Factor shall be 1.2 for sources within a 15-mile radius and 2.0 for sources outside the 15-mile radius. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Open burn emission factors used to determine the quantity of offsets available from the diversion of biomass from open-burning shall be obtained from District Policy SSP 2009 "Open Burn Emission Factors." [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.

28. Daily records of biomass consumption shall be maintained which include the type, mass and geographic origin of all creditable biomass received and used. Records shall include certifications that any creditable biomass has historically been openly burned in the San Joaquin Valley air basin. [District Rules 2201 and 4352] Federally Enforceable Through Title V Permit
29. Monthly records of all fuel consumption (including biomass and all other permitted fuels) shall be kept. Records shall include type, quantity, and higher heating value (HHV) for each fuel used. [District Rule 4352] Federally Enforceable Through Title V Permit
30. Annual records shall be maintained which quantify the total amount of stack emissions and the total amount of offsets claimed from the diversion of creditable biomass from open-burning, and which include calculations demonstrating that the total amount of annual offsets claimed is sufficient to fully offset the annual stack emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
31. Amount of paper used for fuel shall not exceed 50% of the total fuel consumption. [District Rule 4102]
32. Amount of urban wood waste used for fuel shall not exceed 75% of the total fuel consumption. [District Rule 2201]
33. No fuel shall be chemically treated, painted, or oil stained. [District Rule 4102]
34. Fuel feed rate shall not exceed a maximum of 460 MMBtu/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
35. Gross power production shall not exceed 32.85 Megawatts. [District Rule 2201] Federally Enforceable Through Title V Permit
36. Steam production shall not exceed 7,256,000 pounds per day at 900 oF and 850 psig. [District Rule 2201] Federally Enforceable Through Title V Permit
37. If urban wood wastes have been burned during the 365 day period prior to October 31 of any year, fuel testing shall be conducted by December 31 of that year. [District Rule 4102]
38. Fuel testing shall be conducted as follows: one truckload of urban wood waste fuel shall be weighed, dumped, and all contaminants shall be sorted from the fuel, identified and weighed. The report for this test shall be forwarded to the District by January 31 (one month after fuel testing deadline). [District Rule 4102]
39. The District shall be contacted and notified of the proposed date of any fuel testing. [District Rule 2201] Federally Enforceable Through Title V Permit
40. In addition to the scheduled annual fuel testing, testing shall also be performed on urban wood waste on-site within 24 hours of any such request of District staff. [District Rule 2201] Federally Enforceable Through Title V Permit
41. The baghouse shall consist of 2,310 bags with a rating of 226,000 acfm. [District Rule 2201] Federally Enforceable Through Title V Permit
42. All modules of the baghouse shall be equipped with a manometer which shall be calibrated on an annual or more frequent basis. [District Rule 2201] Federally Enforceable Through Title V Permit
43. The multiclone shall consist of a 1,500 hp motor with 200-11.5 inch collector tubes. [District Rule 2201] Federally Enforceable Through Title V Permit
44. The reagent injection system shall consist of a 2,540 cubic foot silo. [District Rule 2201] Federally Enforceable Through Title V Permit
45. The reagent bin for the dry additive injection system shall be under negative pressure whenever reagent is being loaded into the bin. [District Rule 2201] Federally Enforceable Through Title V Permit
46. The ammonia injection system includes 36 nozzles. [District Rule 2201] Federally Enforceable Through Title V Permit
47. The air flow rate and ammonia injection rate shall be monitored continuously and recorded. [District Rule 2201] Federally Enforceable Through Title V Permit
48. Particulate matter emissions in the exhaust gas from this unit shall not exceed 0.03 lb/MMBtu heat input. [40 CFR 60.42Da(a)(1) and (2)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

49. The opacity of the exhaust gas from this unit shall not exceed 20 percent based on a 6-minute average except for one 6-minute period per hour of not more than 27 percent opacity. [40 CFR 60.42Da(b) and 40 CFR 64.3] Federally Enforceable Through Title V Permit
50. Sulfur dioxide (SO₂) emissions from the biomass unit shall not exceed 1.20 lb/MMBtu heat input. [40 CFR 60.43Da(d)(2)] Federally Enforceable Through Title V Permit
51. Sulfur compound emissions shall not exceed 0.2% by volume, 2,000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801 and Madera County Rule 404] Federally Enforceable Through Title V Permit
52. SO₂ emissions shall be calculated based on the arithmetic average of all hourly emissions rates for SO₂ for the 30 successive boiler operating days. [40 CFR 60.48Da(g)] Federally Enforceable Through Title V Permit
53. Except for periods of start-up or shutdown, emissions concentrations in the exhaust from the unit shall not exceed any of the following limits based on a block 24 hour average : 115 ppmv NO_x at 3% O₂ or 400 ppmv CO at 3% O₂. [40 CFR 60.44Da(a) and District Rule 4352] Federally Enforceable Through Title V Permit
54. The duration of each shutdown shall not exceed twelve (12) hours except as provided in Section 5.3.4 of District Rule 4352. [District Rule 4352] Federally Enforceable Through Title V Permit
55. Except as provided in Section 5.3.4 of District Rule 4352, the duration of each start-up shall not exceed 96 hours, or 192 hours if curing of the refractory is required after a modification. [District Rule 4352] Federally Enforceable Through Title V Permit
56. When two or more fuels are combusted simultaneously, NO_x emissions shall not exceed the prorated emissions calculated using the following formula: $E_n = [86w + 260z]/100$, where: E_n is the applicable standard for nitrogen oxides when multiple fuels are combusted simultaneously (ng/J heat input); w is the percentage of total heat input derived from the combustion of gaseous fuels; and z is the percentage of total heat input derived from the combustion of solid fuels. [40 CFR 60.44Da(c)] Federally Enforceable Through Title V Permit
57. Applicable emissions standards of 40 CFR part 60 for PM, SO₂, and NO_x apply at all times except during the startup, shutdown, or malfunction. [40 CFR 60.48Da(c)] Federally Enforceable Through Title V Permit
58. Continuous Emission Monitoring systems (CEMs) shall be operated, maintained, and calibrated pursuant to the requirements of 40 CFR 60.7 (c) and 60.13. CEMs must also satisfy the Performance Specifications of 40 CFR Part 51 Appendix P and 40 CFR Part 60 Appendix B, Performance Specifications 2, 3, and 4, and the Relative Accuracy Test Audit of Appendix F. [District Rules 1080, 2201 and 4352, 40 CFR 49Da(w) and 40 CFR 64.3] Federally Enforceable Through Title V Permit
59. The continuous emissions monitoring systems (CEMs) for NO_x, SO₂, and CO and continuous monitoring system for opacity and O₂ concentration shall be calibrated and maintained operational at all times including the periods of startup, shutdown, malfunction, and emergency conditions, except for the CEMs breakdowns, repairs, calibrate checks, and zero and span adjustments. [40 CFR 60.49Da(a), (b), (c), (d), and (e), 40 CFR 64.3 and District Rule 4352] Federally Enforceable Through Title V Permit
60. Hourly emissions for NO_x (as NO₂), SO₂, and CO shall be based on a consecutive three-hour average as determined by the CEM system. [District Rule 1080] Federally Enforceable Through Title V Permit
61. The owner or operator shall obtain emission data for at least 18 hours in at least 22 hours out of the 30 successive boiler operating days. If this minimum data cannot be obtained, the operator or owner shall supplement emission data with alternate monitoring system approved by the APCO or methods and procedures described in section 60.47a(h) of 40 CFR 60, Subpart Da. [40CFR 60.49Da(f) and 40 CFR 64.9] Federally Enforceable Through Title V Permit
62. The owner or operator shall use methods and procedures described in 40 CFR 60.47a(i) to conduct monitoring system performance evaluations and calibrate checks under subpart 60.13(c) and (d). Alternate methods and procedures described under section 60.47a(j) may also be used. [40 CFR 60.49Da(i) and (j) and 40 CFR 64.9] Federally Enforceable Through Title V Permit
63. 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 and 40 CFR 64.9] 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.

64. A violation of NO_x emission standards indicated by the NO_x CEM shall be reported by the operator to the APCO within 96 hours. [District Rule 1080] Federally Enforceable Through Title V Permit
65. Operator shall notify the APCO shall be notified no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [District Rule 1080] Federally Enforceable Through Title V Permit
66. Operators of CEM's installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include: A. time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; B. averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; C. applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; D. a negative declaration when no excess occurred. [40 CFR 60.51Da, 40 CFR 64.9 and District Rule 1080] Federally Enforceable Through Title V Permit
67. The baghouse shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [40 CFR 64.3] Federally Enforceable Through Title V Permit
68. The baghouse shall operate at all times with a minimum differential pressure of 3 inches water column and a maximum differential pressure of 10 inches water column. [40 CFR Part 64.3] Federally Enforceable Through Title V Permit
69. Differential operating pressure shall be monitored and recorded on each day that the combustor operates. [40 CFR 64.3] Federally Enforceable Through Title V Permit
70. During each day of operation, the permittee shall record the pressure drop of the baghouse, and compare the readings with the acceptable range. Upon detecting any excursion from the acceptable range pressure readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR 64.7] Federally Enforceable Through Title V Permit
71. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR 64.7] Federally Enforceable Through Title V Permit
72. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64.9] Federally Enforceable Through Title V Permit
73. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64.8] Federally Enforceable Through Title V Permit
74. Source testing for PM₁₀, SO_x, NO_x, CO, VOC, and ammonia slip shall be performed at least once every 12 calendar months. [District Rule 2201, District Rule 1081, and District Rule 4352] Federally Enforceable Through Title V Permit
75. 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
76. Stack gas velocity shall be determined using EPA Method 2. Stack gas oxygen shall be determine using EPA Method 3 or 3A (or ARB Method 100). Stack gas moisture content shall be determined using EPA Method 4. Solid fuel higher heating value (hhv) shall be determined using ASTM Method D 2015 or E 711. [District Rule 4352] Federally Enforceable Through Title V Permit
77. Source testing shall be conducted using the following methods: EPA Method 7E (or CARB Method 100) for NO_x (ppmv); EPA Method 19 for NO_x (lb/MMBtu heat input); EPA Method 5 for particulate matter (PM); EPA Method 6/6C or 8 for SO₂; EPA Method 9 for opacity; EPA method 10 (or CARB method 100) for CO; and EPA Method 18 (or CARB Method 100) for VOC. [District Rule 4352 and 40 CFR 60.50Da] 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.

78. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is zero, or is shut off for 30 minutes or longer. [District Rule 4352] Federally Enforceable Through Title V Permit
79. The results of each source test and ash sample ion chromatography test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
80. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEM's that have been installed pursuant to District Rule 1080, and emission measurements. [District Rule 1080, 40 CFR 60.7 (b) and 40 CFR 64.9] Federally Enforceable Through Title V Permit
81. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 forty-minute test runs for NOx and CO. This mean shall be multiplied by the appropriate factor. [District Rule 2520] Federally Enforceable Through Title V Permit
82. Enclosure and dust collection system shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520] Federally Enforceable Through Title V Permit
83. Dust collector filters shall be thoroughly inspected annually for tears, scuffs, abrasions, holes, or any evidence of particulate matter leaks and shall be replaced as needed. [District Rule 2520] Federally Enforceable Through Title V Permit
84. Records of dust collector maintenance, inspections, and repair shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520] Federally Enforceable Through Title V Permit
85. For each unit subject to the Specific Limiting Condition (SLC), the permittee shall maintain all necessary records in order to show compliance with the annual SLC limits. [District Rule 2201] Federally Enforceable Through Title V Permit

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

DRAFT

ATTACHMENT C

Authority to Construct No.
C-799-3-6



San Joaquin Valley
Air Pollution Control District



AUTHORITY TO CONSTRUCT

PERMIT NO C 799 3 6

ISSUANCE DATE 10/09/2002

LEGAL OWNER OR OPERATOR MADERA POWER LLC
MAILING ADDRESS C/O IDAHO ENERGY LIMITED PARTNERSHIP
4006 INDUSTRIAL AVENUE
COEUR D ALENE ID 83814 8928

LOCATION 11427 FIREBAUGH RD
MADERA CA 93622

EQUIPMENT DESCRIPTION

MODIFICATION OF 28.5 MW BIOMASS FACILITY WITH ATMOSPHERIC FLUIDIZED BED BOILER MULTICLONE BAGHOUSE REAGENT INJECTION SYSTEM AMMONIA INJECTION SYSTEM AND CONTINUOUS EMISSION MONITORS REMOVE URBAN WOODWASTE COMBUSTION OPERATING LIMITATION

CONDITIONS

- 1 The permittee may implement the changes authorized by this Authority to Construct upon submittal of an application for a minor modification to the Title V permit in accordance with Rule 2520 (Federally Mandated Operating Permit) [District Rule 2520]
- 2 The APCO or any authorized representative upon request shall have access to and copies of any records required to be kept under the terms and conditions of this permit [CH&SC 42303]
- 3 The APCO or any authorized representative upon request shall have access to inspect any equipment operation or method required in this permit and to sample emissions from the source or require samples to be taken [District Rule 1081]
- 4 No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as or darker than Ringelmann 1 or 20% opacity [District Rule 4101]
- 5 No air contaminant shall be released into the atmosphere which causes a public nuisance [District Rule 4102]
- 6 Source testing for PM10 SOx NOx CO VOC and ammonia slip shall be performed at least once every 12 calendar months [District NSR Rule]
- 7 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]

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.

DAVID L. CROW Executive Director / APCO


SEYED SADREDIN Director of Permit Services



- 8 The results of each source test shall be submitted to the District within 60 days thereafter [District Rule 1091]
- 9 The atmospheric fluidized bed (AFB) boiler shall not operate in excess of 348 days per calendar year [District NSR Rule]
- 10 Natural gas or propane burners shall be used during start up and for combustor stabilization throughout the chamber prior to the introduction of solid fuel [District NSR Rule]
- 11 Ammonia emissions shall not exceed 100 parts per million [District Rule 2201]
- 12 Particulate matter concentrations shall not exceed 0.01 grains/dscf [District Rule 2201]
- 13 Emissions shall not exceed any of the following limits: 50 lb NO₂/hr (1200 lb NO₂/day), 24 lb ROG/hr (576 lb ROG/day), 29 lb SO₂/hr (696 lb SO₂/day), 10 lb PM/hr (240 lb PM/day) or 60 lb CO/hr (1440 lb/day) [District NSR Rule]
- 14 The continuous emission monitors (CEM) shall be operated and maintained in accordance with 40 CFR Part 60 Appendix B Performance Specifications 2, 3, and 4 [District NSR Rule and District Rule 1080]
- 15 Hourly emissions for NO_x (as NO₂), SO₂, and CO shall be based on a consecutive three hour average as determined by the CEM system [District Rule 1080]
- 16 A quarterly report of the daily fuel usage and type shall be submitted to the District by the 30th day of the following month [District Rule 2201]
- 17 Offset creditable fuels are limited to the following: alfalfa straw, almond prunings, apple prunings, apricot prunings, barley straw, bean straw/stalks, cherry prunings, citrus prunings, corn stalks, fig prunings, forest slash/cull, grape prunings, generic orchard prunings, milo sorghum, nectarine prunings, olive prunings, peach prunings, pecan prunings, pistachio prunings, plum prunings, rice straw, wheat straw, walnut prunings, and generic field crops historically open burned in the San Joaquin Valley air basin [District Rule 2201]
- 18 Fuels for the AFB boiler are limited to the following: alfalfa straw, almond prunings, almond shells, apple prunings, apricot prunings, barley straw, bean straw/stalks, cedar bark, cherry pits, cherry prunings, citrus prunings, coffee grounds, corn stalks, cotton gin trash, cotton stalks, ditchbank or canal weeds, fig prunings, forest slash/cull, grape pomace, grape prunings, generic orchard prunings, hog fuel (mill residue), landscape tree trimmings, milo sorghum, nectarine pits, nectarine prunings, olive pits, olive pomace, olive prunings, pallet/bins, wood, peach pits, peach prunings, peanut shells, pecan prunings, pecan shells, pistachio prunings, pistachio shells, plum prunings, prune pits, raisin pomace, rice straw, sawdust, tomato pomace, tumbleweeds, turkey (wood) shavings, urban development clearing trees, walnut prunings, walnut shells, wheat straw, unburned fuel, and paper [District Rule 2201]
- 19 Urban wood waste (construction, demolition, and landfill derived wood wastes) is approved as fuel so long as there is less than 1% by weight of plastic, rubber, and other non wood combustibles (other than dirt or ash) [District Rule 4102]
- 20 All stack emissions shall be offset with creditable biomass on an annual basis based on a calendar year [District Rule 2201]
- 21 Emission offset credits shall be calculated using the following formula: $LC(y) = \text{Summation}[1/DF(i) \times \Gamma(i) \times EF(i)]$ where $LC(y)$ = the amount of offset credit available for the year, i = the i th load of biomass combusted for the offset year, $DF(i)$ = the distance factor for the i th load of biomass, $\Gamma(i)$ = the number of tons of biomass in the i th load, and $EF(i)$ = the emission factor for the type of biomass in the i th load [District Rule 2201]
- 22 The biomass offset Distance Factor shall be 1.2 for sources within a 15 mile radius and 2.0 for sources outside the 15 mile radius [District Rule 2201]
- 23 Open burn emission factors used to determine the quantity of offsets available from the diversion of biomass from open burning shall be obtained from District Policy SSP 2005 "Open Burn Emission Factors" [District Rule 2201]
- 24 Daily records of biomass consumption shall be maintained which include the type, mass, and geographic origin of all creditable biomass received and used. Records shall include certifications that any creditable biomass has historically been openly burned in the San Joaquin Valley air basin [District Rule 2201]
- 25 Annual records based on a calendar year shall be maintained which quantify the total amount of stack emissions and the total amount of offsets claimed from the diversion of creditable biomass from open burning [District Rule 2201]

- 26 Amount of paper used for fuel shall not exceed 50% of the total fuel consumption at any time [District Rule 4102]
- 27 Amount of urban wood waste used for fuel shall not exceed 75% of the total fuel consumption at any time [District Rule 2201]
- 28 No fuel shall be chemically treated painted or oil stained [District Rule 4102]
- 29 Fuel feed rate shall not exceed a maximum of 460 MMBtu/hr [District Rule 2201]
- 30 Gross power production shall not exceed 28.5 Megawatts [District NSR Rule]
- 31 Steam production shall not exceed 6,700,000 pounds per day at 900 Deg F and 850 psig [District Rule 2201]
- 32 If urban wood wastes have been burned during the 365 day period prior to October 31 of any year fuel testing shall be conducted by December 31 of that year [District Rule 4102]
- 33 Fuel testing shall be conducted as follows one truckload of urban wood waste fuel shall be weighed dumped and all contaminants shall be sorted from the fuel identified and weighed The report for this test shall be forwarded to the District by January 31 (one month after fuel testing deadline) [District Rule 4102]
- 34 The District shall be contacted and notified of the proposed date of any fuel testing [District Rule 2201]
- 35 In addition to the scheduled annual fuel testing testing shall also be performed on urban wood waste on site within 24 hours of any such request of District staff [District Rule 2201]
- 36 The baghouse shall consist of 2,310 bags with a rating of 226,000 acfm [District Rule 2201]
- 37 The multiclone shall consist of a 1,500 hp motor with 200 11.5 inch collector tubes [District Rule 2201]
- 38 The reagent injection system shall consist of a 2,540 cubic foot silo [District Rule 2201]
- 39 The ammonia injection system includes 36 nozzles [District Rule 2201]
- 40 All modules of the baghouse shall be equipped with a manometer which shall be calibrated on an annual or more frequent basis [District Rule 2201]
- 41 The air flow rate and ammonia injection rate shall be monitored continuously and recorded [District Rule 2201]
- 42 The reagent bin for the dry additive injection system shall be under negative pressure whenever reagent is being loaded into the bin [District Rule 2201]
- 43 Authority to Construct C 799 3 7 shall be implemented prior to implementation of this ATC [District Rule 2201]



ATTACHMENT D

Emissions Increases

	SSIPE (lb/yr)				
	NOx	VOC	CO	SOx	PM10
S-799-3-24	0	0	0	0	0
TOTAL	0	0	0	0	0

ATTACHMENT E

Application

San Joaquin Valley Air Pollution Control District

www.valleyair.org

RECEIVED

OCT 28 2013

Permit Application For:

Permits Services
SJVAPCD

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

1. PERMIT TO BE ISSUED TO: MADERA POWER, LLC	
2. MAILING ADDRESS:	
STREET/P.O. BOX: PO Box 305	
CITY: Firebaugh	STATE: CA
9-DIGIT 93622-	ZIP CODE: 0305
3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED:	
STREET: 11427 Firebaugh Blvd.	CITY: Firebaugh
NW ¼ SECTION 28	TOWNSHIP Section RANGE 15E
INSTALLATION DATE:	
4. GENERAL NATURE OF BUSINESS: Electric Power Generation	
5. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE (include Permit #'s if known, and use additional sheets if necessary)	
This is an application to convert ATC C-799-3-6 to a PTO. This ATC was issued and changes implemented but not converted to a PTO. See attached submittal Dated May 20, 2002.	
6. TYPE OR PRINT NAME OF APPLICANT: Larry Osborne	TITLE OF APPLICANT: General Manager
7. SIGNATURE OF APPLICANT: 	DATE: 28 Oct, 2013
PHONE: (559) 659-4791	FAX: ()
EMAIL:	

For APCD Use Only:

DATE STAMP RECEIVED OCT 29 2013 FINANCE SJVUAPCD	FILING FEE RECEIVED: \$ 19.00 CHECK#: GP#11046414 DATE PAID: 10/28/13 KM PROJECT NO: C-1133097 FACILITY ID: C-799
---	---

Central Regional Office • 1990 E. Gettysburg Avenue • Fresno, CA 93726-0244 • (559) 230-5900 • FAX (559) 230-6061

RECEIVED

OCT 28 2013

Permits Services
SJVAPCD

MADERA POWER, LLC
11427 FIREBAUGH ROAD
FIREBAUGH CA 93622

(559) 659-4791

28 October 2013

Permit Services
San Joaquin Valley Air Pollution Control District
Central Region
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244

Subject: Title V Application (TV Form – 008)
ATC # C-799-3-6
Compliance Certification Form TVFORM-009

Attached is a completed Title V application for a Minor Modification of the subject ATC.

Please contact me a 951 712 5623 if you have any questions.

Respectfully,



Larry Osborne

Cc: Clair Gottschalk - APCD
Robert Gilles - APCD
Doug Thompson – Madera Power

**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: Madera Power, LLC	FACILITY ID: C-799
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Madera power, LLC	
3. Agent to the Owner: Larry Osborne	

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 foregoing is correct and true:



 Signature of Responsible Official

28 Oct 2013

 Date

Larry Osborne

 Name of Responsible Official (please print)

General Manager

 Title of Responsible Official (please print)

MADERA POWER, LLC
P.O. Box 305
11427 Firebaugh Blvd.
Firebaugh, CA 93622
Tel. No.: (559) 659-4791
FAX No.: (559) 659-4793

May 20, 2002

Mr. Richard McVaigh
San Joaquin Valley Air Pollution Control District
Central Region Office
1990 E. Gettysburg Avenue
Fresno, CA 93726

Subject: ATC to Modify Permit Unit C-799-3-1 Condition 30

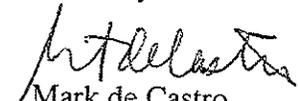
Dear Mr. McVaigh:

The Avogadro Group, LLC performed the toxic emissions testing at the Madera Power, LLC facility on March 12 through 14, 2002 as required by Permit Unit C-799-3-1 Condition 29. This source testing was conducted while the plant was combusting 75% urban woodwaste and 25% grape pomace

Please find the application for Authority to Construct (ATC) to modify Condition 30 of Permit Unit C-799-3-1 in order to allow continued combustion of urban woodwaste based on refined health risk assessment using the results of the toxic emissions testing stated above. Enclosed is the full report prepared by The Avogadro Group, LLC. Included with the ATC application is the nonrefundable filing fee of \$60.00

Please call if you have any question.

Sincerely,


Mark de Castro
Plant Manager

Cc: Mike McIver – with enclosure

San Joaquin Valley Air Pollution Control District

www.valleyair.org

Permit Application For:

- AUTHORITY TO CONSTRUCT (ATC) - New Emission Unit.
 AUTHORITY TO CONSTRUCT (ATC) - Modification Of Emission Unit With Valid PTO/Valid ATC.
 AUTHORITY TO CONSTRUCT (ATC) - Renewal of Valid Authority to Construct.
 PERMIT TO OPERATE (PTO) - Existing Emission Unit Now Requiring a Permit to Operate.

1. PERMIT TO BE ISSUED TO: <u>MADERA POWER, LLC</u>		
2. MAILING ADDRESS: <u>c/o IDAHO ENERGY LIMITED PARTNERSHIP</u> STREET/P.O. BOX: <u>4006 INDUSTRIAL AVENUE</u> CITY: <u>COEUR D'ALENE</u> STATE: <u>ID</u> 9-DIGIT ZIP CODE: <u>83815-8928</u>		
3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED: STREET: <u>11427 FIREBAUGH BLVD.</u> CITY: <u>FIREBAUGH</u> <u> </u> /4 SECTION <u>28</u> TOWNSHIP <u>13S</u> RANGE <u>15E</u>		WITHIN 1.000 FT OF A SCHOOL? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO S.I.C. CODE(S) OF FACILITY (If known):
4. GENERAL NATURE OF BUSINESS: <u>ELECTRIC POWER GENERATOR</u>		INSTALL DATE: <u>06/01/01</u>
5. TITLE V PERMIT HOLDERS ONLY: Do you request a COC (EPA Review) prior to receiving your ATC? <input type="checkbox"/> YES <input type="checkbox"/> NO		
6. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE (include Permit #'s if known, and use additional sheets if necessary): <u>PERMIT UNIT C-799-3-1, CONDITION 30: MODIFY THIS CONDITION TO ALLOW COMBUSTION OF URBAN WOODWASTE BEYOND THE DAYS PERMITTED IN THIS CONDITION.</u>		
7. HAVE YOU EVER APPLIED FOR AN ATC OR PTO IN THE PAST? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If yes, ATC/PTO #: _____	8. IS THIS PROPERTY ZONED PROPERLY FOR THE PROPOSED USE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Optional Section 10 CHECK WHETHER YOU ARE A PARTICIPANT IN EITHER OF THESE VOLUNTARY PROGRAMS: "SPARE THE AIR" <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Send info "INSPECT" <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Send info  
9. IS THIS APPLICATION SUBMITTED AS THE RESULT OF EITHER A NOTICE OF VIOLATION OR A NOTICE TO COMPLY? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If yes, NOV/NTC #: _____		
11. TYPE OR PRINT NAME OF APPLICANT: <u>MARK DE CASTRO</u>		TITLE OF APPLICANT: <u>PLANT MANAGER</u>
12. SIGNATURE OF APPLICANT: <u>[Signature]</u> DATE: <u>05/20/02</u>		PHONE #: <u>(559) 659-4791</u> FAX #: <u>(559) 659-4793</u> E-MAIL: <u>decastro@madera.power.com</u>

FOR APCD USE ONLY:

DATE STAMP	FILING FEE RECEIVED: \$ _____ CHECK #: _____ DATE PAID: _____ PROJECT #: _____ FACILITY ID: _____
------------	---

NONREFUNDABLE FILING FEE FOR AUTHORITY TO CONSTRUCT
TO MODIFY PERMIT UNIT C-799-3-1 CONDITION 30 IN ORDER TO
ALLOW CONTINUED COMBUSTION OF URBAN WOODWASTE AT
MADERA POWER, LLC PLANT - \$60.00

MADERA POWER, LLC
An Energy Products of Idaho Company



4549

HEADQUARTERS
4006 INDUSTRIAL AVENUE
COEUR D'ALENE, IDAHO 83815-8928

POWER PLANT
11427 FIREBAUGH ROAD
MADERA, CALIFORNIA 93637

CHECK NO. CHECK AMOUNT

05/20/02

4549

\$ 60.00

PAY: SIXTY DOLLARS ONLY _____

MADERA POWER, LLC

TO
THE
ORDER
OF

SAN JOAQUIN VALLEY
AIR POLLUTION CONTROL DISTRICT

[Signature]

ATTACHMENT E

Previous Title V Operating Permit No.
C-799-3-20

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-799-3-20

EXPIRATION DATE: 05/31/2018

EQUIPMENT DESCRIPTION:

28.5 MW RESOURCE RECOVERY FACILITY BOILER/GENERATOR INCLUDING: 460 MMBTU/HR ATMOSPHERIC FLUIDIZED BED BOILER, MULTICLONE, BAGHOUSE, REAGENT INJECTION SYSTEM, AMMONIA INJECTION SYSTEM, PROPANE OR NATURAL GAS-FIRED START-UP PREHEATER, WITH CONTINUOUS EMISSION MONITORS

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal testing and monitoring shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal testing and monitoring shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Specific Limiting Condition (SLC) limiting the annual emissions from the fuel handling listed under permit C-799-1, boiler/generator listed under permit C-799-3, the screening operation listed under permit C-799-6, the grinding operation listed under permit C-799-7, the transportable IC engine listed under permit C-799-8, and the transportable IC engine listed under permit C-799-11, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: 417,600 lb-NOx/year, 54,000 lb-SOx/year, 83,520 lb-PM10/year, 501,120 lb-CO/year, or 200,448 lb-VOC/year. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The APCO or any authorized representative, upon request, shall have access to, and copies of, any records required to be kept under the terms and conditions of this permit. [CH&SC 42303]
9. The APCO or any authorized representative, upon request, shall have access to inspect any equipment, operation, or method required in this permit, and to sample emissions from the source or require samples to be taken. [District Rule 1081] Federally Enforceable Through Title V Permit
10. The atmospheric fluidized bed (AFB) boiler shall not operate in excess of 348 days per calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Natural gas or propane burners shall be used during start-up and for combustor stabilization throughout the chamber prior to the introduction of solid fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Particulate matter concentrations shall not exceed 0.024 grains/dscf. [District Rules 2201, 4201 and 4301] 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.

13. Expected emissions of combustion contaminants from the fluidized bed boiler, as particulate matter (PM), will not exceed 10 lb/hr, as measured by EPA Method 5. [District Rule 4301] Federally Enforceable Through Title V Permit
14. Ash sample testing for substances not considered to be combustion contaminants using ion chromatography shall be performed at least once every 12 calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
15. A representative sample of ash shall be collected during source testing and analyzed by ion chromatography to determine the percentage of combustion contaminants exiting the stack. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The PM source test result may be adjusted based on the fraction of combustion contaminants from the ash sample test results to determine the hourly combustion contaminant emission rate. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total PM₁₀ shall not exceed 11.2 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Emissions from this unit shall not exceed any of the following limits: 50 lb-NO₂/hr (1,200 lb-NO₂/day), 24 lb-ROG/hr (576 lb-ROG/day), 29 lb-SO₂/hr (696 lb-SO₂/day), 240 lb-PM/day, or 60 lb-CO/hr (1,440 lb-CO/day). [District Rules 2201 and 4301] Federally Enforceable Through Title V Permit
19. Ammonia emissions shall not exceed 100 parts per million. [District Rule 2201] Federally Enforceable Through Title V Permit
20. A quarterly report of the daily fuel usage and type shall be submitted to the District by the 30th day of the following month. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Offset creditable fuels are limited to the following: alfalfa straw, almond prunings, apple prunings, apricot prunings, barley straw, bean straw/stalks, cherry prunings, citrus prunings, corn stalks, fig prunings, forest slash/cull, grape prunings, generic orchard prunings, milo sorghum, nectarine prunings, olive prunings, peach prunings, pecan prunings, pistachio prunings, plum prunings, rice straw, wheat straw, walnut prunings, and generic field crops historically open burned in the San Joaquin Valley air basin. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Fuels for the AFB boiler are limited to the following: alfalfa straw, almond prunings, almond shells, apple prunings, apricot prunings, barley straw, bean straw/stalks, cedar bark, cherry pits, cherry prunings, citrus prunings, coffee grounds, corn stalks, cotton gin trash, cotton stalks, ditchbank or canal weeds, fig prunings, forest slash/cull, grape pomace, grape prunings, generic orchard prunings, hog fuel (mill residue), landscape tree trimmings, milo sorghum, nectarine pits, nectarine prunings, olive pits, olive pomace, olive prunings, pallet/bins wood, peach pits, peach prunings, peanut shells, pecan prunings, pecan shells, pistachio prunings, pistachio shells, plum prunings, prune pits, raisin pomace, rice straw, sawdust, tomato pomace, tumbleweeds, turkey (wood) shavings, urban development clearing trees, walnut prunings, walnut shells, wheat straw, unburned fuel, and paper. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Urban wood waste (construction, demolition, and landfill derived wood wastes) is approved as fuel so long as there is less than 1% by weight, of plastic, rubber and other non-wood combustibles (other than dirt or ash). [District Rule 4102]
24. All stack emissions shall be offset with creditable biomass on an annual basis. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Emission offset credits shall be calculated using the following formula: $EC(y) = \text{Summation}[1/DF(i) \times T(i) \times EF(i)]$, where $EC(y)$ = the amount of offset credit available for the year, i = the i th load of biomass combusted for the offset year, $DF(i)$ = the distance factor for the i th load of biomass, $T(i)$ = the number of tons of biomass in the i th load, and $EF(i)$ = the emission factor for the type of biomass in the i th load. [District Rule 2201] Federally Enforceable Through Title V Permit
26. The biomass offset Distance Factor shall be 1.2 for sources within a 15-mile radius and 2.0 for sources outside the 15-mile radius. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Open burn emission factors used to determine the quantity of offsets available from the diversion of biomass from open-burning shall be obtained from District Policy SSP 2005 "Open Burn Emission Factors." [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.

28. Daily records of biomass consumption shall be maintained which include the type, mass and geographic origin of all creditable biomass received and used. Records shall include certifications that any creditable biomass has historically been openly burned in the San Joaquin Valley air basin. [District Rules 2201 and 4352] Federally Enforceable Through Title V Permit
29. Monthly records of all fuel consumption (including biomass and all other permitted fuels) shall be kept. Records shall include type, quantity, and higher heating value (HHV) for each fuel used. [District Rule 4352] Federally Enforceable Through Title V Permit
30. Annual records shall be maintained which quantify the total amount of stack emissions and the total amount of offsets claimed from the diversion of creditable biomass from open-burning, and which include calculations demonstrating that the total amount of annual offsets claimed is sufficient to fully offset the annual stack emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
31. Amount of paper used for fuel shall not exceed 50% of the total fuel consumption. [District Rule 4102]
32. No fuel shall be chemically treated, painted, or oil stained. [District Rule 4102]
33. Fuel feed rate shall not exceed a maximum of 460 MMBtu/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Gross power production shall not exceed 32.85 Megawatts. [District Rule 2201] Federally Enforceable Through Title V Permit
35. Steam production shall not exceed 7,256,000 pounds per day at 900 oF and 850 psig. [District Rule 2201] Federally Enforceable Through Title V Permit
36. If urban wood wastes have been burned during the 365 day period prior to October 31 of any year, fuel testing shall be conducted by December 31 of that year. [District Rule 4102]
37. Fuel testing shall be conducted as follows: one truckload of urban wood waste fuel shall be weighed, dumped, and all contaminants shall be sorted from the fuel, identified and weighed. The report for this test shall be forwarded to the District by January 31 (one month after fuel testing deadline). [District Rule 4102]
38. The District shall be contacted and notified of the proposed date of any fuel testing. [District Rule 2201] Federally Enforceable Through Title V Permit
39. In addition to the scheduled annual fuel testing, testing shall also be performed on urban wood waste on-site within 24 hours of any such request of District staff. [District Rule 2201] Federally Enforceable Through Title V Permit
40. Permittee shall provide a toxics emissions test plan and protocol within 120 operating days of restarting facility and will initiate testing within 60 days of ARB and SJVAPCD approval of the protocol. [District Rule 4102]
41. In accordance with the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (amended June 1993), the facility shall be source tested for the following while fired on the maximum proposed mix of urban wood waste: full set of metals, PAHs, dioxins, furans, formaldehyde, acetaldehyde, PCBs and POM. The ratio of urban wood waste to other fuel combusted during the toxics testing will become the maximum ratio allowed for all subsequent combustion, unless otherwise revised under future Authorities to Construct. [District Rule 4102]
42. Urban woodwaste combustion shall cease within 462 days of operation, beginning the date of facility restart, unless an application for Authority to Construct (ATC), based on refined health risk assessment is filed and approved. [District Rule 4102]
43. Records shall be maintained of the number of days of operation since "restart" occurred. [District Rule 4102]
44. The baghouse shall consist of 2,310 bags with a rating of 226,000 acfm. [District Rule 2201] Federally Enforceable Through Title V Permit
45. All modules of the baghouse shall be equipped with a manometer which shall be calibrated on an annual or more frequent basis. [District Rule 2201] Federally Enforceable Through Title V Permit
46. The multiclone shall consist of a 1,500 hp motor with 200-11.5 inch collector tubes. [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.

47. The reagent injection system shall consist of a 2,540 cubic foot silo. [District Rule 2201] Federally Enforceable Through Title V Permit
48. The reagent bin for the dry additive injection system shall be under negative pressure whenever reagent is being loaded into the bin. [District Rule 2201] Federally Enforceable Through Title V Permit
49. The ammonia injection system includes 36 nozzles. [District Rule 2201] Federally Enforceable Through Title V Permit
50. The air flow rate and ammonia injection rate shall be monitored continuously and recorded. [District Rule 2201] Federally Enforceable Through Title V Permit
51. Particulate matter emissions in the exhaust gas from this unit shall not exceed 0.03 lb/MMBtu heat input. [40 CFR 60.42Da(a)(1) and (2)] Federally Enforceable Through Title V Permit
52. The opacity of the exhaust gas from this unit shall not exceed 20 percent based on a 6-minute average except for one 6-minute period per hour of not more than 27 percent opacity. [40 CFR 60.42Da(b) and 40 CFR 64.3] Federally Enforceable Through Title V Permit
53. Sulfur dioxide (SO₂) emissions from the biomass unit shall not exceed 1.20 lb/MMBtu heat input. [40 CFR 60.43Da(d)(2)] Federally Enforceable Through Title V Permit
54. Sulfur compound emissions shall not exceed 0.2% by volume, 2,000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801 and Madera County Rule 404] Federally Enforceable Through Title V Permit
55. SO₂ emissions shall be calculated based on the arithmetic average of all hourly emissions rates for SO₂ for the 30 successive boiler operating days. [40 CFR 60.48Da(g)] Federally Enforceable Through Title V Permit
56. Except for periods of start-up or shutdown, emissions concentrations in the exhaust from the unit shall not exceed any of the following limits based on a block 24 hour average : 115 ppmv NO_x at 3% O₂ or 400 ppmv CO at 3% O₂. [40 CFR 60.44Da(a) and District Rule 4352] Federally Enforceable Through Title V Permit
57. The duration of each shutdown shall not exceed twelve (12) hours except as provided in Section 5.3.4 of District Rule 4352. [District Rule 4352] Federally Enforceable Through Title V Permit
58. Except as provided in Section 5.3.4 of District Rule 4352, the duration of each start-up shall not exceed 96 hours, or 192 hours if curing of the refractory is required after a modification. [District Rule 4352] Federally Enforceable Through Title V Permit
59. When two or more fuels are combusted simultaneously, NO_x emissions shall not exceed the prorated emissions calculated using the following formula: $E_n = [86w + 260z]/100$, where: E_n is the applicable standard for nitrogen oxides when multiple fuels are combusted simultaneously (ng/J heat input); w is the percentage of total heat input derived from the combustion of gaseous fuels; and z is the percentage of total heat input derived from the combustion of solid fuels. [40 CFR 60.44Da(c)] Federally Enforceable Through Title V Permit
60. Applicable emissions standards of 40 CFR part 60 for PM, SO₂, and NO_x apply at all times except during the startup, shutdown, or malfunction. [40 CFR 60.48Da(c)] Federally Enforceable Through Title V Permit
61. Continuous Emission Monitoring systems (CEMs) shall be operated, maintained, and calibrated pursuant to the requirements of 40 CFR 60.7 (c) and 60.13. CEMs must also satisfy the Performance Specifications of 40 CFR Part 51 Appendix P and 40 CFR Part 60 Appendix B, Performance Specifications 2, 3, and 4, and the Relative Accuracy Test Audit of Appendix F. [District Rules 1080, 2201 and 4352, 40 CFR 49Da(w) and 40 CFR 64.3] Federally Enforceable Through Title V Permit
62. The continuous emissions monitoring systems (CEMs) for NO_x, SO₂, and CO and continuous monitoring system for opacity and O₂ concentration shall be calibrated and maintained operational at all times including the periods of startup, shutdown, malfunction, and emergency conditions, except for the CEMs breakdowns, repairs, calibrate checks, and zero and span adjustments. [40 CFR 60.49Da(a), (b), (c), (d), and (e), 40 CFR 64.3 and District Rule 4352] Federally Enforceable Through Title V Permit
63. Hourly emissions for NO_x (as NO₂), SO₂, and CO shall be based on a consecutive three-hour average as determined by the CEM system. [District Rule 1080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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64. The owner or operator shall obtain emission data for at least 18 hours in at least 22 hours out of the 30 successive boiler operating days. If this minimum data cannot be obtained, the operator or owner shall supplement emission data with alternate monitoring system approved by the APCO or methods and procedures described in section 60.47a(h) of 40 CFR 60, Subpart Da. [40CFR 60.49Da(f) and 40 CFR 64.9] Federally Enforceable Through Title V Permit
65. The owner or operator shall use methods and procedures described in 40 CFR 60.47a(i) to conduct monitoring system performance evaluations and calibrate checks under subpart 60.13(c) and (d). Alternate methods and procedures described under section 60.47a(j) may also be used. [40 CFR 60.49Da(i) and (j) and 40 CFR 64.9] Federally Enforceable Through Title V Permit
66. 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 and 40 CFR 64.9] Federally Enforceable Through Title V Permit
67. A violation of NO_x emission standards indicated by the NO_x CEM shall be reported by the operator to the APCO within 96 hours. [District Rule 1080] Federally Enforceable Through Title V Permit
68. Operator shall notify the APCO shall be notified no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [District Rule 1080] Federally Enforceable Through Title V Permit
69. Operators of CEM's installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include: A. time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; B. averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; C. applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; D. a negative declaration when no excess occurred. [40 CFR 60.51Da, 40 CFR 64.9 and District Rule 1080] Federally Enforceable Through Title V Permit
70. The baghouse shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [40 CFR 64.3] Federally Enforceable Through Title V Permit
71. The baghouse shall operate at all times with a minimum differential pressure of 3 inches water column and a maximum differential pressure of 10 inches water column. [40 CFR Part 64.3] Federally Enforceable Through Title V Permit
72. Differential operating pressure shall be monitored and recorded on each day that the combustor operates. [40 CFR 64.3] Federally Enforceable Through Title V Permit
73. During each day of operation, the permittee shall record the pressure drop of the baghouse, and compare the readings with the acceptable range. Upon detecting any excursion from the acceptable range pressure readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR 64.7] Federally Enforceable Through Title V Permit
74. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR 64.7] Federally Enforceable Through Title V Permit
75. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64.9] Federally Enforceable Through Title V Permit
76. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64.8] Federally Enforceable Through Title V Permit
77. Source testing for PM₁₀, SO_x, NO_x, CO, VOC, and ammonia slip shall be performed at least once every 12 calendar months. [District Rule 2201, District Rule 1081, and District Rule 4352] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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78. 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
79. Stack gas velocity shall be determined using EPA Method 2. Stack gas oxygen shall be determine using EPA Method 3 or 3A (or ARB Method 100). Stack gas moisture content shall be determined using EPA Method 4. Solid fuel higher heating value (hhv) shall be determined using ASTM Method D 2015 or E 711. [District Rule 4352] Federally Enforceable Through Title V Permit
80. Source testing shall be conducted using the following methods: EPA Method 7E (or CARB Method 100) for NO_x (ppmv); EPA Method 19 for NO_x (lb/MMBtu heat input); EPA Method 5 for particulate matter (PM); EPA Method 6/6C or 8 for SO₂; EPA Method 9 for opacity; EPA method 10 (or CARB method 100) for CO; and EPA Method 18 (or CARB Method 100) for VOC. [District Rule 4352 and 40 CFR 60.50Da] Federally Enforceable Through Title V Permit
81. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is zero, or is shut off for 30 minutes or longer. [District Rule 4352] Federally Enforceable Through Title V Permit
82. The results of each source test and ash sample ion chromatography test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
83. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEM's that have been installed pursuant to District Rule 1080, and emission measurements. [District Rule 1080, 40 CFR 60.7 (b) and 40 CFR 64.9] Federally Enforceable Through Title V Permit
84. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 forty-minute test runs for NO_x and CO. This mean shall be multiplied by the appropriate factor. [District Rule 2520] Federally Enforceable Through Title V Permit
85. Enclosure and dust collection system shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520] Federally Enforceable Through Title V Permit
86. Dust collector filters shall be thoroughly inspected annually for tears, scuffs, abrasions, holes, or any evidence of particulate matter leaks and shall be replaced as needed. [District Rule 2520] Federally Enforceable Through Title V Permit
87. Records of dust collector maintenance, inspections, and repair shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520] Federally Enforceable Through Title V Permit
88. For each unit subject to the Specific Limiting Condition (SLC), the permittee shall maintain all necessary records in order to show compliance with the annual SLC limits. [District Rule 2201] Federally Enforceable Through Title V Permit

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

ATTACHMENT F

Previous Title V Operating Permit No.
C-799-3-20

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-799-3-20

EXPIRATION DATE: 05/31/2018

EQUIPMENT DESCRIPTION:

28.5 MW RESOURCE RECOVERY FACILITY BOILER/GENERATOR INCLUDING: 460 MMBTU/HR ATMOSPHERIC FLUIDIZED BED BOILER, MULTICLONE, BAGHOUSE, REAGENT INJECTION SYSTEM, AMMONIA INJECTION SYSTEM, PROPANE OR NATURAL GAS-FIRED START-UP PREHEATER, WITH CONTINUOUS EMISSION MONITORS

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal testing and monitoring shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal testing and monitoring shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Specific Limiting Condition (SLC) limiting the annual emissions from the fuel handling listed under permit C-799-1, boiler/generator listed under permit C-799-3, the screening operation listed under permit C-799-6, the grinding operation listed under permit C-799-7, the transportable IC engine listed under permit C-799-8, and the transportable IC engine listed under permit C-799-11, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: 417,600 lb-NOx/year, 54,000 lb-SOx/year, 83,520 lb-PM10/year, 501,120 lb-CO/year, or 200,448 lb-VOC/year. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The APCO or any authorized representative, upon request, shall have access to, and copies of, any records required to be kept under the terms and conditions of this permit. [CH&SC 42303]
9. The APCO or any authorized representative, upon request, shall have access to inspect any equipment, operation, or method required in this permit, and to sample emissions from the source or require samples to be taken. [District Rule 1081] Federally Enforceable Through Title V Permit
10. The atmospheric fluidized bed (AFB) boiler shall not operate in excess of 348 days per calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Natural gas or propane burners shall be used during start-up and for combustor stabilization throughout the chamber prior to the introduction of solid fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Particulate matter concentrations shall not exceed 0.024 grains/dscf. [District Rules 2201, 4201 and 4301] 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.

13. Expected emissions of combustion contaminants from the fluidized bed boiler, as particulate matter (PM), will not exceed 10 lb/hr, as measured by EPA Method 5. [District Rule 4301] Federally Enforceable Through Title V Permit
14. Ash sample testing for substances not considered to be combustion contaminants using ion chromatography shall be performed at least once every 12 calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
15. A representative sample of ash shall be collected during source testing and analyzed by ion chromatography to determine the percentage of combustion contaminants exiting the stack. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The PM source test result may be adjusted based on the fraction of combustion contaminants from the ash sample test results to determine the hourly combustion contaminant emission rate. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total PM10 shall not exceed 11.2 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Emissions from this unit shall not exceed any of the following limits: 50 lb-NO2/hr (1,200 lb-NO2/day), 24 lb-ROG/hr (576 lb-ROG/day), 29 lb-SO2/hr (696 lb-SO2/day), 240 lb-PM/day, or 60 lb-CO/hr (1,440 lb-CO/day). [District Rules 2201 and 4301] Federally Enforceable Through Title V Permit
19. Ammonia emissions shall not exceed 100 parts per million. [District Rule 2201] Federally Enforceable Through Title V Permit
20. A quarterly report of the daily fuel usage and type shall be submitted to the District by the 30th day of the following month. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Offset creditable fuels are limited to the following: alfalfa straw, almond prunings, apple prunings, apricot prunings, barley straw, bean straw/stalks, cherry prunings, citrus prunings, corn stalks, fig prunings, forest slash/cull, grape prunings, generic orchard prunings, milo sorghum, nectarine prunings, olive prunings, peach prunings, pecan prunings, pistachio prunings, plum prunings, rice straw, wheat straw, walnut prunings, and generic field crops historically open burned in the San Joaquin Valley air basin. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Fuels for the AFB boiler are limited to the following: alfalfa straw, almond prunings, almond shells, apple prunings, apricot prunings, barley straw, bean straw/stalks, cedar bark, cherry pits, cherry prunings, citrus prunings, coffee grounds, corn stalks, cotton gin trash, cotton stalks, ditchbank or canal weeds, fig prunings, forest slash/cull, grape pomace, grape prunings, generic orchard prunings, hog fuel (mill residue), landscape tree trimmings, milo sorghum, nectarine pits, nectarine prunings, olive pits, olive pomace, olive prunings, pallet/bins wood, peach pits, peach prunings, peanut shells, pecan prunings, pecan shells, pistachio prunings, pistachio shells, plum prunings, prune pits, raisin pomace, rice straw, sawdust, tomato pomace, tumbleweeds, turkey (wood) shavings, urban development clearing trees, walnut prunings, walnut shells, wheat straw, unburned fuel, and paper. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Urban wood waste (construction, demolition, and landfill derived wood wastes) is approved as fuel so long as there is less than 1% by weight, of plastic, rubber and other non-wood combustibles (other than dirt or ash). [District Rule 4102]
24. All stack emissions shall be offset with creditable biomass on an annual basis. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Emission offset credits shall be calculated using the following formula: $EC(y) = \text{Summation}[1/DF(i) \times T(i) \times EF(i)]$, where $EC(y)$ = the amount of offset credit available for the year, i = the i th load of biomass combusted for the offset year, $DF(i)$ = the distance factor for the i th load of biomass, $T(i)$ = the number of tons of biomass in the i th load, and $EF(i)$ = the emission factor for the type of biomass in the i th load. [District Rule 2201] Federally Enforceable Through Title V Permit
26. The biomass offset Distance Factor shall be 1.2 for sources within a 15-mile radius and 2.0 for sources outside the 15-mile radius. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Open burn emission factors used to determine the quantity of offsets available from the diversion of biomass from open-burning shall be obtained from District Policy SSP 2005 "Open Burn Emission Factors." [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.

28. Daily records of biomass consumption shall be maintained which include the type, mass and geographic origin of all creditable biomass received and used. Records shall include certifications that any creditable biomass has historically been openly burned in the San Joaquin Valley air basin. [District Rules 2201 and 4352] Federally Enforceable Through Title V Permit
29. Monthly records of all fuel consumption (including biomass and all other permitted fuels) shall be kept. Records shall include type, quantity, and higher heating value (HHV) for each fuel used. [District Rule 4352] Federally Enforceable Through Title V Permit
30. Annual records shall be maintained which quantify the total amount of stack emissions and the total amount of offsets claimed from the diversion of creditable biomass from open-burning, and which include calculations demonstrating that the total amount of annual offsets claimed is sufficient to fully offset the annual stack emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
31. Amount of paper used for fuel shall not exceed 50% of the total fuel consumption. [District Rule 4102]
32. No fuel shall be chemically treated, painted, or oil stained. [District Rule 4102]
33. Fuel feed rate shall not exceed a maximum of 460 MMBtu/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Gross power production shall not exceed 32.85 Megawatts. [District Rule 2201] Federally Enforceable Through Title V Permit
35. Steam production shall not exceed 7,256,000 pounds per day at 900 oF and 850 psig. [District Rule 2201] Federally Enforceable Through Title V Permit
36. If urban wood wastes have been burned during the 365 day period prior to October 31 of any year, fuel testing shall be conducted by December 31 of that year. [District Rule 4102]
37. Fuel testing shall be conducted as follows: one truckload of urban wood waste fuel shall be weighed, dumped, and all contaminants shall be sorted from the fuel, identified and weighed. The report for this test shall be forwarded to the District by January 31 (one month after fuel testing deadline). [District Rule 4102]
38. The District shall be contacted and notified of the proposed date of any fuel testing. [District Rule 2201] Federally Enforceable Through Title V Permit
39. In addition to the scheduled annual fuel testing, testing shall also be performed on urban wood waste on-site within 24 hours of any such request of District staff. [District Rule 2201] Federally Enforceable Through Title V Permit
40. Permittee shall provide a toxics emissions test plan and protocol within 120 operating days of restarting facility and will initiate testing within 60 days of ARB and SJVAPCD approval of the protocol. [District Rule 4102]
41. In accordance with the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (amended June 1993), the facility shall be source tested for the following while fired on the maximum proposed mix of urban wood waste: full set of metals, PAHs, dioxins, furans, formaldehyde, acetaldehyde, PCBs and POM. The ratio of urban wood waste to other fuel combusted during the toxics testing will become the maximum ratio allowed for all subsequent combustion, unless otherwise revised under future Authorities to Construct. [District Rule 4102]
42. Urban woodwaste combustion shall cease within 462 days of operation, beginning the date of facility restart, unless an application for Authority to Construct (ATC), based on refined health risk assessment is filed and approved. [District Rule 4102]
43. Records shall be maintained of the number of days of operation since "restart" occurred. [District Rule 4102]
44. The baghouse shall consist of 2,310 bags with a rating of 226,000 acfm. [District Rule 2201] Federally Enforceable Through Title V Permit
45. All modules of the baghouse shall be equipped with a manometer which shall be calibrated on an annual or more frequent basis. [District Rule 2201] Federally Enforceable Through Title V Permit
46. The multiclone shall consist of a 1,500 hp motor with 200-11.5 inch collector tubes. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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47. The reagent injection system shall consist of a 2,540 cubic foot silo. [District Rule 2201] Federally Enforceable Through Title V Permit
48. The reagent bin for the dry additive injection system shall be under negative pressure whenever reagent is being loaded into the bin. [District Rule 2201] Federally Enforceable Through Title V Permit
49. The ammonia injection system includes 36 nozzles. [District Rule 2201] Federally Enforceable Through Title V Permit
50. The air flow rate and ammonia injection rate shall be monitored continuously and recorded. [District Rule 2201] Federally Enforceable Through Title V Permit
51. Particulate matter emissions in the exhaust gas from this unit shall not exceed 0.03 lb/MMBtu heat input. [40 CFR 60.42Da(a)(1) and (2)] Federally Enforceable Through Title V Permit
52. The opacity of the exhaust gas from this unit shall not exceed 20 percent based on a 6-minute average except for one 6-minute period per hour of not more than 27 percent opacity. [40 CFR 60.42Da(b) and 40 CFR 64.3] Federally Enforceable Through Title V Permit
53. Sulfur dioxide (SO₂) emissions from the biomass unit shall not exceed 1.20 lb/MMBtu heat input. [40 CFR 60.43Da(d)(2)] Federally Enforceable Through Title V Permit
54. Sulfur compound emissions shall not exceed 0.2% by volume, 2,000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801 and Madera County Rule 404] Federally Enforceable Through Title V Permit
55. SO₂ emissions shall be calculated based on the arithmetic average of all hourly emissions rates for SO₂ for the 30 successive boiler operating days. [40 CFR 60.48Da(g)] Federally Enforceable Through Title V Permit
56. Except for periods of start-up or shutdown, emissions concentrations in the exhaust from the unit shall not exceed any of the following limits based on a block 24 hour average : 115 ppmv NO_x at 3% O₂ or 400 ppmv CO at 3% O₂. [40 CFR 60.44Da(a) and District Rule 4352] Federally Enforceable Through Title V Permit
57. The duration of each shutdown shall not exceed twelve (12) hours except as provided in Section 5.3.4 of District Rule 4352. [District Rule 4352] Federally Enforceable Through Title V Permit
58. Except as provided in Section 5.3.4 of District Rule 4352, the duration of each start-up shall not exceed 96 hours, or 192 hours if curing of the refractory is required after a modification. [District Rule 4352] Federally Enforceable Through Title V Permit
59. When two or more fuels are combusted simultaneously, NO_x emissions shall not exceed the prorated emissions calculated using the following formula: $E_n = [86w + 260z]/100$, where: E_n is the applicable standard for nitrogen oxides when multiple fuels are combusted simultaneously (ng/J heat input); w is the percentage of total heat input derived from the combustion of gaseous fuels; and z is the percentage of total heat input derived from the combustion of solid fuels. [40 CFR 60.44Da(c)] Federally Enforceable Through Title V Permit
60. Applicable emissions standards of 40 CFR part 60 for PM, SO₂, and NO_x apply at all times except during the startup, shutdown, or malfunction. [40 CFR 60.48Da(c)] Federally Enforceable Through Title V Permit
61. Continuous Emission Monitoring systems (CEMs) shall be operated, maintained, and calibrated pursuant to the requirements of 40 CFR 60.7 (c) and 60.13. CEMs must also satisfy the Performance Specifications of 40 CFR Part 51 Appendix P and 40 CFR Part 60 Appendix B, Performance Specifications 2, 3, and 4, and the Relative Accuracy Test Audit of Appendix F. [District Rules 1080, 2201 and 4352, 40 CFR 49Da(w) and 40 CFR 64.3] Federally Enforceable Through Title V Permit
62. The continuous emissions monitoring systems (CEMs) for NO_x, SO₂, and CO and continuous monitoring system for opacity and O₂ concentration shall be calibrated and maintained operational at all times including the periods of startup, shutdown, malfunction, and emergency conditions, except for the CEMs breakdowns, repairs, calibrate checks, and zero and span adjustments. [40 CFR 60.49Da(a), (b), (c), (d), and (e), 40 CFR 64.3 and District Rule 4352] Federally Enforceable Through Title V Permit
63. Hourly emissions for NO_x (as NO₂), SO₂, and CO shall be based on a consecutive three-hour average as determined by the CEM system. [District Rule 1080] Federally Enforceable Through Title V Permit

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64. The owner or operator shall obtain emission data for at least 18 hours in at least 22 hours out of the 30 successive boiler operating days. If this minimum data cannot be obtained, the operator or owner shall supplement emission data with alternate monitoring system approved by the APCO or methods and procedures described in section 60.47a(h) of 40 CFR 60, Subpart Da. [40CFR 60.49Da(f) and 40 CFR 64.9] Federally Enforceable Through Title V Permit
65. The owner or operator shall use methods and procedures described in 40 CFR 60.47a(i) to conduct monitoring system performance evaluations and calibrate checks under subpart 60.13(c) and (d). Alternate methods and procedures described under section 60.47a(j) may also be used. [40 CFR 60.49Da(i) and (j) and 40 CFR 64.9] Federally Enforceable Through Title V Permit
66. 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 and 40 CFR 64.9] Federally Enforceable Through Title V Permit
67. A violation of NO_x emission standards indicated by the NO_x CEM shall be reported by the operator to the APCO within 96 hours. [District Rule 1080] Federally Enforceable Through Title V Permit
68. Operator shall notify the APCO shall be notified no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [District Rule 1080] Federally Enforceable Through Title V Permit
69. Operators of CEM's installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include: A. time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; B. averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; C. applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; D. a negative declaration when no excess occurred. [40 CFR 60.51Da, 40 CFR 64.9 and District Rule 1080] Federally Enforceable Through Title V Permit
70. The baghouse shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [40 CFR 64.3] Federally Enforceable Through Title V Permit
71. The baghouse shall operate at all times with a minimum differential pressure of 3 inches water column and a maximum differential pressure of 10 inches water column. [40 CFR Part 64.3] Federally Enforceable Through Title V Permit
72. Differential operating pressure shall be monitored and recorded on each day that the combustor operates. [40 CFR 64.3] Federally Enforceable Through Title V Permit
73. During each day of operation, the permittee shall record the pressure drop of the baghouse, and compare the readings with the acceptable range. Upon detecting any excursion from the acceptable range pressure readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR 64.7] Federally Enforceable Through Title V Permit
74. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR 64.7] Federally Enforceable Through Title V Permit
75. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64.9] Federally Enforceable Through Title V Permit
76. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64.8] Federally Enforceable Through Title V Permit
77. Source testing for PM₁₀, SO_x, NO_x, CO, VOC, and ammonia slip shall be performed at least once every 12 calendar months. [District Rule 2201, District Rule 1081, and District Rule 4352] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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79. Stack gas velocity shall be determined using EPA Method 2. Stack gas oxygen shall be determine using EPA Method 3 or 3A (or ARB Method 100). Stack gas moisture content shall be determined using EPA Method 4. Solid fuel higher heating value (hhv) shall be determined using ASTM Method D 2015 or E 711. [District Rule 4352] Federally Enforceable Through Title V Permit
80. Source testing shall be conducted using the following methods: EPA Method 7E (or CARB Method 100) for NO_x (ppmv); EPA Method 19 for NO_x (lb/MMBtu heat input); EPA Method 5 for particulate matter (PM); EPA Method 6/6C or 8 for SO₂; EPA Method 9 for opacity; EPA method 10 (or CARB method 100) for CO; and EPA Method 18 (or CARB Method 100) for VOC. [District Rule 4352 and 40 CFR 60.50Da] Federally Enforceable Through Title V Permit
81. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is zero, or is shut off for 30 minutes or longer. [District Rule 4352] Federally Enforceable Through Title V Permit
82. The results of each source test and ash sample ion chromatography test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
83. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEM's that have been installed pursuant to District Rule 1080, and emission measurements. [District Rule 1080, 40 CFR 60.7 (b) and 40 CFR 64.9] Federally Enforceable Through Title V Permit
84. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 forty-minute test runs for NO_x and CO. This mean shall be multiplied by the appropriate factor. [District Rule 2520] Federally Enforceable Through Title V Permit
85. Enclosure and dust collection system shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520] Federally Enforceable Through Title V Permit
86. Dust collector filters shall be thoroughly inspected annually for tears, scuffs, abrasions, holes, or any evidence of particulate matter leaks and shall be replaced as needed. [District Rule 2520] Federally Enforceable Through Title V Permit
87. Records of dust collector maintenance, inspections, and repair shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520] Federally Enforceable Through Title V Permit
88. For each unit subject to the Specific Limiting Condition (SLC), the permittee shall maintain all necessary records in order to show compliance with the annual SLC limits. [District Rule 2201] Federally Enforceable Through Title V Permit

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