



NOV 1 2 2009

Gerardo C. Rios, Chief Permits Office (AIR-3) U.S. EPA - Region IX 75 Hawthorne St. San Francisco, CA 94105

Re:

Notice of Final Action - Title V Permit Renewal

District Facility # C-799 Project # C-1080167

Dear Mr. Rios:

The District has issued the Final Renewed Title V Permit for Madera Power, LLC. The preliminary decision for this project was made on August 17, 2009. A summary of the comments and the District's response to each comment is included as an attachment to the engineering evaluation. These permits address all deficiencies cited by the EPA in their comments.

The public notice for issuance of the Final Renewed Title V Permit will be published approximately three days from the date of this letter.

I would like to thank you and your staff for working with us. We appreciate your concurrence with this action. Should you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Sincerely

David Warner

**Director of Permit Services** 

**Attachments** 

cc: Dennis Roberts, Permit Services Engineer

Seyed Sadredin

Executive Director/Air Pollution Control Officer

**Central Region (Main Office)** 





NOV 1 2 2009

Mike Tollstrup, Chief **Project Assessment Branch** Air Resources Board P O Box 2815 Sacramento, CA 95812-2815

Re: Notice of Final Action - Title V Permit Renewal

> District Facility # C-799 **Project # C-1080167**

Dear Mr. Tollstrup:

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Sincerely,

David Warner

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**Attachments** 

cc: Dennis Roberts, Permit Services Engineer

Seved Sadredin

**Executive Director/Air Pollution Control Officer** 

Southern Region





NOV 1 2 2009

Mark de Castro Madera Power, LLC P.O. Box 305 Firebaugh, CA 93622-0305

Re:

**Notice of Final Action - Title V Permit Renewal** 

**District Facility # C-799 Project # C-1080167** 

Dear Mr. de Castro:

The District has issued the Final Renewed Title V Permit for Madera Power, LLC. The preliminary decision for this project was made on August 17, 2009. A summary of the comments and the District's response to each comment is included as an attachment to the engineering evaluation. These permits address all deficiencies cited by the EPA in their comments.

The public notice for issuance of the Final Renewed Title V Permit will be published approximately three days from the date of this letter.

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

Sincerely,

**David Warner** 

**Director of Permit Services** 

Attachments

cc: Dennis Roberts, Permit Services Engineer

Seyed Sadredin

**Executive Director/Air Pollution Control Officer** 

**Southern Region** 

## SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT

#### Proposed Title V Permit Renewal Evaluation Madera Power, LLC C-799

### **TABLE OF CONTENTS**

I.	PROPOSAL	 2
II.	FACILITY LOCATION	 2
III.	EQUIPMENT LISTING	 3
IV.	GENERAL PERMIT TEMPLATE USAGE	
٧. ٠	SCOPE OF EPA AND PUBLIC REVIEW	 3
VI.	FEDERALLY ENFORCEABLE REQUIREMENTS	
VII.	REQUIREMENTS NOT FEDERALLY ENFORCEABLE	 6
VIII.	PERMIT REQUIREMENTS	 7
IX.	PERMIT SHIELD	 22
Χ.	PERMIT CONDITIONS	 22
XI.	ATTACHMENTS	 23
Α.	Renewed Title V Operating Permit	
B.	Previous Title V Operating Permit	
C.	Detailed Facility List	
D.	EPA Comments	

#### TITLE V PERMIT RENEWAL EVALUATION

#### Solid Fuel-Fired Cogeneration Facility

**Engineer:** Dennis Roberts

Date: November 4. 2009

Facility Number: C-799

Facility Name: Madera Power, LLC

Mailing Address: P.O. Box 305

Firebaugh, CA 93622-0305

Contact Name: Mark de Castro

Phone: (559) 659-4791

Responsible Official: Mark de Castro

Title: Plant Engineer

**Project #:** C-1080167

Deemed Complete: April 4, 2008

#### **PROPOSAL** I.

Madera Power, LLC was issued a Title V permit on December 12, 2002. As required by District Rule 2520, the applicant is requesting a permit renewal. The existing Title V permit shall be reviewed and modified to reflect all applicable District and federal rules updated, removed, or added since the issuance of the initial Title V permit.

The purpose of this evaluation is to provide the legal and factual basis for all updated applicable requirements and to determine if the facility will comply with these updated requirements. It also specifically identifies all additions, deletions, and/or changes made to permit conditions or equipment descriptions.

During the Preliminary Notice period for this permitting action comments were received from the EPA (attached in Appendix D). Subsequently, condition #24 of permit C-799-3-13 was modified to address EPA's concern.

#### II. FACILITY LOCATION

Madera Power, LLC is located at 11427 Firebaugh Blvd, Firebaugh, Fresno County, CA

#### III. EQUIPMENT LISTING

A detailed facility printout listing all permitted equipment at the facility is included as Attachment C.

#### IV. GENERAL PERMIT TEMPLATE USAGE

The applicant does not propose to use any model general permit templates.

#### V. SCOPE OF EPA AND PUBLIC REVIEW

The applicant is not requesting any model general permit templates. Therefore, all federally enforceable conditions in this current Title V permit will be subject to EPA and public review.

#### VI. FEDERALLY ENFORCEABLE REQUIREMENTS

#### A. Rules Updated

- District Rule 2020, <u>Exemptions</u>
   (amended September 17, 1998 ⇒ amended December 19, 2002)
- District Rule 2201, New and Modified Stationary Source Review Rule (amended August 20, 1998 ⇒ amended December 19, 2002)
- District Rule 2520, <u>Federally Mandated Operating Permits</u> (adopted June 15, 1995 ⇒ amended June 21, 2001)
- District Rule 4352, <u>Solid Fuel Fired Boilers</u>, <u>Steam Generators and Process Heaters</u>
   (amended October 19, 1995 ⇒ amended May 18, 2006)
- 40 CFR Part 60, Subpart Da, <u>Standards for Performance for Electric</u> <u>Utility Steam Generating Units for Which Construction is Commenced</u> <u>After September 18, 1978</u>
- 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos

40 CFR Part 82, Subparts B and F, <u>Stratospheric Ozone</u>

The following Rules are amended from previous Non-SIP version to correct SIP deficiencies and are now included in SIP.

District Rule 4101, <u>Visible Emissions</u>
 (amended December 17, 1992 ⇒ amended February 17, 2005)

#### **B. Rules Removed**

No rules were removed.

#### C. Rules Added

- District Rule 8041, <u>Carryout and Trackout</u> (adopted November 15, 2001)
- District Rule 8051, <u>Open Areas</u> (adopted November 15, 2001)
- District Rule 8071, <u>Unpaved Vehicle/Equipment Traffic Areas</u> (adopted November 15, 2001)
- 40 CFR Part 64, Compliance Assurance Monitoring (CAM)

#### D. Rules Not Updated

- District Rule 1070, <u>Inspections</u> (amended December 17,1992)
- District Rule 1080, <u>Stack Monitoring</u> (amended December 17,1992)
- District Rule 1081, Source Sampling (amended December 16,1993)
- District Rule 1100, Equipment Breakdown (amended December 17,1992)
- District Rule 1160, Emission Statements (adopted November 18, 1992)
- District Rule 2010, Permits Required (amended December 17, 1992)
- District Rule 2031, <u>Transfer of Permits</u> (amended December 17, 1992)
- District Rule 2040, Applications (amended December 17, 1992)
- District Rule 2070, <u>Standards for Granting Applications</u> (amended December 17, 1992)

- District Rule 2080, Conditional Approval (amended December 17, 1992)
- District Rule 4201, <u>Particulate Matter Concentration</u> (amended December 17, 1992)
- District Rule 4202, <u>Particulate Matter Emission Rate</u> (amended December 17, 1992)
- District Rule 4301, <u>Fuel Burning Equipment</u> (amended December 17, 1992)
- District Rule 4601, <u>Architectural Coatings</u>
   (amended December 17, 1992 ⇒ amended October 31, 2001)
- District Rule 4801, <u>Sulfur Compounds</u> (amended December 17, 1992)
- District Rule 8011, General Requirements (adopted November 15, 2001)
- District Rule 8021, <u>Construction</u>, <u>Demolition</u>, <u>Excavation</u>, <u>Extraction</u>, <u>and</u>
   <u>Other Earthmoving Activities</u> (adopted November 15, 2001)
- District Rule 8031, Bulk Materials (adopted November 15, 2001)
- District Rule 8041, <u>Carryout and Trackout</u> (adopted November 15, 2001)
- District Rule 8051, Open Areas (adopted November 15, 2001)
- District Rule 8061, <u>Paved and Unpaved Roads</u> (adopted November 15, 2001)
- District Rule 8071, <u>Unpaved Vehicle/Equipment Traffic Areas</u> (adopted November 15, 2001)
- 40 CFR Part 52.21, <u>Prevention of Significant Deterioration (PSD)</u>

#### VII. REQUIREMENTS NOT FEDERALLY ENFORCEABLE

For each Title V source, the District issues a single permit that contains the Federally Enforceable requirements, as well as the District-only requirements. The District-only requirements are not a part of the Title V Operating Permits. The terms and conditions that are part of the facility's Title V permit are designated as "Federally Enforceable Through Title V Permit".

For this facility, the following are not federally enforceable and will not be discussed in further detail:

#### A. Rules Added (None)

#### B. Rules Not Updated

District Rule 4102, <u>Nuisance</u> (as amended December 17, 1992)

Condition 41 of permit unit -0-2 is based on District Rule 4102 and will therefore not be discussed any further.

 District Rule 7012, <u>Hexavalent Chromium - Cooling Towers</u> (as amended December 17, 1992)

Condition 3 of permit unit -4-2 is based on District Rule 7012 and will therefore not be discussed any further

#### VIII. PERMIT REQUIREMENTS

The purpose of this evaluation is to review changes to federally enforceable requirements; therefore, this compliance section will only address rules that have been amended or added since the issuance of the initial Title V permit or un-amended rules for which the original permit conditions have been revised.

#### A. District Rule 2020 - Exemptions

District Rule 2020 lists equipment which is specifically exempt from obtaining permits and specifies recordkeeping requirements to verify such exemptions. The amendments to this rule do not have any affect on current permit requirements and will therefore not be addressed in this evaluation.

#### B. District Rule 2201 - New and Modified Stationary Source Review Rule

District Rule 2201 has been amended since this facility's initial Title V permit was issued. This Title V permit renewal does not constitute a modification per section 3.26, defined as an action including at least one of the following items:

- 1) Any change in hours of operation, production rate, or method of operation of an existing emissions unit, which would necessitate a change in permit conditions.
- 2) Any structural change or addition to an existing emissions unit which would necessitate a change in permit conditions. Routine replacement shall not be considered to be a structural change.
- An increase in emissions from an emissions unit caused by a modification of the Stationary Source when the emissions unit is not subject to a daily emissions limitation.
- 4) Addition of any new emissions unit which is subject to District permitting requirements.
- 5) A change in a permit term or condition proposed by an applicant to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

Therefore, the updated requirements of this rule are not applicable at this time.

#### C. District Rule 2520 - Federally Mandated Operating Permits

This rule was amended to incorporate several administrative corrections, clarify rule language, and add procedures for implementing compliance schedules. The only amendments to this rule that will have an effect on current permit requirements are the corrections to Section 9 rule references, as described in the following table:

Old Rule Section	Corrected Rule Section
9.3	9.2
9.4	9.3
9.5	9.4
9.6	9.5
9.7	9.6
9.8	9.7
9.9	9.8
9.10	9.9
9.11	9.10
9.12	9.11
9.13	9.12
9.14	9.13
9.15	9.14
9.16	9.15
9.17	9.16
9.18	9.17
9.19	9.18

Rule 2520, Section 6.4.4, "Other Changes Not Requiring Title V Permit Amendment," allowed the permittee to implement changes, including the addition of new emissions units, without triggering the permit modification or amendment requirements until the time of Title V permit renewal, provided the conditions described in Sections 6.4.4.1 through 6.4.4.2 were met.

The following permit requirements were added and/or revised to ensure compliance with this rule:

#### a. C-799-0-2: Facility-Wide Requirements

• Conditions 5 and 18 from the current permit requirements have been revised to include the updated Section 9 rule references.

#### b. C-799-2-3: Ash Handling and Disposal System

• Condition 10 from the current permit requirements has been revised to include the updated Section 9 rule reference.

#### c. C-799-4-2: Steam and Power System

• Condition 4 from the current permit requirements has been revised to include the updated Section 9 rule reference.

#### D. District Rule 4101 - Visible Emissions

The latest version of District Rule 4101 was approved by EPA for adoption into the SIP effective October 11, 2005 (see August 11, 2005 Federal Register Part 70, pages 46770-46772).

Section 5.0 prohibits the discharge of any air contaminant for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker in shade as that designated as No. 1 on the Ringelmann Chart; or is of such opacity as to obscure an observer's view to a degree equal to or greater than the smoke described in Section 5.1 of Rule 4101. Condition 22 of permit unit -0-2 ensures compliance.

## E. District Rule 4351 - <u>Solid Fuel Fired Boilers, Steam Generators and Process Heaters</u>

Permit unit -3-13 is a resource recovery (biomass-fired) electric utility steam generating unit subject to the requirements of District Rule 4352.

Section 5.1 requires a fluidized bed boiler firing biomass to operate in a manner such that the NOx and CO emissions do not exceed 115 ppmv and 400 ppmv respectively (corrected to 3% O2).

<u>Section 5.2</u> stipulates that the NOx and CO limits of the rule are based on a block 24 hour average.

<u>Section 5.3</u> specifies that the emission limits in Section 5.1 are not applicable during periods of start-up or shut down provided each shutdown does not exceed 12 hours duration and each start-up does not exceed 96 hours duration with a provision allowing a startup duration of 192 hours in the event that curing of refractory is required following a modification of the unit.

<u>Section 5.5</u> requires the owner/operator of an affected unit utilizing ammonia injection as a NOx control technique to operate a Continuous Emissions Monitoring System (CEM) to monitor and record NOx concentration, CO2 of O2 concentrations, as well as the NOx emission rate. CEMs are required to be operated, maintained and calibrated pursuant to the requirements of 40 CFR 60.7 © and 60.13 and must also satisfy the Performance Specifications of 40 CFR 60 Appendix B and the Relative Accuracy Test Audit of Appendix F.

<u>Section 6.2</u> requires that monthly records of the type, quantity used and the higher heating value (HHV) of each fuel used and requires that the records be retained on site for at least five years and made available to the District, ARB and EPA upon request.

Section 6.3 requires that 1) the unit be source tested at least every twelve months, 2) that the emission measurement be made with the unit operating either at conditions representative of normal operations or at conditions specified in the Permit to Operate and 3) that no compliance determination be established within two hours after a period in which fuel flow to the unit is zero or is shut off for 30 minutes or longer.

Section 6.4 specifies the test methods for source testing.

The following current permit conditions assure compliance:

#### a. C-799-0-2: Facility-Wide Requirements

 Existing permit condition 9 ensures compliance with the recordkeeping requirements of District Rule 4352.

#### b. C-799-3-13: 28.5 MW Resource Recovery Facility Boiler/Generator

- Existing permit conditions 22, 55, 56, 71, 73, 74 and 75 assure compliance with the requirements of District Rule 4352.
- Permit conditions 23, 50, 51 and 52 were added to the permit to assure compliance with the requirements of District Rule 4352, replacing existing conditions 48 and 49 on the original permit.

#### F. District Rule 8041 - Carryout and Trackout

The purpose of this rule is to limit fugitive dust emissions from carryout and trackout.

This rule applies to all sites that are subject to Rules 8021 (Construction, Demolition, Excavation, Extraction, and other Earthmoving Activities), 8031 (Bulk Materials), and 8071 (Unpaved Vehicle and Equipment Traffic Areas) where carryout or trackout has occurred or may occur.

Section 5.0 requires that an owner/operator shall sufficiently prevent or cleanup carryout and trackout as specified in sections 5.1 through 5.8. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII. The use of blower devices, or dry rotary brushes or brooms, for removal of carryout and trackout on public roads is expressly prohibited. The removal of carryout and trackout from paved public roads does not exempt an owner/operator from obtaining state or local agency permits which may be required for the cleanup of mud and dirt on paved public roads.

Condition 31 of permit unit –0-2 ensures compliance.

#### G. District Rule 8051 - Open Areas

The purpose of this rule is to limit fugitive dust emissions from open areas.

This rule applies to any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused, or vacant for more than seven days.

<u>Section 5.0</u> requires that whenever open areas are disturbed or vehicles are used in open areas, the owner/operator shall implement one or a combination of control measures indicated in Table 8051-1 to comply with the conditions of a stabilized surface at all times and to limit VDE to 20% opacity. In addition

to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII.

Condition 32 of permit unit -0-2 ensures compliance.

#### H. District Rule 8061 - Paved and Unpaved Roads

The purpose of this rule is to limit fugitive dust emissions from paved and unpaved roads by implementing control measures and design criteria. This rule was addressed in the original permit but the applicable condition has been revised.

This rule applies to any new or existing public or private paved or unpaved road, road construction project, or road modification project.

Condition 33 of permit unit -0-2 which replaced condition 31 in the original permit ensures compliance.

#### I. District Rule 8071 - Unpaved Vehicle/Equipment Traffic Area

The purpose of this rule is to limit fugitive dust emissions from unpaved vehicle and equipment traffic areas by implementing control measures and design criteria.

This rule applies to any unpaved vehicle/equipment traffic area of 1.0 acre or larger.

Condition 34 of permit unit -0-2 ensures compliance.

# J. 40 CFR Part 60, Subpart Da - <u>Standards for Performance for Electric</u> <u>Utility Steam Generating Units for Which Construction is Commenced</u> After September 18, 1978

Permit unit -3-13 is a resource recovery (biomass-fired) electric utility steam generating unit subject to the requirements of 40 CFR 60 Subpart Da.

#### 60.42Da - Standard for Particulate Matter

Section §60.42(a) requires that particulate emissions from an affected unit not exceed 0.03 lb/MMBtu heat input and §60.42(a)(2) limits emissions to 1% of the potential combustion concentration (99% reduction) when combusting solid fuel. Pursuant to §60.48Da(a), compliance with the particulate matter

emission limitation under §60.42(a)(1) constitutes compliance with the percent reduction requirements under §60.42(a)(2).

Section §60.42(b) requires that the opacity of the stack gases not exceed 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27 percent opacity.

#### 60.43Da - Standard for Sulfur Dioxide

§60.43(d)(2) is applicable to this unit since the unit is a resource recovery unit, requiring that sulfur dioxide emissions not exceed 1.2 lb/MMBtu.

§60.43(g) specifies that compliance determination for the SO2 standard is based on a 30-day rolling average basis.

#### 60.44Da - Standard for Nitrogen Oxides

§60.44(a)(1) requires that NOx emissions from an affected unit not exceed 0.60 lb/MMBtu heat input for "other fuels" not specifically identified in that section.. §60.44(a)(2) limits emissions to 35% of the potential combustion concentration (65% reduction) when combusting solid fuel. Pursuant to §60.48Da(b), compliance with the NOx emission limitation under §60.44(a)(1) constitutes compliance with the percent reduction requirements under §60.44(a)(2).

§60.44(c) specifies the calculated emission standard required when multiple fuels are utilized.

#### 60.45Da - Standard for Mercury

§60.44Da applies to units for which construction or reconstruction commenced after January 30, 2004. Since permit unit -3-13 was constructed prior to that date, provisions of this section are not applicable.

#### 60.48Da - Compliance Provisions

§60.48(a) and (b), previously mentioned, allow compliance determination for particulate matter and NOx to be based only on the emission factor limitation in each of the respective standards, such determination constituting compliance with the percent reduction provisions in each standard.

§60.48(c) states that the emission standards for particulate matter and NOx apply at all times except during periods of startup, shutdown, or malfunction.

§60.48(d) allows operation of the unit with a malfunctioning flue gas desulfurization system during emergency conditions provided all operable portions of the system continue to be operated and the malfunctioning portions are brought back on-line as soon as repairs are completed.

§60.48 (e), (f) and (g) state that the compliance determination for sulfur dioxide emission limitations and the percentage reduction limitations under §60.43Da, and the nitrogen oxides emission limitation under §60.44Da, are based on a 30 day rolling arithmetic average, except for data obtained during startup, shutdown, malfunction (NOx only) or emergency conditions (SO2 only).

#### 60.49Da - Emissions Monitoring

§60.49(a)(1) requires installation, calibration, maintenance, and operation of a continuous opacity monitoring system and the recording of the output of the system.

§60.49(b) requires installation, calibration, maintenance, and operation of a continuous emissions monitoring system for sulfur dioxide and the recording of the output of the system. The system must monitor SO2 at both the inlet and outlet of the control device. In lieu of emissions monitoring at the inlet of the SO2 control device, an "as-fired" fuel monitoring system, meeting the requirements of Method 19, may be used to determine potential sulfur dioxide emissions.

§60.49(c) requires installation, calibration, maintenance, and operation of a continuous emissions monitoring system for nitrogen oxides and the recording of the output of the system.

§60.49(d) requires installation, calibration, maintenance, and operation of a continuous monitoring system for oxygen or carbon dioxide content of the flue gases and requires the recording of the output of the system.

§60.49(e) requires that all continuous monitoring devices specified under (b), (c), and (d) shall be continuously operated and the data collected during all periods of operation of the unit, including periods of startup, shutdown, malfunction and emergency except for breakdowns, repairs, and calibration periods of the monitoring systems.

§60.49(f) requires that all continuous emission monitoring data be collected for at least 18 hours in at least 22 out of 30 successive boiler operating days.

§60.49(i) and (j) specify the methods for monitoring system performance evaluations and calibration checks pursuant to §60.13(c) and §60.13(d).

§60.49(w) stipulates the required performance specifications and the methods for monitoring system performance evaluations and calibration checks pursuant to §60.13(c) and §60.13(d).

#### 60.50Da – Compliance Determination Procedures and Methods

This section describes the allowed procedures and method for compliance determination.

#### 60.51Da –Reporting and Recordkeeping Requirements

These sections require the submittal of reports to the APCO, establish the required content of the reporting, and require on-going maintenance of records.

The following current permit conditions assure compliance:

#### c. C-799-0-2: Facility-Wide Requirements

• Existing permit condition 9 ensures compliance with the recordkeeping requirements of 40 CFR 60Da.

#### d. C-799-3-13: 28.5 MW Resource Recovery Facility Boiler/Generator

- Existing permit conditions 45 and 53 were retained unchanged in the proposed new permit. Existing conditions 47, 49, 54, 55, 56, 58, 59, 63 and 74 were also retained unchanged but the CFR section reference was revised to reflect the revisions in 40 CFR 40Da.
- New permit conditions 46 and 50 were added to the permit.
- Existing condition 48 was deleted from the permit (replaced by new condition #50)

#### K. 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos

These regulations apply to demolition or renovation activity, as defined in 40 CFR 61.141. 40 CFR Section 61.150 of this Subpart was amended September 18, 2003, and condition 35 of C-799-0-2 assures compliance with the requirements.

#### L. 40 CFR Part 82, Subparts B and F, Stratospheric Ozone

These regulations apply to servicing motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC). Sections of this regulation were amended in 2004 and 2008, and conditions 27 and 28 of C-799-0-2 assure compliance with the requirements.

#### M. 40 CFR Part 64-CAM

#### §64.2 – Applicability

This section requires Compliance Assurance Monitoring (CAM) for units that meet the following three criteria:

- 1) the unit must have an emission limit for the pollutant;
- 2) the unit must have add-on controls for the pollutant; these are devices such as flue gas recirculation (FGR), baghouses, and catalytic oxidizers; and
- 3) the unit must have a pre-control potential to emit of greater than the major source thresholds.

#### §64.3 - Monitoring Design Criteria

This section specifies the design criteria for the CAM system. Paragraph (a) (*General criteria*) requires that the CAM system be designed to obtain data for one or more appropriate indicators of emission control system performance and requires the owner to establish appropriate ranges or designated conditions for the selected indicators such that operation within the ranges provides a reasonable assurance of ongoing compliance with emission limitations or standards for the anticipated range of operating conditions.

Paragraph (b) (*Performance criteria*) requires the owner or operator to establish and maintain the following:

- Specifications to ensure that representative data are collected
- Verification procedures for startup of new monitoring equipment
- Quality assurance and control practices to ensure continuing validity of data
- Data collection frequency and procedures

Paragraph (c) (*Evaluation factors*) requires the owner or operator to take into account site specific factors in the design of the CAM system.

Paragraph (d) (Special criteria for the use of continuous emission, opacity, or predictive monitoring systems) requires the owner or operator to use a continuous emission monitoring system (CEMS), continuous opacity monitoring system (COMS), or a predictive emission monitoring system

(PEMS) to satisfy CAM requirements, provided that these monitoring systems are required pursuant to other authority under the Clean Air Act or state or local law. This subsection also stipulates the following:

- The use of a CEMS, COMS, or PEMS that satisfies any of the following monitoring requirements shall be deemed to satisfy the general design criteria in paragraphs (a) and (b) of this section, provided that a COMS may be subject to the criteria for establishing indicator ranges under paragraph (a) of this section:
  - (i) Section 51.214 and appendix P of 40 CFR 51;
  - (ii) Section 60.13 and appendix B of 40 CFR 60;
  - (iii) Section 63.8 and any applicable performance specifications required pursuant to the applicable subpart of 40 CFR 63;
  - (iv) 40 CFR 75;
  - (v) Subpart H and appendix IX of 40 CFR 266; or
  - (vi) In the event that the monitoring system is not subject to any of the requirements listed above, comparable requirements and specifications established by the permitting authority.
  - The owner or operator shall design the monitoring system subject to this paragraph (d) to:
    - (i) Allow for reporting of exceedances (or excursions if applicable to a COMS used to assure compliance with a particulate matter standard), consistent with any period for reporting of exceedances in an underlying requirement. If an underlying requirement does not contain a provision for establishing an averaging period for the reporting of exceedances or excursions, the criteria used to develop an averaging period specified in the data collection procedures required under paragraph (b) of this section shall apply; and
    - (ii) Provide an indicator range consistent with paragraph (a) of this section for a COMS used to assure compliance with a particulate matter standard. If an opacity standard applies to the pollutant-specific emissions unit, such limit may be used as the appropriate indicator range unless the opacity limit fails to meet the criteria in paragraph (a) of this section after considering the type of control device and other site-specific factors applicable to the pollutant-specific emissions unit.

Permit unit S-1751-3 will implement the requirements of CAM for the fluidized bed combustor by monitoring NOx and SOx emissions utilizing a CEMS pursuant to §64.3, paragraph (d) and by monitoring PM10 emissions using a COMS as a surrogate with monitoring of the baghouse differential pressure to provide supplemental indication of PM10 emission control performance. The

monitoring design criteria of §64.3 are satisfied by proposed conditions 39, 40-42, 45 and 49.

#### §64.4 - Submittal Requirements

This section specifies submittal requirements for the owner or operator which ensure the CAM system will comply with the design criteria of §64.3.

#### §64.5 - Deadlines for Submittals

This section specifies required timing for submittals required under §64.4.

Large pollutant-specific emissions units (those with controlled emissions exceeding major source thresholds) are required to make the submittals as a part of the initial Title V permit application where the application has either not been filed or has not been deemed complete. Where the initial Title V permit has been issued without implementation of 40 CFR 64, the owner or operator must make the required submittals as a part of a subsequent application for any significant permit revision. If the required information is not submitted by either of these deadlines, it must be submitted as a part of the application for the Title V permit renewal.

For *other pollutant-specific emissions units*, the required submittal deadline is the application for Title V permit renewal.

#### §64.6 - Approval of monitoring

This section stipulates the following:

- A requirement that the permitting authority act to approve the proposed monitoring by confirming that the monitoring submitted complies with the requirements of §64.3
- An allowance for the permitting authority to condition the approval based on collecting additional data on the indicators to be monitored, including performance or compliance testing
- The minimum conditions that must be placed on the permit in the event that the proposed monitoring is approved by the permitting authority including a milestone schedule for completion of any conditional approval actions required by the owner or operator, such as installations, testing, or verification of operational status
- Actions required by the permitting authority in the event that the proposed monitoring is not approved

The CAM submittal requirements and stipulations for approval of such submittals pursuant to §64.4, §64.5, and §64.6 have been completed in conjunction with the application and review process for this renewal of the Title V permit.

#### §64.7 - Operation of Approved Monitoring

This section stipulates the following:

- Requirements that the owner or operator 1) commence the monitoring upon receipt of a Title V permit that includes such monitoring, 2) properly maintain the monitoring system, and 3) conduct all monitoring in a continuous mode with the exception of outage periods associated with monitor malfunction and repair and with quality assurance and control activities
- Actions required by the owner or operator in response to excursions or exceedances
- A requirement for the owner or operator to document any need for improved monitoring based upon either an identification of a failure of the monitoring system to identify an excursion or exceedance or upon the results of compliance or performance testing that identifies a need to modify the monitoring

The requirements of §64.7 (operation of approved monitoring) are satisfied by proposed conditions 43, 44, 46 and 50.

#### §64.8 - Quality Improvement Plan (QIP) Requirements

This section stipulates that the Administrator or the permitting authority may require that the facility develop and implement a QIP in the event of a determination of a need for improved monitoring pursuant to §64.7. §64.8 also identifies the minimum elements required in the QIP, and requires that the facility implement the QIP as expeditiously as possible, with implementation not exceeding 180 days after the date that the need for implementation was identified unless the permitting authority is notified.

The requirements of §64.8 (quality improvement plan) are satisfied by proposed condition 45.

#### §64.9 - Reporting and Recordkeeping Requirements

This section stipulates the minimum reporting and recordkeeping requirements for facilities subject to 40 CFR 64.

The requirements of §64.9 (reporting and recordkeeping) are satisfied by proposed conditions 44 and 47-52.

#### §64.10 - Savings Provisions

This section states that the purpose of 40 CFR 64 is to require, as a part of the issuance of a Title V permit, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of 40 CFR 64. In addition, §64.10 states that nothing in 40 CFR 64 shall excuse an owner or operator from any other

requirements of federal, state or local law or restrict or abrogate the authority of the Administrator or of the permitting authority.

#### **CAM REQUIREMENTS**

- a. <u>C-799-1-3</u>: <u>Fuel Storage and Feed system</u>
  Unit S-799-1-3 emits only PM10 and has a PM10 limit; however it does not have add-on controls and therefore CAM is not applicable to this unit.
- b. <u>C-799-2-3: Ash Handling and Disposal System</u>
  Unit -799-2-3 emits only PM10 and has add-on controls. However, the unit does not have an emission limitation. Therefore CAM is not applicable to this unit.
- c. C-799-3-13: 28.5 MW Resource Recovery Facility Boiler/Generator Unit C-799-3-13 is not subject to CAM for CO and VOC since it is not equipped with any add-on controls for these pollutants. However, Unit S-1751-3 is subject to CAM for NO<sub>x</sub>, SO<sub>2</sub> and PM10 since there is a limit for each of these pollutants, the unit is equipped with add-on control devices for each pollutant (ammonia injection system, limestone injection system, and fabric filter respectively), and the unit has a pre-control potential to emit of greater than the major source thresholds for each of these pollutants as shown below.

#### NOx:

The uncontrolled NOx emission factor for this unit is assumed to be 0.49 lb-NOx/MMBtu as taken from AP-42, Table 1.6-2 for dry wood-fired boilers. The maximum operating schedule for this unit is 8,760 hours/year.

8,760 hr/year x 0.49 lb NOx/MMBtu x 460 MMBtu/hr = 1.97 x 10<sup>6</sup> lbs NOx/year

Since this exceeds the NOx major source threshold of 50,000 lb/year, CAM is applicable to this unit for NOx.

#### SOx:

The controlled SOx emission factor for this unit is 1.2 lb-SOx/MMBtu. Assuming a 50% control efficiency provided by the limestone desulfurization operation in the fluidized bed, the uncontrolled emission factor will be 1.2/(1-0.50) = 2.4 lb/MMBtu. The maximum operating schedule for this unit is 8,760 hours/year.

8,760 hr/year x 2.4 lb SOx/MMBtu x 460 MMBtu/hr = 9.67 x 10<sup>6</sup> lbs SOx/year

Since this exceeds the SOx major source threshold of 140,000 lb/year, CAM is applicable to this unit for SOx.

#### PM10:

The controlled PM10 emission factor for this unit is 0.03 lb-PM10/MMBtu . Assuming a 99% control efficiency provided by the fabric filter, the uncontrolled emission factor will be 0.03/(1-.99) = 3.0 lb/hr. The maximum operating schedule for this unit is 8,760 hours/year.

8,760 hr/year x 3.0 lb-PM10/MMBtu x 460 MMBtu/hr = 12.1 x 10<sup>6</sup> lbs PM10/year

Since this exceeds the PM10 major source threshold of 140,000 lb/year, CAM is applicable to this unit for PM10.

CAM requirements are satisfied for this unit by utilizing a CEMS for NOx and SOx monitoring. For PM10, a combination of a Continuous Opacity Monitoring System (COMS) for visible emissions monitoring and a differential pressure monitor to monitor the differential pressure across the baghouse has been implemented.

- Existing conditions 46, 55, 56, 58, 59, 60, 63 and 77 assure compliance with 40 CFR 64 (the reference to 40 CFR 64 was added).
- New conditions 64 through 70 were added to the proposed permit to assure compliance with the PM10 monitoring requirements of 40 CFR 64.

#### C-799-4-2: Fuel Storage and Feed system

Unit S-799-4-2 emits only PM10 (cooling tower). The unit does not have an emission limit nor add-on controls. Therefore, CAM is not applicable to this unit.

#### IX. PERMIT SHIELD

A permit shield legally protects a facility from enforcement of the shielded regulations when a source is in compliance with the terms and conditions of the Title V permit. Compliance with the terms and conditions of the Operating Permit is considered compliance with all applicable requirements upon which those conditions are based, including those that have been subsumed.

#### A. Requirements Addressed by Model General Permit Templates

The applicant does not propose to use any model general permit templates.

#### B. Requirements not Addressed by Model General Permit Templates

The applicant is not requesting any permit shields.

### C. Obsolete Permit Shields From Existing Permit Requirements

The original permits did not contain any permit shields.

#### X. PERMIT CONDITIONS

See Attachment A - Renewed Title V Operating Permit.

#### XII. ATTACHMENTS

- A. Renewed Title V Operating Permit
- B. Previous Title V Operating Permit
- C. Detailed Facility List
- D. EPA Comments

## ATTACHMENT A

Renewed Title V Operating Permits





# **Permit to Operate**

FACILITY: C-799

**EXPIRATION DATE: 05/31/2012** 

**LEGAL OWNER OR OPERATOR:** 

MADERA POWER, LLC

**MAILING ADDRESS:** 

**PO BOX 305** 

FIREBAUGH, CA 93622

**FACILITY LOCATION:** 

11427 FIREBAUGH BLVD

P O BOX 305

FIREBAUGH, CA 93622

**FACILITY DESCRIPTION:** 

**POWER GENERATION** 

The Facility's Permit to Operate may include Facility-wide Requirements as well as requirements that apply to specific permit units.

This Permit to Operate remains valid through the permit expiration date listed above, subject to payment of annual permit fees and compliance with permit conditions and all applicable local, state, and federal regulations. This permit is valid only at the location specified above, and becomes void upon any transfer of ownership or location. Any modification of the equipment or operation, as defined in District Rule 2201, will require prior District approval. This permit shall be posted as prescribed in District Rule 2010.

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**FACILITY:** C-799-0-2 EXPIRATION DATE: 05/31/2012

### **FACILITY-WIDE REQUIREMENTS**

- The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1 and Madera County Rule 113] Federally Enforceable Through Title V Permit
- The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0 and Madera County Rule 113] Federally Enforceable Through Title V Permit
- The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit
- Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (3/21/02). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
- The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.8.1 and 9.12.1] Federally Enforceable Through Title V Permit
- A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit
- Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit
- The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
- The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

#### FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate. Any amendments to these Facility-wide Requirements that affect specific Permit Units may constitute modification of those Permit Units.

Facility Name: MADERA POWER, LLC

Location: 11427 FIREBAUGH BLVD,P O BOX 305,FIREBAUGH, CA 93622 C-799-0-2 Nov 4 2009 8-41AM - KEASTMD

- 10. The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520, 9.5.1] Federally Enforceable Through Title V Permit
- 11. Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with section 10.0 of District Rule 2520(6/21/01) [District Rules 2520, 9.5.2 and 1100, 7.0] Federally Enforceable Through Title V Permit
- 12. If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520, 9.7] Federally Enforceable Through Title V Permit
- 13. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520, 9.8.2] Federally Enforceable Through Title V Permit
- 14. The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520, 9.8.3] Federally Enforceable Through Title V Permit
- 15. The permit does not convey any property rights of any sort, or any exclusive privilege, [District Rule 2520, 9.8.4] Federally Enforceable Through Title V Permit
- 16. The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520, 9.8.5] Federally Enforceable Through Title V Permit
- 17. The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520, 9.9] Federally Enforceable Through Title V Permit
- 18. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit
- 19. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit
- 20. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520, 9.13.2.3] Federally Enforceable Through Title V Permit
- 21. Upon the request of an authorized representative of the District, a permittee shall collect, have collected, or allow the APCO to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [District Rule 2520, 9.13.2.4] Federally Enforceable Through Title V Permit

- 22. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (11/15/01). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
- 23. No person shall manufacture, blend, repackage, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in the Table of Standards of District Rule 4601 (10/31/01) for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit
- 24. All VOC-containing materials subject to Rule 4601 (10/31/01) shall be stored in closed containers when not in use. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit
- 25. The permittee shall comply with all the Labeling and Test Method requirements outlined in Rule 4601 sections 6.1 and 6.3 (10/31/01). [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit
- 26. With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520, 9.13.1 and 10.0] Federally Enforceable Through Title V Permit
- 27. If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit
- 28. If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. [40 CFR Part 82, Subpart B] Federally Enforceable Through Title V Permit
- 29. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in SJVUAPCD District Rule 8021, unless specifically exempted under section 4.0 of Rule 8021 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8021 and Rule 8011] Federally Enforceable Through Title V Permit
- 30. Outdoor handling and storage of any bulk material which emits dust shall comply with the requirements of SJVUAPCD Rule 8031, unless specifically exempted under section 4.0 of Rule 8031 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8031 and Rule 8011] Federally Enforceable Through Title V Permit
- 31. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8041 and Rule 8011] Federally Enforceable Through Title V Permit
- 32. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8051 and Rule 8011] Federally Enforceable Through Title V Permit
- 33. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8061 and Rule 8011] Federally Enforceable Through Title V Permit
- 34. Any unpaved vehicle/equipment area that anticipates more than 75 vehicle trips per day shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 100 vehicle trips per day shall comply with the requirements of Section 5.1.2 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (11/15/01) or Rule 8011 (11/15/01). [] [District Rule 8071 and Rule 8011] Federally Enforceable Through Title V Permit

- 35. Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit
- 36. The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520, 9.16] Federally Enforceable Through Title V Permit
- 37. The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520, 5.2] Federally Enforceable Through Title V Permit
- 38. When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permit shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit
- 39. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), Rule 111 (Kern, Tulare, Kings), and Rule 202 (Fresno, Kern, Tulare, Kings, Madera, Stanislaus, Merced, San Joaquin). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
- 40. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (11/15/01); 4601, sections 5.1, 5.2, 5.3, 5.8 and 8.0 (10/31/01); 8021 (11/15/01); 8031 (11/15/01); 8061 (11/15/01); A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
- 41. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- 42. When applicable to 40 CFR Part 68, a subject facility shall submit to the proper authority a Risk Management Plan when mandated by the regulations. [40 CFR Part 68] Federally Enforceable Through Title V Permit
- 43. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report begin January 1 of every year, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days after the end of the reporting period. [District Rule 2520] Federally Enforceable Through Title V Permit

C-799-0-2 : Nov 4 2009 8:41AM - KEASTME

**PERMIT UNIT:** C-799-1-3

**EXPIRATION DATE: 05/31/2012** 

#### **EQUIPMENT DESCRIPTION:**

FUEL STORAGE AND FEED SYSTEM CONSISTING OF: TRUCK WEIGH SCALE, FUEL STORAGE BLDG., TRUCK TIPPER, 2 RECLAIM CONVEYORS (RC1A, RC2A), FUEL RECLAIM, COLLECTION, AND TRANSFER CONVEYORS.

### PERMIT UNIT REQUIREMENTS

- 1. Fugitive dust emissions shall be controlled by water sprays, dust suppressants, enclosures, fencing, or other wind barriers. [District Rule 4102]
- 2. Mobile equipment, except their propulsion motors, shall be subject to all applicable conditions of this permit. [District Rule 4102]
- 3. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation E = 3.59xP^0.62; P is less than or equal to 30 tons per hour, or E = 17.31xP^0.16; P is greater than 30 tons per hour. [District Rule 4202] Federally Enforceable Through Title V Permit
- 4. Visible emissions shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 5. Enclosure shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 6. Records of visible emission checks, emission control system 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, 9.3.2] Federally Enforceable Through Title V Permit

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

Facility Name: MADERA POWER, LLC
Location: 11427 FIREBAUGH BLVD,P O BOX 305,FIREBAUGH, CA 93622
C-799-1-3: Nov 4 2009 8 41AM - KEASTMD

**PERMIT UNIT:** C-799-2-3

EXPIRATION DATE: 05/31/2012

#### **EQUIPMENT DESCRIPTION:**

ASH HANDLING AND DISPOSAL SYSTEM CONSISTING OF PNEUMATIC PIPING, ASH SILO CYCLONE, ASH SILO BAGHOUSE, ASH SILO, ASH BLOWER, ASH ROTARY VALVE, AND ASH CONDITIONER/PUGMILL.

## PERMIT UNIT REQUIREMENTS

- No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- 2. The storage, handling, and disposal of ash shall be controlled by closed systems, enclosures, covers water sprays, or wind barriers. [District Rule 4102]
- Mobile equipment, except their propulsion motors, used in the handling of ash shall be subject to all applicable conditions of this permit. [District Rule 4102]
- The ash shall be mixed with water to form a wet cake suitable for hauling prior to being loaded into trucks. [District 4. Rule 4102]
- Any contractor or other person who handles or disposes of ash from this facility shall be subject to all applicable conditions of this permit. [District Rule 4102]
- Particulate matter emissions from any combustion source shall not exceed 0.1 grains/dscf. [District Rule 4201 and District Rule 4202] Federally Enforceable Through Title V Permit
- Enclosure and dust collection system shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- Visible emissions shall be inspected quarterly during operation. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 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, 9.3.2] Federally Enforceable Through Title V Permit
- 10. Records of visible emission checks, 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, 9.4.1] Federally Enforceable Through Title V Permit

11427 FIREBAUGH BLVD,P O BOX 305,FIREBAUGH, CA 93622

Facility Name: MADERA POWER, LLC

**PERMIT UNIT:** C-799-3-13

**EXPIRATION DATE: 05/31/2012** 

#### **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

- 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]
- 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
- The atmospheric fluidized bed (AFB) boiler shall not operate in excess of 348 days per calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
- 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] Federally Enforceable Through Title V Permit
- Particulate matter concentrations shall not exceed 0.024 grains/dscf. [District NSR Rule and District Rules 4201 and 4301, 5.1] Federally Enforceable Through Title V Permit
- 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
- 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 NSR Rule] Federally Enforceable Through Title V Permit
- 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 NSR Rule] Federally Enforceable Through Title V Permit
- 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 NSR Rule] Federally Enforceable Through Title V Permit
- 10. Total PM10 shall not exceed 11.2 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
- 11. 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, 5.2] Federally Enforceable Through Title V Permit
- 12. Annual emissions from this unit shall not exceed any of the following limits: 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 NSR Rule] Federally Enforceable Through Title V Permit
- 13. Ammonia emissions shall not exceed 100 parts per million. [District NSR Rule] 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.

Facility Name: MADERA POWER, LLC

Location: 11427 FIREBAUGH BLVD,P O BOX 305,FIREBAUGH, CA 93622 C-799-3-13 Nov 4 2009 8 42AM - KEASTMD

- 14. 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 NSR Rule] Federally Enforceable Through Title V Permit
- 15. 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 NSR Rule] Federally Enforceable Through Title V Permit
- 16. 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 NSR Rule] Federally Enforceable Through Title V Permit
- 17. 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]
- 18. All stack emissions shall be offset with creditable biomass on an annual basis. [District NSR Rule] Federally Enforceable Through Title V Permit
- 19. Emission offset credits shall be calculated using the following formula:  $EC(y) = Summation[1/DF(i) \times T(i) \times EF(i)]$ , where EC(y) = the amount of offset credit available for the year, i = the ith load of biomass combusted for the offset year, DF(i) = the distance factor for the ith load of biomass, T(i) = the number of tons of biomass in the ith load, and EF(i) = the emission factor for the type of biomass in the ith load. [District NSR Rule] Federally Enforceable Through Title V Permit
- 20. The biomass offset Distance Factor shall be 1,2 for sources within a 15-mile radius and 2.0 for sources outside the 15mile radius. [District NSR Rule] Federally Enforceable Through Title V Permit
- 21. 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 NSR Rule] Federally Enforceable Through Title V Permit
- 22. 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 NSR Rule and District Rule 4352, 6.2.1] Federally Enforceable Through Title V Permit
- 23. 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, 6.2.1] Federally Enforceable Through Title V Permit
- 24. 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 NSR Rule] Federally Enforceable Through Title V Permit
- 25. Amount of paper used for fuel shall not exceed 50% of the total fuel consumption. [District Rule 4102]
- 26. No fuel shall be chemically treated, painted, or oil stained. [District Rule 4102]
- 27. Fuel feed rate shall not exceed a maximum of 460 MMBtu/hr. [District NSR Rule] Federally Enforceable Through Title V Permit

- 28. Gross power production shall not exceed 28.5 Megawatts. [District NSR Rule] Federally Enforceable Through Title V Permit
- 29. Steam production shall not exceed 6,700,000 pounds per day at 900 °F and 850 psig. [District NSR Rule] Federally Enforceable Through Title V Permit
- 30. 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]
- 31. 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]
- 32. The District shall be contacted and notified of the proposed date of any fuel testing. [District NSR Rule] Federally Enforceable Through Title V Permit
- 33. 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 NSR Rule] Federally Enforceable Through Title V Permit
- 34. 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]
- 35. 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]
- 36. 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]
- 37. Records shall be maintained of the number of days of operation since "restart" occurred. [District Rule 4102]
- 38. The baghouse shall consist of 2,310 bags with a rating of 226,000 acfm. [District NSR Rule] Federally Enforceable Through Title V Permit
- 39. All modules of the baghouse shall be equipped with a manometer which shall be calibrated on an annual or more frequent basis. [District NSR Rule] Federally Enforceable Through Title V Permit
- 40. The multiclone shall consist of a 1,500 hp motor with 200-11.5 inch collector tubes. [District NSR Rule] Federally Enforceable Through Title V Permit
- 41. The reagent injection system shall consist of a 2,540 cubic foot silo. [District NSR Rule] Federally Enforceable Through Title V Permit
- 42. The reagent bin for the dry additive injection system shall be under negative pressure whenever reagent is being loaded into the bin. [District NSR Rule] Federally Enforceable Through Title V Permit
- 43. The ammonia injection system includes 36 nozzles. [District NSR Rule] Federally Enforceable Through Title V Permit
- 44. The air flow rate and ammonia injection rate shall be monitored continuously and recorded. [District NSR Rule] Federally Enforceable Through Title V Permit
- 45. 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
- 46. 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
- 47. 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

- 48. 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
- 49. 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
- 50. 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 NOx at 3% O2 or 400 ppmv CO at 3% O2. [40 CFR 60.44Da(a) and District Rule 4352, 5.1 & 5.2] Federally Enforceable Through Title V Permit
- 51. 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, 5.3.1] Federally Enforceable Through Title V Permit
- 52. 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, 5.3.2] Federally Enforceable Through Title V Permit
- 53. When two or more fuels are combusted simultaneously, NOx emissions shall not exceed the prorated emissions calculated using the following formula: En = [86w + 260z]/100, where: En 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
- 54. Applicable emissions standards of 40 CFR part 60 for PM, SO2, and NOx apply at all times except during the startup, shutdown, or malfunction. [40 CFR 60.48Da(c)] Federally Enforceable Through Title V Permit
- 55. 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 NSR Rule, District Rules 1080, 6.0 and 4352, 5.5, 40 CFR 49Da(w) and 40 CFR 64.3] Federally Enforceable Through Title V Permit
- 56. The continuous emissions monitoring systems (CEMs) for NOx, 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
- 57. Hourly emissions for NOx (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
- 58. 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
- 59. 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
- 60. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2 and 40 CFR 64.9] Federally Enforceable Through Title V Permit
- 61. A violation of NOx emission standards indicated by the NOx CEM shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

- 62. 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, 10.0] Federally Enforceable Through Title V Permit
- 63. 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, 8.0] Federally Enforceable Through Title V Permit
- 64. 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
- 65. 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
- 66. 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
- 67. 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
- 68. 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
- 69. 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
- 70. 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
- Source testing for PM10, SOx, NOx, CO, VOC, and ammonia slip shall be performed at least once every 12 calendar months. [District NSR Rule, District Rule 1081, and District Rule 4352, 6.3.1] Federally Enforceable Through Title V Permit
- 72. 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
- 73. 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, 6.4.1] Federally Enforceable Through Title V Permit
- 74. Source testing shall be conducted using the following methods: EPA Method 7E (or CARB Method 100) for NOx (ppmv); EPA Method 19 for NOx (lb/MMBtu heat input); EPA Method 5 for particulate matter (PM); EPA Method 19 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, 6.4.1 and 40 CFR 60.50Da] Federally Enforceable Through Title V Permit
- 75. 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, 6.3.2 and 6.3.3] Federally Enforceable Through Title V Permit

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

- 76. 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
- 77. 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, 7.3.1, 40 CFR 60.7 (b) and 40 CFR 64.9] Federally Enforceable Through Title V Permit
- 78. 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, 9.3.2] Federally Enforceable Through Title V Permit
- 79. Enclosure and dust collection system shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 80. 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, 9.3.2] Federally Enforceable Through Title V Permit
- 81. 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, 9.3.2] Federally Enforceable Through Title V Permit

**PERMIT UNIT:** C-799-4-2

**EXPIRATION DATE:** 05/31/2012

### **EQUIPMENT DESCRIPTION:**

STEAM AND POWER SYSTEM CONSISTING OF: FORCED CIRCULATION BOILER, TURBINE, BOILER FEEDWATER PUMPS, COOLING TOWER AND FANS, CONDENSATE PUMPS, AIR COMPRESSOR SYSTEM, AND OTHER ASSOCIATED EQUIPMENT.

## PERMIT UNIT REQUIREMENTS

- 1. See facility wide permit for requirements applicable to this permit unit. [District Rule 2080] Federally Enforceable Through Title V Permit
- 2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- 3. No compound containing hexavalent chromium shall be added to the cooling tower. [District Rule 7012] Federally Enforceable Through Title V Permit
- 4. Records shall be maintained which show the composition of all substances added to the cooling tower. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit

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

Facility Name: MADERA POWER, LLC Location: 11427 FIREBAUGH BLVD,P O BOX 305,FIREBAUGH, CA 93622

## ATTACHMENT B

Previous Title V Operating Permits

**FACILITY:** C-799-0-1 **EXPIRATION DATE:** 05/31/2007

## **FACILITY-WIDE REQUIREMENTS**

- 1. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1 and Madera County Rule 113] Federally Enforceable Through Title V Permit
- 2. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0 and Madera County Rule 113] Federally Enforceable Through Title V Permit
- 3. The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit
- 4. Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (3/21/02). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
- 5. The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.9.1 and 9.13.1] Federally Enforceable Through Title V Permit
- 6. A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District [District Rule 2031] Federally Enforceable Through Title V Permit
- 7. Every application for a permit required under Rule 2010 (12/17/92) (Permits Required) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit
- 8. The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
- 9. The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate. Any amendments to these Facility-wide Requirements that affect specific Permit Units may constitute modification of those Permit Units.

Facility Name: MADERA POWER, LLC

Location: 11427 FIREBAUGH BLVD,P O BOX 305,FIREBAUGH, CA 93622 C-799-0-1. Aug 10 2009 3:06PM—ROBERTSD

- 10. The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520, 9.5.1] Federally Enforceable Through Title V Permit
- 11. Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with section 10.0 of District Rule 2520(6/21/01) [District Rules 2520, 9.5.2 and 1100, 7.0] Federally Enforceable Through Title V Permit
- 12. If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520, 9.7] Federally Enforceable Through Title V Permit
- 13. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520, 9.8.2] Federally Enforceable Through Title V Permit
- 14. The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520, 9.8.3] Federally Enforceable Through Title V Permit
- 15. The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520, 9.8.4] Federally Enforceable Through Title V Permit
- 16. The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520, 9.8.5] Federally Enforceable Through Title V Permit
- 17. The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520, 9.9] Federally Enforceable Through Title V Permit
- 18. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520, 9.13.2.1] Federally Enforceable Through Title V Permit
- 19. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit
- 20. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520, 9.13.2.3] Federally Enforceable Through Title V Permit
- 21. Upon the request of an authorized representative of the District, a permittee shall collect, have collected, or allow the APCO to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [District Rule 2520, 9.13.2.4] Federally Enforceable Through Title V Permit
- 22. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (11/15/01). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [40 CFR 60.42a(b) and District Rule 4101] Federally Enforceable Through Title V Permit

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

- 23. No person shall manufacture, blend, repackage, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in the Table of Standards of District Rule 4601 (10/31/01) for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit
- 24. All VOC-containing materials subject to Rule 4601 (10/31/01) shall be stored in closed containers when not in use. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit
- 25. The permittee shall comply with all the Labeling and Test Method requirements outlined in Rule 4601 sections 6.1 and 6.3 (10/31/01). [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit
- 26. With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520, 9.13.1 and 10.0] Federally Enforceable Through Title V Permit
- 27. If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit
- 28. If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart F. [40 CFR Part 82, Subpart F] Federally Enforceable Through Title V Permit
- 29. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in SJVUAPCD District Rule 8021, unless specifically exempted under section 4.0 of Rule 8021 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8021 and Rule 8011] Federally Enforceable Through Title V Permit
- 30. Outdoor handling and storage of any bulk material which emits dust shall comply with the requirements of SJVUAPCD Rule 8031, unless specifically exempted under section 4.0 of Rule 8031 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8031 and Rule 8011] Federally Enforceable Through Title V Permit
- 31. Any paved road or unpaved roads with more than 75 vehicle trips per day shall comply with the administrative requirements of SJVUAPCD Rule 8061, unless specifically exempted under section 4.0 of Rule 8061 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8061 and Rule 8011] Federally Enforceable Through Title V Permit
- 32. Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit
- 33. The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520, 9.16] Federally Enforceable Through Title V Permit
- 34. The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520, 5.2] Federally Enforceable Through Title V Permit
- 35. When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permit shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit
- 36. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), Rule 111 (Kern, Tulare, Kings), and Rule 202 (Fresno, Kern, Tulare, Kings, Madera, Stanislaus, Merced, San Joaquin). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

- 37. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (11/15/01); 4601, sections 5.1, 5.2, 5.3, 5.8 and 8.0 (10/31/01); 8021 (11/15/01); 8031 (11/15/01); 8061 (11/15/01); A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
- 38. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- 39. When applicable to 40 CFR Part 68, a subject facility shall submit to the proper authority a Risk Management Plan when mandated by the regulations. [40 CFR Part 68] Federally Enforceable Through Title V Permit
- 40. On December 31, 2002, the initial Title V permit was issued. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report are based upon this initial permit issuance date, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days after the end of the reporting period. [District Rule 2520] Federally Enforceable Through Title V Permit

**PERMIT UNIT:** C-799-1-2

**EXPIRATION DATE: 05/31/2007** 

#### **EQUIPMENT DESCRIPTION:**

FUEL STORAGE AND FEED SYSTEM CONSISTING OF: TRUCK WEIGH SCALE, FUEL STORAGE BLDG., TRUCK TIPPER, 2 RECLAIM CONVEYORS (RC1A, RC2A), FUEL RECLAIM, COLLECTION, AND TRANSFER CONVEYORS.

### PERMIT UNIT REQUIREMENTS

- 1. Fugitive dust emissions shall be controlled by water sprays, dust suppressants, enclosures, fencing, or other wind barriers. [District Rule 4102]
- 2. Mobile equipment, except their propulsion motors, shall be subject to all applicable conditions of this permit. [District Rule 4102]
- 3. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation E = 3.59xP^0.62; P is less than or equal to 30 tons per hour, or E = 17.31xP^0.16; P is greater than 30 tons per hour. [District Rule 4202] Federally Enforceable Through Title V Permit
- 4. Visible emissions shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 5. Enclosure shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 6. Records of visible emission checks, emission control system 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, 9.3.2] Federally Enforceable Through Title V Permit

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

**PERMIT UNIT:** C-799-2-2

**EXPIRATION DATE: 05/31/2007** 

#### **EQUIPMENT DESCRIPTION:**

ASH HANDLING AND DISPOSAL SYSTEM CONSISTING OF PNEUMATIC PIPING, ASH SILO CYCLONE, ASH SILO BAGHOUSE, ASH SILO, ASH BLOWER, ASH ROTARY VALVE, AND ASH CONDITIONER/PUGMILL.

### PERMIT UNIT REQUIREMENTS

- 1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- 2. The storage, handling, and disposal of ash shall be controlled by closed systems, enclosures, covers water sprays, or wind barriers. [District Rule 4102]
- 3. Mobile equipment, except their propulsion motors, used in the handling of ash shall be subject to all applicable conditions of this permit. [District Rule 4102]
- 4. The ash shall be mixed with water to form a wet cake suitable for hauling prior to being loaded into trucks. [District Rule 4102]
- 5. Any contractor or other person who handles or disposes of ash from this facility shall be subject to all applicable conditions of this permit. [District Rule 4102]
- 6. Particulate matter emissions from any combustion source shall not exceed 0.1 grains/dscf. [District Rule 4201 and District Rule 4202] Federally Enforceable Through Title V Permit
- 7. Enclosure and dust collection system shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 8. Visible emissions shall be inspected quarterly during operation. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 9. 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, 9.3.2] Federally Enforceable Through Title V Permit
- 10. Records of visible emission checks, 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, 9.3.2] Federally Enforceable Through Title V Permit

**PERMIT UNIT:** C-799-3-10

EXPIRATION DATE: 05/31/2007

#### **EQUIPMENT DESCRIPTION:**

28.5 MW RESOURCE RECOVERY FACILITY BOILER/GENERATOR INCLUDING: 460 MMBTU/HR ATMOSPHERIC FLUIDIZED BED BOILER, 1,750 HP DRAFT FAN, PROPANE GAS-FIRED START-UP PREHEATER, COMBUSTION AIR CONTROL DAMPERS, WITH CONTINUOUS EMISSION MONITORS

## PERMIT UNIT REQUIREMENTS

- 1. 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]
- 2. 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
- 3. The atmospheric fluidized bed (AFB) boiler shall not operate in excess of 348 days per calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
- 4. 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] Federally Enforceable Through Title V Permit
- 5. Particulate matter concentrations shall not exceed 0.024 grains/dscf. [District NSR Rule and District Rules 4201 and 4301, 5.1] Federally Enforceable Through Title V Permit
- 6. 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
- 7. 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 NSR Rule] Federally Enforceable Through Title V Permit
- 8. 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 NSR Rule] Federally Enforceable Through Title V Permit
- 9. 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 NSR Rule] Federally Enforceable Through Title V Permit
- 10. Total PM10 shall not exceed 11.2 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
- 11. 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, 5.2] Federally Enforceable Through Title V Permit
- 12. Annual emissions from this unit shall not exceed any of the following limits: 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 NSR Rule] Federally Enforceable Through Title V Permit
- 13. Ammonia emissions shall not exceed 100 parts per million. [District NSR Rule] Federally Enforceable Through Title V Permit

- 14. 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 NSR Rule] Federally Enforceable Through Title V Permit
- 15. 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 NSR Rule] Federally Enforceable Through Title V Permit
- 16. 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 NSR Rule] Federally Enforceable Through Title V Permit
- 17. 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]
- 18. All stack emissions shall be offset with creditable biomass on an annual basis. [District NSR Rule] Federally Enforceable Through Title V Permit
- 19. Emission offset credits shall be calculated using the following formula:  $EC(y) = Summation[1/DF(i) \times T(i) \times EF(i)]$ , where EC(y) = the amount of offset credit available for the year, i = the ith load of biomass combusted for the offset year, DF(i) = the distance factor for the ith load of biomass, T(i) = the number of tons of biomass in the ith load, and EF(i) = the emission factor for the type of biomass in the ith load. [District NSR Rule] Federally Enforceable Through Title V Permit
- 20. The biomass offset Distance Factor shall be 1.2 for sources within a 15-mile radius and 2.0 for sources outside the 15mile radius. [District NSR Rule] Federally Enforceable Through Title V Permit
- 21. 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 NSR Rule] Federally Enforceable Through Title V Permit
- 22. 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 NSR Rule and District Rule 4352, 6.2.1] Federally Enforceable Through Title V Permit
- 23. 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. [District NSR Rule] Federally Enforceable Through Title V Permit
- 24. Amount of paper used for fuel shall not exceed 50% of the total fuel consumption. [District Rule 4102]
- 25. No fuel shall be chemically treated, painted, or oil stained. [District Rule 4102]
- 26. Fuel feed rate shall not exceed a maximum of 460 MMBtu/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
- 27. Gross power production shall not exceed 28.5 Megawatts. [District NSR Rule] Federally Enforceable Through Title V Permit
- 28. Steam production shall not exceed 6,700,000 pounds per day at 900 °F and 850 psig. [District NSR Rule] Federally Enforceable Through Title V Permit

- 29. 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]
- 30. 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]
- 31. The District shall be contacted and notified of the proposed date of any fuel testing. [District NSR Rule] Federally Enforceable Through Title V Permit
- 32. 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 NSR Rule] Federally Enforceable Through Title V Permit
- 33. 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]
- 34. 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]
- 35. 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]
- 36. Records shall be maintained of the number of days of operation since "restart" occurred. [District Rule 4102]
- 37. The baghouse shall consist of 2,310 bags with a rating of 226,000 acfm. [District NSR Rule] Federally Enforceable Through Title V Permit
- 38. All modules of the baghouse shall be equipped with a manometer which shall be calibrated on an annual or more frequent basis. [District NSR Rule] Federally Enforceable Through Title V Permit
- 39. The multiclone shall consist of a 1,500 hp motor with 200-11.5 inch collector tubes. [District NSR Rule] Federally Enforceable Through Title V Permit
- 40. The reagent injection system shall consist of a 2,540 cubic foot silo. [District NSR Rule] Federally Enforceable Through Title V Permit
- 41. The reagent bin for the dry additive injection system shall be under negative pressure whenever reagent is being loaded into the bin. [District NSR Rule] Federally Enforceable Through Title V Permit
- 42. The ammonia injection system includes 36 nozzles. [District NSR Rule] Federally Enforceable Through Title V Permit
- 43. The air flow rate and ammonia injection rate shall be monitored continuously and recorded. [District NSR Rule] Federally Enforceable Through Title V Permit
- 44. Particulate matter emissions in the exhaust gas from this unit shall not exceed 0.03 lb/MMBtu heat input. [40 CFR 60.42a(a)(1) and (2)] Federally Enforceable Through Title V Permit
- 45. Sulfur dioxide (SO2) emissions from the biomass unit shall not exceed 1.20 lb/MMBtu heat input. [40 CFR 60.43a(d)] Federally Enforceable Through Title V Permit
- 46. 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
- 47. 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 60.46a(g)] Federally Enforceable Through Title V Permit
- 48. NOx emissions from the stack exhaust gas shall not exceed 0.20 lb/MMBtu (heat input) based on 24-hour averaging period. [District Rule 4352, 5.1 & 5.2, and 40 CFR 60.44a(a)] Federally Enforceable Through Title V Permit

- 49. CO emissions from the stack exhaust gas shall not exceed 400 ppmv at 3% O2, or 310 ppmv at 7% O2, or 310 ppmv at 12% CO2 based on 24-hour averaging period. [District Rule 4352, 5.3] Federally Enforceable Through Title V Permit
- 50. When two or more fuels are combusted simultaneously, NOx emissions shall not exceed the prorated emissions calculated using the following formula: En = [86w + 260z]/100, where: En 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 60.44a(c)] Federally Enforceable Through Title V Permit
- 51. Applicable emissions standards of 40 CFR part 60 for PM, SO2, and NOx apply at all times except during the startup, shutdown, or malfunction. [40 CFR 60.46a(c)] Federally Enforceable Through Title V Permit
- 52. 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 NSR Rule and District Rules 1080, 6.0 and 4352, 5.5] Federally Enforceable Through Title V Permit
- 53. The continuous emissions monitoring systems (CEMs) for NOx, 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 60.47a(a), (b), (c), (d), and (e) and District Rule 4352] Federally Enforceable Through Title V Permit
- 54. Hourly emissions for NOx (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
- 55. 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 60.47a(f)] Federally Enforceable Through Title V Permit
- 56. 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 60.47a(i) and (j)] Federally Enforceable Through Title V Permit
- 57. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit
- 58. A violation of NOx emission standards indicated by the NOx CEM shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit
- 59. 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, 10.0] Federally Enforceable Through Title V Permit
- 60. 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 60.49a and District Rule 1080, 8.0] Federally Enforceable Through Title V Permit

- 61. Source testing for PM10, SOx, NOx, CO, VOC, and ammonia slip shall be performed at least once every 12 calendar months. [District NSR Rule, District Rule 1081, and District Rule 4352, 6.3] Federally Enforceable Through Title V Permit
- 62. 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
- 63. 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, 6.4] Federally Enforceable Through Title V Permit
- 64. Source testing shall be conducted using the following methods: EPA Method 7E (or CARB Method 100) for NOx (ppmv); EPA Method 19 for NOx (lb/MMBtu heat input); EPA Method 5 for particulate matter (PM); EPA Method 19 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, 6.4 and 40 CFR 60.48a] Federally Enforceable Through Title V Permit
- 65. 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, 6.4.2 and 6.4.3] Federally Enforceable Through Title V Permit
- 66. 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
- 67. 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, 7.3.1, and 40 CFR 60.7 (b)] Federally Enforceable Through Title V Permit
- 68. 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, 9.3.2] Federally Enforceable Through Title V Permit
- 69. Enclosure and dust collection system shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 70. 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, 9.3.2] Federally Enforceable Through Title V Permit
- 71. 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, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT: C-799-4-1

EXPIRATION DATE: 05/31/2007

#### **EQUIPMENT DESCRIPTION:**

STEAM AND POWER SYSTEM CONSISTING OF: FORCED CIRCULATION BOILER, TURBINE, BOILER FEEDWATER PUMPS, COOLING TOWER AND FANS, CONDENSATE PUMPS, AIR COMPRESSOR SYSTEM, AND OTHER ASSOCIATED EQUIPMENT.

## PERMIT UNIT REQUIREMENTS

- 1. See facility wide permit for requirements applicable to this permit unit. [District Rule 2080] Federally Enforceable Through Title V Permit
- 2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- 3. No compound containing hexavalent chromium shall be added to the cooling tower. [District Rule 4002] Federally Enforceable Through Title V Permit
- 4. Records shall be maintained which show the composition of all substances added to the cooling tower. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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

## ATTACHMENT C

**Detailed Facility List** 

11/4/09	3:26 am
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05/31/2007 1 / 08/10

**Detailed Facility Report**For Facility=799

Sorted by Facility Name and Permit Number

MADERA POWER, LLC 11427 FIREBAUGH BLVD P O BOX 305 FIREBAUGH, CA 93622

SJVUAPCD CENTRAL

	EXPIRE ON:	AREA:	INSP. DATE:
		ID: 51852	
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PERMIT NUMBER	PERMIT NUMBER FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE	PERMIT	EQUIPMENT DESCRIPTION
C-799-1-3	244.5 HP	66-666	<b>-</b>	0.00	0.00	∢	FUEL STORAGE AND FEED SYSTEM CONSISTING OF: TRUCK WEIGH SCALE, FUEL STORAGE BLDG., TRUCK TIPPER, 2 RECLAIM CONVEYORS (RC1A, RC2A), FUEL RECLAIM, COLLECTION, AND TRANSFER CONVEYORS.
C-799-2-3	ASH DISPOSAL SYSTEM (74.5 HP TOTAL)	66-666	, <del>-</del>	0.00	0.00	∢ .	ASH HANDLING AND DISPOSAL SYSTEM CONSISTING OF PNEUMATIC PIPING, ASH SILO CYCLONE, ASH SILO BAGHOUSE, ASH SILO, ASH BLOWER, ASH ROTARY VALVE, AND ASH CONDITIONER/PUGMILL.
C-799-3-13	28,500 kW electrical generator	3020-08A F	- -	8,171.00	8,171.00	∢	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
C-799-4-2	STEAM & POWER SYSTEM, 4043 HP	66-666	-	0.00	0.00	∢ .	STEAM AND POWER SYSTEM CONSISTING OF: FORCED CIRCULATION BOILER, TURBINE, BOILER FEEDWATER PUMPS, COOLING TOWER AND FANS, CONDENSATE PUMPS, AIR COMPRESSOR SYSTEM, AND OTHER ASSOCIATED EQUIPMENT.
C-799-5-3	AIR POLLUTION CONTROL EQUIP	66-666	-	00.0	00.00	٥	AIR POLLUTION CONTROL EQUIPMENT CONSISTING OF: 226,000 ACFM BAGHOUSE WITH 2,310 BAGS, 248,330 ACFM MULTICLONE WITH 200 11.5" COLLECTOR TUBES, REAGENT INJECTION SYSTEM WITH 2,540 CUBIC FOOT SILO, AND 36 NOZZLE AMMONIA INJECTION SYSTEM.

Number of Facilities Reported: 1

## ATTACHMENT D

**EPA Comments** 

#### **Dennis Roberts**

From: Yannayon.Laura@epamail.epa.gov

Sent: Tuesday, November 03, 2009 5:46 PM

To: Dennis Roberts

Subject: RE: C-799 (C-1080167) Madera Power

Hi Dennis,

Your proposed modification address EPA's concern. Please go ahead and revise the permit accordingly.

Thanks! Laura Yannayon

US EPA, Region 9 / Air Division, Permits Office (Air-3) / 75 Hawthorne St. / San Francisco, CA 94105-3901 yannayon.laura@epa.gov / (415) 972-3534 / (415) 947-3579 (fax)

From:

"Dennis Roberts" < Dennis Roberts@valleyair.org>

To:

Laura Yannayon/R9/USEPA/US@EPA

Date:

11/03/2009 05:21 PM

Subject:

RE: C-799 (C-1080167) Madera Power

#### Hi Laura

I'm proposing to modify condition #24 from the C-799-3-13 permit to address your comment.

### Revised condition #24

24. 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 NSR Rule]

As far as maintaining the records on-site, the following conditions currently on the facility-wide permit ('-0-2) require maintenance of all records for 5 years and require access to the data

- 9. The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Y
- 18. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is

located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520, 9.13.2.1] Y

19. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520, 9.13.2.2] Y

Do the above adequately address your comment?

### Dennis Roberts, PE

San Joaquin Valley Air Pollution Control District

Tel. (559) 230-5919 Fax (559) 230-6061

From: Yannayon.Laura@epamail.epa.gov [mailto:Yannayon.Laura@epamail.epa.gov]

Sent: Monday, November 02, 2009 10:54 AM

To: Dennis Roberts

Subject: RE: C-799 (C-1080167) Madera Power

Hi Dennis,

Sorry for the delay in getting back to you. As I mentioned, I am doing some review work of all Biomass plants in the valley that use local ag-related biomass to provide their NSR offsets. Since I am not sure how these issues will be resolved, for now I am providing the comment listed below that should be addressed prior to finalizing the proposed Title V permit renewal for this facility.

#### EPA comment:

While the permit requires the source to maintain daily and monthly fuel consumption records (See Conditions #22 and 23), and Condition 24 requires annual records which quantify stack emissions and the total amount of offsets claimed from the diversion of creditable biomass from open-burning, the permit does not have a specific condition requiring the source to demonstrate that the amount of offsets claimed is in fact sufficient to offset stack emissions. Please revise Condition #24 or add a new one, to require the source to perform this calculation at least annually and maintain the results on site. I assume that the source is already performing such a calculation, but the permit needs to be explicit to ensure such a calculation is performed.

Please feel free to call me if you have any questions.

## Laura Yannayon

US EPA, Region 9 / Air Division, Permits Office (Air-3) / 75 Hawthorne St. / San Francisco, CA 94105-3901 yannayon.laura@epa.gov / (415) 972-3534 / (415) 947-3579 (fax)

From:

"Dennis Roberts" < Dennis.Roberts@valleyair.org>

To:

Laura Yannayon/R9/USEPA/US@EPA

Date:

10/19/2009 10:42 AM

Subject:

RE: C-799 (C-1080167)