

June 20, 2011

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
(7009 0960 0000 3848 6190)

11-394E CAB
File No. 0650

Mr. Eric Knutzen
Partner
Green Energy Team, LLC
P.O. Box 340
Anahola, Hawaii 96703

Dear Mr. Knutzen:

Subject: Covered Source Permit (CSP) No. 0650-01-C
Application for a Significant Modification No. 0650-02
Green Energy Team, LLC
One (1) nominal 100 MMBtu/hr Biomass Fired Boiler
Located at: Old Government Road, Koloa, Kauai
UTM Zone 4: 452,443 m E; 2,429,060 m N (NAD-27)
Date of Expiration: June 12, 2013

The subject covered source permit is issued in accordance with Hawaii Administrative Rules, Title 11, Chapter 60.1. The issuance of this permit is based on the plans, specifications, and information you submitted as part of your original application received November 29, 2010 and additional information received February 11, March 3, and March 10, 2011. This Covered Source Permit supersedes CSP No. 0650-01-C issued June 13, 2008, in its entirety.

The covered source permit is issued subject to the conditions and requirements set forth in the following attachments:

- Attachment I: Standard Conditions
- Attachment II: Special Conditions
- Attachment II - INSIG: Special Conditions - Insignificant Activities
- Attachment III: Annual Fee Requirements
- Attachment IV: Annual Emissions Reporting Requirements

Mr. Eric Knutzen
June 20, 2011
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The following forms are enclosed for your use and submittal as required:

Compliance Certification Form
Excess Emission and Monitoring System Performance Summary Report
Annual Emission Report Form: Boiler
Monitoring Report Form: Boiler

The following plans are enclosed for compliance assurance monitoring requirements:

Compliance Assurance Monitoring Plan: Oxides of Nitrogen

This permit: (a) shall not in any manner affect the title of the premises upon which the equipment is to be located; (b) does not release the permittee from any liability for any loss due to personal injury or property damage caused by, resulting from or arising out of the design, installation, maintenance, or operation of the equipment; and (c) in no manner implies or suggests that the Department of Health, or its officers, agents, or employees, assumes any liability, directly or indirectly, for any loss due to personal injury or property damage caused by, resulting from or arising out of the design, installation, maintenance, or operation of the equipment.

Sincerely,

STUART YAMADA, P.E., CHIEF
Environmental Management Division

CL:smk
Enclosures

c: Rodney Yama, EHS - Kauai
CAB Monitoring Section

**ATTACHMENT I: STANDARD CONDITIONS
COVERED SOURCE PERMIT NO. 0650-01-C**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

This permit is granted in accordance with the Hawaii Administrative Rules (HAR), Title 11, Chapter 60.1, Air Pollution Control, and is subject to the following standard conditions:

1. Unless specifically identified, the terms and conditions contained in this permit are consistent with the applicable requirement, including form, on which each term or condition is based.

(Auth.: HAR §11-60.1-90)
2. This permit, or a copy thereof, shall be maintained at or near the source and shall be made available for inspection upon request. The permit shall not be willfully defaced, altered, forged, counterfeited, or falsified.

(Auth.: HAR §11-60.1-6; SIP §11-60-11)²
3. This permit is not transferable whether by operation of law or otherwise, from person to person, from place to place, or from one piece of equipment to another without the approval of the Department of Health, except as provided in HAR, Section 11-60.1-91.

(Auth.: HAR §11-60.1-7; SIP §11-60-9)²
4. A request for transfer from person to person shall be made on forms furnished by the Department of Health.

(Auth.: HAR §11-60.1-7)
5. In the event of any changes in control or ownership of the facilities to be constructed or modified, this permit shall be binding on all subsequent owners and operators. The permittee shall notify the succeeding owner and operator of the existence of this permit and its conditions by letter, copies of which will be forwarded to the Department of Health and the U.S. Environmental Protection Agency (EPA), Region 9.

(Auth.: HAR §11-60.1-5, §11-60.1-7, §11-60.1-94)
6. The facility covered by this permit shall be constructed and operated in accordance with the application, and any information submitted as part of the application, for the Covered Source Permit. There shall be no deviation unless additional or revised plans are submitted to and approved by the Department of Health, and the permit is amended to allow such deviation.

(Auth.: HAR §11-60.1-2, §11-60.1-4, §11-60.1-82, §11-60.1-84, §11-60.1-90)

7. This permit (a) does not release the permittee from compliance with other applicable statutes of the State of Hawaii, or with applicable local laws, regulations, or ordinances, and (b) shall not constitute, nor be construed to be an approval of the design of the covered source.

(Auth.: HAR §11-60.1-5, §11-60.1-82)

8. The permittee shall comply with all the terms and conditions of this permit. Any permit noncompliance constitutes a violation of HAR, Chapter 11-60.1 and the Clean Air Act and is grounds for enforcement action; for permit termination, suspension, reopening, or amendment; or for denial of a permit renewal application.

(Auth.: HAR §11-60.1-3, §11-60.1-10, §11-60.1-19, §11-60.1-90)

9. If any term or condition of this permit becomes invalid as a result of a challenge to a portion of this permit, the other terms and conditions of this permit shall not be affected and shall remain valid.

(Auth.: HAR §11-60.1-90)

10. The permittee shall not use as a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the terms and conditions of this permit.

(Auth.: HAR §11-60.1-90)

11. This permit may be terminated, suspended, reopened, or amended for cause pursuant to HAR, Sections, 11-60.1-10 and 11-60.1-98, and Hawaii Revised Statutes (HRS), Chapter 342B-27, after affording the permittee an opportunity for a hearing in accordance with HRS, Chapter 91.

(Auth.: HAR §11-60.1-3, §11-60.1-10, §11-60.1-90, §11-60.1-98)

12. The filing of a request by the permittee for the termination, suspension, reopening, or amendment of this permit, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

(Auth.: HAR §11-60.1-90)

13. This permit does not convey any property rights of any sort, or any exclusive privilege.

(Auth.: HAR §11-60.1-90)

14. The permittee shall notify the Department of Health and U.S. EPA, Region 9, in writing of the following dates:
- The **anticipated date of initial start-up** for each emission unit of a new source or significant modification not more than sixty (60) days or less than thirty (30) days prior to such date;
 - The **actual date of construction commencement** within fifteen (15) days after such date; and
 - The **actual date of start-up** within fifteen (15) days after such date.

(Auth.: HAR §11-60.1-90)

15. The permittee shall furnish, in a timely manner, any information or records requested in writing by the Department of Health to determine whether cause exists for terminating, suspending, reopening, or amending this permit, or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Department of Health copies of records required to be kept by the permittee. For information claimed to be confidential, the Director of Health may require the permittee to furnish such records not only to the Department of Health but also directly to the U.S. EPA, Region 9, along with a claim of confidentiality.

(Auth.: HAR §11-60.1-14, §11-60.1-90)

16. The permittee shall notify the Department of Health in writing, of the **intent to shut down air pollution control equipment for necessary scheduled maintenance** at least twenty-four (24) hours prior to the planned shutdown. The submittal of this notice shall not be a defense to an enforcement action. The notice shall include the following:
- Identification of the specific equipment to be taken out of service, as well as its location and permit number;
 - The expected length of time that the air pollution control equipment will be out of service;
 - The nature and quantity of emissions of air pollutants likely to be emitted during the shutdown period;
 - Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period; and
 - The reasons why it would be impossible or impractical to shut down the source operation during the maintenance period.

(Auth.: HAR §11-60.1-15; SIP §11-60-16)²

17. **Except for emergencies which result in noncompliance with any technology-based emission limitation in accordance with HAR, Section 11-60.1-16.5, in the event any emission unit, air pollution control equipment, or related equipment malfunctions or breaks down in such a manner as to cause the emission of air pollutants in violation**

of HAR, Chapter 11-60.1 or this permit, the permittee shall immediately notify the Department of Health of the malfunction or breakdown, unless the protection of personnel or public health or safety demands immediate attention to the malfunction or breakdown and makes such notification infeasible. In the latter case, the notice shall be provided as soon as practicable. Within five (5) working days of this initial notification, the permittee shall also submit, in writing, the following information:

- a. Identification of each affected emission point and each emission limit exceeded;
- b. Magnitude of each excess emission;
- c. Time and duration of each excess emission;
- d. Identity of the process or control equipment causing the excess emission;
- e. Cause and nature of each excess emission;
- f. Description of the steps taken to remedy the situation, prevent a recurrence, limit the excessive emissions, and assure that the malfunction or breakdown does not interfere with the attainment and maintenance of the National Ambient Air Quality Standards and state ambient air quality standards;
- g. Documentation that the equipment or process was at all times maintained and operated in a manner consistent with good practice for minimizing emissions; and
- h. A statement that the excess emissions are not part of a recurring pattern indicative of inadequate design, operation, or maintenance.

The submittal of these notices shall not be a defense to an enforcement action.

(Auth.: HAR §11-60.1-16; SIP §11-60-16)²

18. The permittee may request confidential treatment of any records in accordance with HAR, Section 11-60.1-14.

(Auth.: HAR §11-60.1-14, §11-60.1-90)

19. This permit shall become invalid with respect to the authorized construction if construction is not commenced as follows:

- a. Within eighteen (18) months after the permit takes effect, is discontinued for a period of eighteen (18) months or more, or is not completed within a reasonable time.
- b. For phased construction projects, each phase shall commence construction within eighteen (18) months of the projected and approved commencement dates in the permit. This provision shall be applicable only if the projected and approved commencement dates of each construction phase are defined in Attachment II, Special Conditions, of this permit.

(Auth.: HAR §11-60.1-9, §11-60.1-90)

20. The Department of Health may extend the time periods specified in Standard Condition No. 19 upon a satisfactory showing that an extension is justified. Requests for an extension shall be submitted in writing to the Department of Health.

(Auth.: HAR §11-60.1-9, §11-60.1-90)

21. The permittee shall submit fees in accordance with HAR, Chapter 11-60.1, Subchapter 6.

(Auth.: HAR §11-60.1-90)

22. All certifications shall be in accordance with HAR, section 11-60.1-4.

(Auth.: HAR §11-60.1-4, HAR §11-60.1-90)

23. The permittee shall allow the Director of Health, the Regional Administrator for the U.S. EPA and/or an authorized representative, upon presentation of credentials or other documents required by law:

- a. To enter the premises where a source is located or emission-related activity is conducted, or where records must be kept under the conditions of this permit and inspect at reasonable times all facilities, equipment, including monitoring and air pollution control equipment, practices, operations, or records covered under the terms and conditions of this permit and request copies of records or copy records required by this permit; and
- b. To sample or monitor at reasonable times substances or parameters to ensure compliance with this permit or applicable requirements of HAR, Chapter 11-60.1.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

24. Within thirty (30) days of **permanent discontinuance of the construction, modification, relocation, or operation of a stationary source covered by this permit**, the discontinuance shall be reported in writing to the Department of Health by a responsible official of the source.

(Auth.: HAR §11-60.1-8; SIP §11-60-10)²

25. Each permit renewal application shall be submitted to the Department of Health and the U.S. EPA, Region 9, no less than twelve (12) months and no more than eighteen (18) months prior to the permit expiration date. The Director may allow a permit renewal application to be submitted no less than six (6) months prior to the permit expiration date, if the Director determines that there is reasonable justification.

(Auth.: HAR §11-60.1-101, 40 CFR §70.5(a)(1)(iii))¹

26. The terms and conditions included in this permit, including any provision designed to limit a source's potential to emit, are federally enforceable unless such terms, conditions, or requirements are specifically designated as not federally enforceable.

(Auth.: HAR §11-60.1-93)

27. The compliance plan and compliance certification submittal requirements shall be in accordance with HAR, Sections 11-60.1-85 and 11-60.1-86. As specified in HAR, Section 11-60.1-86, the compliance certification shall be submitted to the Department of Health and the U.S. EPA, Region 9, once per year, or more frequently as set by any applicable requirement.

(Auth.: HAR §11-60.1-90)

28. **Any document (including reports) required to be submitted by this permit shall be certified as being true, accurate, and complete by a responsible official in accordance with HAR, Sections 11-60.1-1 and 11-60.1-4, and shall be mailed to the following address:**

**Clean Air Branch
Environmental Management Division
Hawaii Department of Health
919 Ala Moana Boulevard, Room 203
Honolulu, HI 96814**

Upon request and as required by this permit, all correspondence to the State of Hawaii Department of Health associated with this Covered Source Permit shall have duplicate copies forwarded to:

**Chief
Permits Office, (Attention: Air-3)
Air Division
U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105**

(Auth.: HAR §11-60.1-4, §11-60.1-90)

29. To determine compliance with submittal deadlines for time-sensitive documents, the postmark date of the document shall be used. If the document was hand-delivered, the date received ("stamped") at the Clean Air Branch shall be used to determine the submittal date.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

¹The citations to the Code of Federal Regulations (CFR) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the CFR. Due to the integration of the preconstruction and operating permit requirements, permit conditions may incorporate more stringent requirements than those set forth in the CFR.

²The citations to the State Implementation Plan (SIP) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the SIP.

**ATTACHMENT II: SPECIAL CONDITIONS
COVERED SOURCE PERMIT NO. 0650-01-C**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

In addition to the Standard Conditions of the Covered Source Permit, the following Special Conditions shall apply to the permitted facility:

Section A. Equipment Description

1. This permit encompasses the following equipment and associated appurtenances:
 - a. One (1) nominal 100 MMBtu/hr Standardkessel GmbH Biomass Fired Boiler equipped with the following:
 - i. One (1) PPC Industries (or equivalent as allowed by Special Condition No. C.7) Electrostatic Precipitator; and
 - ii. One (1) Selective Non-Catalytic Reduction System (SNCR with Ammonia/Urea Injection).

2. An identification tag or name plate shall be displayed on each of the equipment listed in Special Condition No. A.1 to show model no. (Electrostatic Precipitator and SNCR only), serial no. (Electrostatic Precipitator and SNCR only), and manufacturer (Boiler, Electrostatic Precipitator, and SNCR). The identification tag or name plate shall be permanently attached to the equipment in a conspicuous location.

(Auth.: HAR §11-60.1-3)

(Auth.: HAR §11-60.1-5)

Section B. Applicable Federal Regulations

1. The Biomass Boiler is subject to the provisions of the following federal regulations:
 - a. 40 Code of Federal Regulations (CFR) Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Provisions;
 - b. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units;
 - c. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants, Subpart A, General Provisions;
 - d. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources; and
 - e. 40 CFR Part 64, Compliance Assurance Monitoring.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR Part 60; 40 CFR Part 63; 40 CFR Part 64)¹

2. The permittee shall comply with all of the applicable requirements of these standards, including all emission limits, notification, reporting, monitoring, testing and recordkeeping requirements. The major requirements of these standards are detailed in the special conditions of this permit.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR Part 60; 40 CFR Part 63; 40 CFR Part 64)¹

Section C. Operational and Emission Limits

1. Heat Input

- a. The total heat input to the boiler shall not exceed 840,000 MMBtu in any rolling twelve-month (12-month) period. Heat input shall include all periods of operation of the boiler (including all startup and shutdown periods). The total heat input shall be based on the total combined heat input from the combustion of wood, fuel oil no. 2, and biodiesel in the boiler;
- b. The measurement of heat input to the boiler shall be based on an approved or conditionally approved protocol as specified in Special Condition No. E.4; and
- c. The protocol must receive the approval or conditional approval of the Department of Health prior to the first fire of the boiler.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

2. Startup and Shutdown

a. Startup

- i. The beginning of boiler startup shall be when combustion at the diesel fuel burner begins;
- ii. The end of boiler startup shall be when boiler steam production reaches 44,000 lb/hr; and
- iii. Each startup for the boiler shall not exceed eight (8) hours.

b. Shutdown

- i. The beginning of boiler shutdown shall be when boiler steam production is reduced to below 44,000 lb/hr; and
- ii. Each shutdown for the boiler shall not exceed two (2) hours.

- c. The permittee shall minimize the boiler's startup and shutdown periods following the manufacturer's recommended procedures.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90; 40 CFR §63.11214)¹

3. Air Pollution Control Equipment

- a. The permittee shall design, install, continuously operate and maintain the following air pollution control equipment to meet the NO_x and particulate matter emission limits as specified in Condition Nos. C.5.a and C.5.b:
 - i. One (1) Ammonia/Urea injection system; and
 - ii. One (1) electrostatic precipitator.
- b. The electrostatic precipitator shall be fully operational when the boiler is in operation.
- c. The Ammonia/Urea injection system, at a minimum, shall be in full operation at the end of boiler startup and shall continue to operate until the beginning of the boiler shutdown.
- d. The permittee shall not operate the boiler if a problem affecting the NO_x control efficiency of the Ammonia/Urea injection system or the PM control efficiency of the electrostatic precipitator is observed or apparent at any time. The permittee shall investigate and correct the problem before resuming operation of the boiler.
- e. Following the initial source performance test, on a three-hour (3-hour) average basis the minimum Ammonia/Urea injection rate, in lb/MMBtu, shall be maintained at or above the minimum Ammonia/Urea injection rate established during the most recent source performance test demonstrating compliance with the NO_x emission limit of Special Condition No. C.5.a.
- f. Following the initial source performance test, the electrostatic precipitator's second-stage voltage shall be maintained at or above the lowest one-hour (1-hour) average second stage voltage established during the initial source performance test of Special Condition No. F.1. The minimum second stage voltage shall be maintained at all times the boiler is in operation.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-140, §11-60.1-161; 40 CFR §63.11201)

4. Fuel Usage and Specifications

- a. The boiler may be fired on biomass, fuel oil no. 2, or biodiesel.
 - i. The total combined fuel oil no. 2 and biodiesel usage shall not exceed a maximum of 150,000 gallons per rolling twelve-month (12-month) period.
 - ii. The combined fuel oil no. 2 and biodiesel annual capacity factor shall not exceed 10%.
 - 1) The annual capacity factor is determined by dividing the total combined actual heat input from the combustion of fuel oil no. 2 and biodiesel in the boiler during the calendar year by the maximum potential heat input capacity of the boiler, 840,000 MMBtu/year.
 - iii. The sulfur content of the fuel oil no. 2 and biodiesel fired in the boiler shall not exceed a maximum of 0.0015% by weight

- b. With the exception of the fuels allowed to be burned in the boiler as specified in Special Condition Nos. C.4.a and C.4.c, the boiler shall be fired only on albizia and eucalyptus wood chips. The wood chips shall be untreated and uncontaminated by paint, oils, salts, pressure treated material, glues, preservatives, added chemicals, or similar foreign substances. Use of construction demolition debris of any type as wood fuel is explicitly prohibited.
- c. Wood fuel other than albizia or eucalyptus may be fired in the boiler provided that, in advance of its introduction into the boiler:
 - i. The boiler manufacturer has reviewed the proposed type and quantity of wood fuel and has agreed on its use, in writing;
 - ii. The permittee submits a request, in writing, and receives approval from the Department of Health. The request shall include the type and quantity of wood, expected duration of use, and certification that the proposed wood fuel will not increase the emissions of any air pollutant and will not result in the emission of any air pollutant not previously emitted;
 - iii. A copy of the written agreement required by Special Condition No. C.4.c.i is provided with the request; and
 - iv. The permittee submits any additional information as requested by the Department of Health at the time of the request.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90; 40 CFR Part 60.44b)¹

5. Emission Limits

- a. Except during the boiler's startup and shutdown, the permittee shall not discharge or cause the discharge into the atmosphere from the operation of the boiler system, nitrogen oxides (NO_x as NO₂), particulate matter (PM), carbon monoxide (CO), and ammonia (NH₃) emissions in excess of the following specified limits:

Pollutant	Maximum Emission Limits in lb/MMBtu (3-hr average)	Maximum Emission Limits in lb/hr (3-hour average)
NO _x (as NO ₂)	0.25	25
PM	0.025	2.5
CO	0.20	20
NH ₃	50 ^a	2.7

^a Maximum Emission Limit in ppmvd @ 15% O₂ (3-hour average)

- b. Emissions, averaged over any rolling three (3) hour period, shall not exceed the limits as specified in Special Condition Nos. C.5.a, except during boiler startup and shutdown periods. The three (3) hour averaging period shall begin immediately at the end of boiler startup and end at the beginning boiler shutdown. Startup and shutdown periods are defined in Special Condition No. C.2.

- c. Total nitrogen oxide (NO_x) emissions from the boiler shall not exceed 107 tons in any rolling twelve-month (12-month) period.
- d. The PM emission limits of Special Condition No. C.5.a pertain to the front half (filter and probe) only.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90; 40 CFR Part 60.43b, 40 CFR Part 63.11201)¹

6. Boiler Opacity Limits

- a. For any six (6) minute averaging period, the boiler system shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during startup, shutdown, or equipment breakdown, the boiler system may exhibit visible emissions greater than twenty (20) percent opacity but not exceeding sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minute period.
- b. The boiler shall not exhibit visible emissions of ten (10) percent opacity or greater averaged over a twenty-four (24-hour) (daily block average) period.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-32, §11-60.1-90; 40 CFR Part 60.43b; 40 CFR 63, Table 3 to Subpart JJJJJ)¹

7. One Time Alternate Operating Scenario

This one time alternate operating scenario shall only be applicable to alternate unit(s) requested prior to the installation of the unit(s) listed in Special Condition No. A.1 and shall not apply to the replacement of any unit following initial installation.

The permittee may replace the Electrostatic Precipitator listed in Special Condition No. A.1 with alternate unit(s) if the following provisions are adhered to:

- a. The permittee shall submit a written request and receive prior written approval from the Department of Health before the replacement;
- b. Electrostatic Precipitator:
 - i. The alternate unit's capacity to control particulate matter emissions is equal to or greater than that of the ESP listed in Special Condition No. A.1; and
 - ii. The alternate unit complies with all applicable conditions including all air pollution control equipment requirements and operating restrictions;
- c. The written request shall include the following information:
 - i. Identify the unit(s) to be replaced;
 - ii. The reason(s) for the replacement;
 - iii. Written documentation on the alternate unit(s) including, but not limited to: the make, model, size, serial number, manufacturer's literature, emissions data (including but not limited to manufacture's guarantees), description of air pollution

controls, control efficiencies, stack parameters, and calculations of emissions with supporting documentation;

- iv. An ambient air quality impact assessment for the alternate unit(s) showing compliance with all State and National Ambient Air Quality Standards (SAAQS/NAAQS); and
- v. Any additional information as requested by the Department of Health.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

8. Tune-ups

Upon startup and biennially thereafter, the permittee shall conduct or cause to be conducted, a tune-up of the boiler in accordance with the requirements of 40 CFR §63.11223. Each biennial tune-up must be conducted no more than twenty-five (25) months after the previous tune-up.

(Auth.: 40 CFR §63.11223)

9. Fugitive Dust

- a. The permittee shall take measures to control fugitive dust (e.g., wet suppression, enclosures, dust screens, etc.) at material transfer points, stockpiles, and throughout the facility. The Department of Health may at any time require the permittee to further abate fugitive dust emissions if an inspection indicates poor or insufficient control.
- b. The permittee shall not cause or permit fugitive dust to become airborne without taking reasonable precautions and shall not cause or permit the discharge of visible emissions of fugitive dust beyond the lot line of the property boundary on which the emissions originate.

(Auth.: HAR §11-60.1-3, §11-60.1-33, §11-60.1-90)

10. Maintenance

The equipment listed in Special Condition No. A.1 shall be maintained in good operating condition at all times with scheduled inspections and maintenance as recommended by the manufacturer, or as needed.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

Section D. Monitoring and Recordkeeping Requirements

- 1. All records, including support information, shall be true, accurate and maintained for at least five (5) years from the date of the monitoring data (e.g., original strip chart or computer continuous emission monitoring (CEM) recordings), measurements, tests, reports, or applications. Support information includes but is not limited to all calibration and

maintenance records, inspection and repair records, and copies of all reports required by this permit. These records shall be in a permanent form suitable for inspection and shall be made available to the Department of Health or its representative upon request.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR Part 60.49b, 40 CFR Part 60.4211)¹

2. Startup, Shutdown, and Air Pollution Control

- a. The following shall be recorded for each boiler startup:
 - i. The date and time when combustion begins at the diesel fuel burner;
 - ii. The date and time when boiler steam production reaches 44,000 lb/hr;
 - iii. The duration of boiler startup (in hours and minutes);
 - iv. The date and time the ESP is brought into full operation; and
 - v. The date and time the Ammonia/Urea injection system is brought into full operation.
- b. The following shall be recorded for each boiler shutdown:
 - i. The date and time when boiler steam production falls below 44,000 lb/hr;
 - ii. The date and time when wood combustion is ended;
 - iii. The duration of boiler shutdown (in hours and minutes);
 - iv. The date and time the ESP is shutdown; and
 - v. The date and time the Ammonia/Urea injection system is shutdown.
- c. The permittee shall record the dates, times, durations and actions taken when the electrostatic precipitator is not operating as required by Special Condition No. C.3.
- d. The permittee shall record the dates, times, durations and actions taken when the Ammonia/Urea injection system is not operating as required by Special Condition No. C.3.
- e. The total number of boiler startups shall be recorded on an annual basis for annual emissions reporting purposes.
- f. The owner/operator must minimize the boiler's startup and shutdown periods following the manufacturer's recommended procedures, if available. If manufacturer's recommended procedures are not available, the owner/operator must follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90; 40 CFR 63.11214)

3. Continuous Monitoring System

- a. Prior to the date of initial startup and thereafter, the permittee shall at its own expense install, operate, calibrate, and maintain the following continuous monitoring systems (CMS) for the boiler to measure and record the following parameters or data. The associated date and time of the monitored data shall also be recorded.

- i. The wood chip feed rate in pounds per hour and tons per day. The wood chip feed rate shall be based on the protocol of Special Condition No. C.1.b;
 - ii. The wood chip heat input to the boiler in MMBtu per hour. Calculation of the wood chip heat input shall be based on the protocol of Special Condition No. C.1.b;
 - iii. The Ammonia/Urea injection rate in pounds per MMBtu on an hourly and three-hour (3-hour) average basis;
 - iv. Boiler steam production in pounds per hour; and
 - v. Continuous Opacity Monitoring System (COMS)
 - 1) Stack percent opacity using a Continuous Opacity Monitoring System (COMS) shall be measured. The COMS shall meet U.S. EPA monitoring performance standards as specified in Special Condition Nos. D.3.b and D.3.c. The span value of the COMS shall be between sixty (60) and eighty (80) percent.
 - 2) The permittee shall maintain records of the occurrence and duration of each malfunction of the COMS and of any corrective actions taken to minimize emissions or restore the COMS to normal operating order.
- b. The procedures under 40 CFR §60.13 shall be followed for the installation, evaluation, and operation of the CMS.
 - c. The CMS shall also be operated according to the performance specifications of 40 CFR Part 60, Appendix B.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR Part 60.49b; 40 CFR §63.11225; SIP §11-60-15)^{1,2}

4. ESP Voltage

- a. The voltage of the second stage of the ESP, provided for under Special Condition No. C.3.f shall be checked routinely, or at least once per day when the facility is operating, to ensure effective collection of PM is occurring and to determine whether maintenance is required pursuant to Special Condition No. D.10.
- b. Written records shall be maintained on the operating second stage voltage of the ESP, in kV, for each day the boiler is operated.
- c. Maintain records of the occurrence and duration of each malfunction of the ESP and of any corrective actions taken to minimize emissions or restore the ESP to normal operating order.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90; 40 CFR §63.11225)¹

5. Malfunctions

The permittee shall record the date, time, description, and duration of any malfunctions of the boiler, Ammonia/Urea injection system, electrostatic precipitator, and continuous monitoring system (CMS).

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90; 40 CFR §63.11225)¹

6. Fuel Consumption, Heat Input, NO_x Emissions, and Annual Capacity Factor

The following records shall be maintained:

- a. Records on the fuel (chipped and unchipped wood) received at the facility including the date received, type of wood (e.g., albizia, eucalyptus, or a wood approved pursuant to Special Condition No. C.4.c) and the quantity of wood received, in tons.
- b. The total quantity of wood fired in the boiler on a daily, monthly and rolling twelve-month (12-month) basis, in tons.
- c. The total combined heat input to the boiler from wood chips, fuel oil no. 2, and biodiesel, in MMBtu, on a monthly and rolling twelve-month (12-month) basis (including startup and shutdown). The measurement of the heat input shall be based upon the approved or conditionally approved protocol of Special Condition No. C.1.b. The supporting calculations used to determine the total heat input to the boiler shall be maintained.
- d. Total NO_x emissions in tons/year on a monthly and rolling twelve-month (12-month) basis. The calculation of NO_x emissions shall be based on the wood chip heat input to the boiler, the quantity of diesel and biodiesel fuel consumed by the boiler, and the number and duration of startups and shutdowns. The supporting calculations used to determine total NO_x emissions shall be maintained.
- e. A non-resetting fuel flow meter shall be installed, operated, and maintained on the boiler for the permanent recording of the total quantity of fuel oil no. 2 and biodiesel consumed by the boiler. The non-resetting meter shall not allow the manual resetting or other manual adjustments of the meter readings. The installation of any new non-resetting meters or the replacement of any existing non-resetting meters shall be designed to accommodate a minimum of five (5) years of equipment operation, considering any operational limitations, before the meter returns to a zero reading.

The meter shall permanently record the total quantity of fuel oil no. 2 and biodiesel consumed by the boiler for the purpose of the fuel consumption limitations specified in Special Condition Nos. C.4.a.i and C.4.a.ii. The following information shall be recorded for the boiler:

- i. On a monthly basis:
 - 1) Total quantity of fuel oil no. 2 and biodiesel consumed by the boiler for each month, in gallons;
 - 2) Total quantity of fuel oil no. 2 and biodiesel consumed by the boiler on a rolling twelve-month (12-month) basis, in gallons;

- 3) The actual heat input to the boiler from the combined consumption of fuel oil no. 2 and biodiesel for each month, in MMBtu/month; and
- 4) The annual capacity factor on a rolling twelve-month (12-month) basis.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90)

7. Performance Test

Initial and annual source performance tests shall be conducted pursuant to Section F Testing Requirements. Records of test summaries and results including the minimum Ammonia/Urea injection rate established during the most recent source performance test demonstrating compliance with the NOx emission limit shall be maintained.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161; SIP §11-60-15)²

8. Diesel and Biodiesel Fuel Usage and Specifications

Fuel purchase receipts, showing the supplier, fuel type, sulfur content in percent by weight, date of delivery, and amount of diesel and biodiesel fuel delivered to the site for the boiler shall be maintained. Fuel sulfur content may be demonstrated by providing the supplier's fuel certification for the type of fuel purchased and received.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90; SIP §11-60-15)²

9. Alternate Operating Scenario

The permittee shall maintain all records corresponding to the implementation of the Alternate Operating Scenario of Special Condition No. C.7.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

10. Maintenance

An inspection, maintenance, and repair log shall be maintained for the Boiler (including the boiler, Ammonia/Urea injection system, and electrostatic precipitator). At a minimum, the following records shall be maintained:

- a. The date of the inspection/repair work;
- b. A description of the findings or any maintenance or repair work performed;
- c. The name and title of the personnel performing the inspection/work; and
- d. Part(s) inspected or repaired.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90)

11. Compliance Assurance Monitoring (CAM)

The boiler is subject to the following CAM requirements to ensure compliance with the emission limits specified in Special Condition No. C.5.a for NO_x:

- a. The permittee shall follow the enclosed CAM plan for NO_x and record excursions to ensure compliance with the emissions limit for NO_x specified in Special Condition No. C.5.a. Excursions are incidences when:
 - i. The three-hour (3-hour) average Ammonia/Urea feed rate, as measured by the CMS, is less than the minimum Ammonia/Urea feed rate in lb/MMBtu established during the most recent source performance test demonstrating compliance with the NO_x emission limit of Special Condition No. C.5.a.
- b. Except for monitoring malfunctions, associated repairs, required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), start-up, shut-down, and malfunction, the permittee shall conduct all monitoring in continuous operation at all times that the boiler is operating. Data recorded during boiler malfunctions, associated repairs, and required quality assurance control activities shall not be used for purposes of reporting excursions, including data averages and calculations. The permittee shall use all the data collected during all other periods in assessing the operation of the emission control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
- c. Upon detecting an excursion, the permittee shall restore operation of the boiler (including control devices and systems) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any start-up, shut-down, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of the excursion (other than those caused by excused start-up or shut-down conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the applicable indicator range that would not cause an excursion as specified in Special Condition Nos. D.11.a and D.11.b.
- d. Determination of whether the permittee has used acceptable procedures in response to an excursion will be based on information available, which may include but is not limited to performance testing, monitoring results, review of operation and maintenance procedures and records, and inspection of the control devices and systems, and the process.
- e. If the permittee identifies a failure to achieve compliance with an emissions limit or standard for which monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall

promptly notify the Department of Health, and if necessary, submit a permit modification to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

- f. The Department of Health may require the permittee to develop a quality improvement plan (QIP) in accordance with 40 CFR §64.8.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §64.4, §64.7, §64.8)¹

12. Tune-ups

The permittee shall maintain records identifying the boiler, date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90; 40 CFR §63.11225)¹

13. Monthly Fuel Records

The permittee shall maintain records documenting the fuel type(s) used monthly.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90; 40 CFR §63.11225)¹

Section E. Notification and Reporting Requirements

1. Notification and reporting pertaining to the following events shall be done in accordance with Attachment I, Standard Condition Nos. 14, 16, 17, and 24, respectively:

- a. *Anticipated date of initial start-up, actual date of construction commencement, and actual date of start-up.*

- i. *Notification shall include the information as specified in 40 CFR § 60.49b(a).*

- b. *Intent to shut down air pollution control equipment for necessary scheduled maintenance;*

- c. *Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedences due to emergencies); and*

- d. *Permanent discontinuance of construction, modification, relocation, or operation of the facility covered by this permit.*

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90; 40 CFR Part 60.49b; SIP §11-60-10, §11-60-16)^{1,2}

2. The permittee shall report (in writing) **within five (5) working days** any deviations from the permit requirements, including those attributable to upset conditions, the probable cause of such deviations and any corrective actions or preventive measures taken. Corrective actions may include a requirement for additional source testing, more frequent monitoring, or the implementation of a corrective action plan.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-16, §11-60.1-90)

3. One Time Alternate Operating Scenario for the Electrostatic Precipitator

Should an alternate unit(s) be selected in the bidding and award process, the permittee shall submit to the Department of Health the information required pursuant to this Attachment, Special Condition No. C.7.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

4. Heat Input

At least sixty (60) days prior to first fire of the boiler, the permittee shall submit to the Department of Health for approval, in writing, a protocol for determining the wood chip feed rate in pounds per hour and tons per day and the wood chip heat input, in MMBtu per hour, to the boiler. The protocol shall address the heat input to the boiler for all operating conditions, including but not limited to, startup and shutdown of the boiler.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

5. Excess Emissions and Monitor Downtime Reporting

- a. The permittee shall submit to the Department of Health and U.S. EPA, Region 9, an **Excess Emissions and Monitoring Systems Performance Report** in accordance with 40 CFR Part 60, § 60.7(c). Excess emissions and monitor downtimes shall be reported for all periods of unit operation, including startup, shutdown, and malfunction.

The **Excess Emissions and Monitoring Systems Performance Report** shall include the following:

- i. The magnitude of excess emissions computed in accordance with 40 CFR Part 60, §60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period;
- ii. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;

- iii. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and
 - iv. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
- b. For the purposes of this permit, excess emissions and monitor downtimes shall be defined as follows:
- i. Excess Emissions

Any opacity measurements, as measured by the transmissometer continuous monitoring system, exceeding the opacity limits set forth Special Condition No. C.6.a.
 - ii. Monitor Downtime

A period of monitor downtime shall be:

 - 1) Any unit operating hour in which the data for any of the following parameters are either missing or invalid: wood chip feed rate, boiler heat input, boiler steam production, or Ammonia/Urea injection rate; and
 - 2) Any six (6) minute period in which sufficient data are not obtained to validate the opacity.
- c. The enclosed **Excess Emissions and Monitoring System Performance Summary Report** form or an equivalent form shall be submitted in conjunction with the **Excess Emissions and Monitoring Systems Performance Report** of Special Condition No. E.5.a. The reports shall be postmarked by the **30th day following the end of each semiannual calendar period.**
- d. Excess emissions exceeding the emission limit set forth in Special Condition No. C.6 indicated by the continuous opacity monitoring system shall be considered violations of the opacity limit.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR Part 60.7, 40 CFR Part 60.13, 40 CFR Part 60.49b; SIP §11-60-15)^{1, 2}

6. Performance Specification and Source Performance Test

The permittee shall notify the Department of Health, in writing, of the following events. Notification shall be **postmarked not less than 60 days prior** to the performance of the event:

- a. Conducting a performance specification test on the COMS. The testing date shall be in accordance with the performance test date identified in 40 CFR Part 60, Section 60.13; and

- b. Conducting a source performance test as required by Special Conditions Section F, Testing Requirements.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.13; 40 CFR Part §60.49b; 40 CFR §63.9)¹

7. Source Test Reporting

Source performance test reports shall be submitted **within 60 days after completion of the source performance test.**

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90; 40 CFR §60.8)¹

8. Semi-Annual Monitoring Reports

The permittee shall submit **semi-annually** the following written reports to the Department of Health. The report shall be submitted **within sixty (60) days after** the end of each semiannual calendar period (January 1 – June 30 and July 1 – December 31), and shall include the following:

a. Startup and Shutdown

- i. All periods of time (dates, times, durations, and actions taken) when a startup period exceeded eight (8) hours; and
- ii. All periods of time (dates, times, durations, and actions taken) when a shutdown period exceeded two (2) hours.

b. Air Pollution Control

- i. All periods of time (dates, times, durations, and actions taken) when the Ammonia/Urea injection system fails to remain fully operational as specified in Special Condition No. C.3;
- ii. All periods of time (dates, times, durations, and actions taken) when the electrostatic precipitator fails to remain fully operational as specified in Special Condition No. C.3;
- iii. All periods of time (dates, times, durations, and actions taken) when the electrostatic precipitator fails to maintain the minimum second stage voltage as specified in Special Condition No. C.3.f; and
- iv. All periods of time (dates, times, durations, and actions taken) when the Ammonia/Urea injection rate falls below the minimum rate established during the most recent source performance test demonstrating compliance with the NO_x emission limit of Special Condition No. C.5.a.

Explain for each incidence the reason why it occurred, the final outcome, and any actions taken to correct the situation. If no incidences of the above were experienced during the reporting period, the report shall so state.

c. Heat Input

The total combined heat input from the combustion of wood, fuel oil no. 2, and biodiesel in the boiler, in MMBtu, on a monthly and rolling twelve-month (12-month) basis. The total heat input shall include all periods of operation, including but not limited to, startup and shutdown of the boiler. Supporting documents detailing the calculation of the heat input for each fuel burned shall be provided.

d. Nitrogen Oxide Emissions

- i. The total quantity of NO_x emitted on a monthly basis in tons; and
- ii. The total quantity of NO_x emitted on a rolling twelve-month (12-month) basis in tons.

e. Fuel Certification

Certification that the fuel fired in the boiler meets the requirements of Special Condition No. C.4.

f. Fuel Oil No. 2 and Biodiesel Fuel Consumption

The total combined quantity of fuel oil no. 2 and biodiesel consumed on a monthly and rolling twelve-month (12-month) basis.

g. Annual Capacity Factor

The actual heat input to the boiler from the combined consumption of fuel oil no. 2 and biodiesel on a monthly basis, in MMBtu/month, and the annual capacity factor on a rolling twelve-month (12-month) basis.

h. Malfunction of Boiler, Ammonia/Urea Injection System, Electrostatic Precipitator and Continuous Monitoring System

Date, time, description, and duration of any malfunctions in the operation of the boiler, Ammonia/Urea injection system, electrostatic precipitator, and continuous monitoring system.

Explain for each incidence the reason why it occurred, the final outcome, and any actions taken to correct the situation. If no incidences of the above were experienced during the reporting period, the report shall so state.

The enclosed **Monitoring Report Form: Boiler** or equivalent form shall be used.

(Auth.: HAR §11-60.1-5, HAR §11-60.1-11, §11-60.1-90)

9. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA, Region 9, the attached **Compliance Certification Form** pursuant to HAR, Subsection 11-60.1-86. The permittee shall indicate whether or not compliance is being met with each term or condition of this permit. The compliance certification shall include, at a minimum, the following information:

- a. The identification of each term or condition of the permit that is the basis of the certification;
- b. The compliance status;
- c. Whether compliance was continuous or intermittent;
- d. The methods used for determining the compliance status of the source currently and over the reporting period;
- e. Any additional information indicating the source's compliance status with any applicable enhanced monitoring and compliance certification, including the requirements of Section 114 (a)(3) of the Clean Air Act or any applicable monitoring and analysis provisions of Section 504 (b) of the Clean Air Act;
- f. Brief description of any deviations including identifying as possible exceptions to compliance any periods during which compliance is required and in which the excursion or exceedances as defined in 40 CFR 64 occurred; and
- g. Any additional information as required by the Department of Health, including information to determine compliance.

The compliance certification shall be submitted within **sixty (60) days after** the end of each calendar year and shall be signed and dated by a responsible official.

Upon the written request of the permittee, the deadline for submitting the compliance certification may be extended, if the Department of Health determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-4, §11-60.1-86, §11-60.1-90)

10. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **annually** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due **within sixty (60) days following** the end of each calendar year. The enclosed **Annual Emissions Report Form: Boiler** shall be used for reporting. Upon the written request of the permittee, the deadline for reporting annual emissions may be extended, if the Department of Health determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

11. Annual Compliance Report

By March 1 of each year, the permittee shall submit to the Department of Health and U.S. EPA, Region 9, an annual compliance report for the previous calendar year containing the following information in accordance with 40 CFR §63.11225:

- a. Company name and address;
- b. Statement by a responsible official certifying the truth, accuracy and completeness of the notification;
- c. Descriptions of all deviations occurring during the reporting period; and
- d. The total fuel used and EPA non-waste determination.

(Auth.: HAR §11-60.1-3, §11-60.1-15, §11-60.1-90, 40 CFR §63.11225)¹

Section F. Testing Requirements

1. Performance Testing

Within sixty (60) days after achieving the maximum production rate at which the boiler will be operated, but **not later than 180 days after** the initial startup of the boiler, and annually thereafter, the permittee shall conduct, or cause to be conducted, performance tests on the boiler to determine the emission rates of NO_x (as NO₂), CO, PM, NH₃, and opacity of visible emissions for the purpose of determining compliance with the emission limits provided for under Special Condition No. C.5.a and C.5.b.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.8; SIP §11-60.6)^{1,2}

2. Performance Test Methods

- a. Performance tests for the emissions of NO_x (as NO₂), CO, PM, NH₃, and opacity of visible emissions shall be conducted and the results reported in accordance with test methods set forth in 40 CFR, Part 60, Appendix A, and 40 CFR Part 60, Section 60.8. The performance test shall be conducted at the maximum expected capacity of the boiler. The following test methods, or EPA approved equivalent methods shall be used:
 - i. Performance tests for CO emissions shall be conducted using EPA Methods 1-4 and 10;
 - ii. Performance tests for NO_x emissions shall be conducted using EPA Methods 1-4 and Method 7E or 19;
 - iii. Performance tests for PM shall be conducted in accordance with 40 CFR §60.46b PM emissions shall be reported as follows:
 - 1) Front half (filter and probe); and

- 2) Front and back half (probe, filter, and impingers). When conducting back half clean-up, all connectors and tubing of the back half sampling train up to and including the first impinger shall be properly rinsed. All rinses shall be included in the analysis for back half.
 - iv. Performance tests for NH₃ emissions shall be conducted using EPA Conditional Test Method 027 (CTM-027) or BAAQMD Method ST-1B;
 - v. During the initial performance test, compliance with the opacity standard of Special Condition No. C.6 shall be determined in accordance with 40 CFR §60.46b(d)(7) and §63.11224(e)(2). The permittee shall record COMS monitoring data produced during the initial performance test and shall furnish the Department of Health a written report of the monitoring results along with the Method 9 and 40 CFR §60.8 and §63.7 performance test results; and
 - vi. During the annual performance tests, compliance with the opacity standard of Special Condition No. C.6 shall be determined with COMS data collection in accordance with 40 CFR §60.11(e)(5).
 - b. Performance tests for NO_x, CO, PM, and NH₃ as required by Special Condition No. F.1.a, shall consist of three (3) separate runs using the applicable test method. For the purpose of determining compliance with the permit requirements, the arithmetic mean of the results from the three (3) runs shall apply. For each test run, the following operating parameters shall be recorded and reported:
 - i. Wood chip fuel feed rate measured in tons per hour (the feed rate shall be determined using an approved method as detailed in the protocol of Special Condition No. C.1.b);
 - ii. Wood chip heat input to the boiler in MMBtu per hour;
 - iii. Ammonia/Urea injection rate in pounds per MMBtu;
 - iv. Boiler steam flow rate in pounds per hour; and
 - v. Minimum second stage voltage reading in kV.
 - c. Any deviations from these conditions, test methods, or procedures may be cause for rejection of the test results unless such deviations are approved by the Department of Health before the test.
- (Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.8; SIP §11-60.6)^{1,2}
3. A minimum second stage voltage shall be established during the initial performance test of the boiler for monitoring the operating condition of the electrostatic precipitator to ensure adequate particulate matter control. The minimum second stage voltage shall be identified in the Test Report of Special Condition No. F.6.

(Auth.: §11-60.1-5, §11-60.1-11, §11-60.1-90)

4. The minimum Ammonia/Urea injection rate shall be established during the initial performance test and annually thereafter for monitoring the operating condition of the Ammonia/Urea injection system to ensure adequate NO_x control. The minimum Ammonia/Urea injection rate shall be identified in the Test Report of Special Condition No. F.6.

(Auth.: §11-60.1-5, §11-60.1-11, §11-60.1-90)

5. Test Plan

At least sixty (60) calendar days prior to performing a test, the permittee shall submit a written performance test plan to the Department of Health and U.S. EPA, Region 9, that includes the date(s) of the test, test duration, test locations, test methods, source operation and other parameters that may affect test results. Such a plan shall conform to EPA guidelines including quality assurance procedures. A test plan or quality assurance plan that does not have the approval of the Department of Health may be grounds to invalidate any test and require a retest.

(Auth.: HAR §11-60.1-5, §11-60.1-11, 11-60.1-90, §11-60.1-161; 40 CFR 60.8; SIP §11-60-15)^{1,2}

6. Test Report

Within sixty (60) days after completion of the performance test, the permittee shall submit to the Department of Health and U.S. EPA, Region 9, the test report which shall include the operating conditions of the boiler at the time of the test, the summarized test results, comparative results with the permit emission limits, and other pertinent field and laboratory data.

(Auth.: HAR §11-60.1-11, §11-60.1-90; 40 CFR §60.8; SIP §11-60-15)^{1,2}

7. Test Expense and Monitoring

The permittee shall provide sampling and testing facilities at its own expense. All performance tests may be monitored by the Department of Health.

(Auth.: HAR §11-60.1-5, §11-60.1-11, §11-60.1-90; SIP §11-60-15)²

8. Test Waiver

Upon written request and justification, the Department of Health may waive the requirement for, or a portion of, a specific source performance test. The waiver request is to be submitted prior to the required test and must include documentation justifying such action.

Documentation should include, but is not limited to, the results of the prior performance test indicating compliance by a wide margin, documentation of continuing compliance, and further that operations of the source have not changed since the previous source test.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

Section G. Agency Notification

Any document (including reports) that is required to be submitted by this covered source permit shall be done in accordance with Attachment I, Standard Condition 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

- ¹. The citations to the Code of Federal Regulations (CFR) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the CFR. Due to the integration of the preconstruction and operating permit requirements, permit conditions may incorporate more stringent requirements than those set forth in the CFR.
- ². The citations to the State Implementation Plan (SIP) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the SIP.

**ATTACHMENT II - INSIG
SPECIAL CONDITIONS - INSIGNIFICANT ACTIVITIES
COVERED SOURCE PERMIT NO. 0650-01-C**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

In addition to the Standard Conditions of the Covered Source Permit, the following Special Conditions shall apply to the permitted facility:

Section A. Equipment Description

This attachment encompasses insignificant activities listed in HAR, §11-60.1-82(f) and (g) for which provisions of this permit and HAR, Subchapter 2, General Prohibitions, apply.

(Auth.: HAR §11-60.1-3)

Section B. Operational Limitations

1. The permittee shall take measures to operate applicable insignificant activities in accordance with the provisions of HAR, Subchapter 2 for visible emissions, fugitive dust, incineration, process industries, sulfur oxides from fuel combustion, storage of volatile organic compounds, volatile organic compound water separation, pump and compressor requirements, and waste gas disposal.

(Auth.: HAR §11-60.1-3, §11-60.1-82, §11-60.1-90)

2. The Department of Health may at any time require the permittee to further abate emissions if an inspection indicates poor or insufficient controls.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-82, §11-60.1-90)

Section C. Monitoring and Recordkeeping Requirements

1. The Department of Health reserves the right to require monitoring, recordkeeping, or testing of any insignificant activity to determine compliance with the applicable requirements.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

2. All records shall be maintained for at least five (5) years from the date of any required monitoring, recordkeeping, testing, or reporting. These records shall be true, accurate, and maintained in a permanent form suitable for inspection and made available to the Department of Health or its authorized representative upon request.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90)

Section D. Notification and Reporting

Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA, Region 9, the attached *Compliance Certification Form* pursuant to HAR, Subsection 11-60.1-86. The permittee shall indicate whether or not compliance is being met with each term or condition of this permit. The compliance certification shall include, at a minimum, the following information:

1. The identification of each term or condition of the permit that is the basis of the certification;
2. The compliance status;
3. Whether compliance was continuous or intermittent;
4. The methods used for determining the compliance status of the source currently and over the reporting period;
5. Any additional information indicating the source's compliance status with any applicable enhanced monitoring and compliance certification including the requirements of Section 114(a)(3) of the Clean Air Act or any applicable monitoring and analysis provisions of Section 504(b) of the Clean Air Act;
6. Brief description of any deviations including identifying as possible exceptions to compliance any periods during which compliance is required and in which the excursion or exceedances as defined in 40 CFR 64 occurred; and
7. Any additional information as required by the Department of Health including information to determine compliance.

The compliance certification shall be submitted **within sixty (60) days** after the end of each calendar year, and shall be signed and dated by a responsible official.

Upon written request of the permittee, the deadline for submitting the compliance certification may be extended, if the Department of Health determines that reasonable justification exists for the extension.

In lieu of addressing each emission unit as specified in *Compliance Certification Form*, the permittee may address insignificant activities as a single unit provided compliance is met with all applicable requirements. If compliance is not totally attained, the permittee shall identify the specific insignificant activity and provide the details associated with the noncompliance.

(Auth.: HAR §11-60.1-4, §11-60.1-86, §11-60.1-90)

Section E. Agency Notification

Any document (including reports) required to be submitted by this Covered Source Permit shall be done in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

**ATTACHMENT III: ANNUAL FEE REQUIREMENTS
COVERED SOURCE PERMIT NO. 0650-01-C**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

The following requirements for the submittal of annual fees are established pursuant to Hawaii Administrative Rules (HAR), Title 11, Chapter 60.1, Air Pollution Control. Should HAR, Chapter 60.1 be revised such that the following requirements are in conflict with the provisions of HAR, Chapter 60.1, the permittee shall comply with the provisions of HAR, Chapter 60.1:

1. Annual fees shall be paid in full:
 - a. Within **sixty (60) days** after the end of each calendar year; and
 - b. Within **thirty (30) days** after the permanent discontinuance of the covered source.
2. The annual fees shall be determined and submitted in accordance with Hawaii Administrative Rules, Chapter 11-60.1, Subchapter 6.
3. The annual emissions data for which the annual fees are based shall accompany the submittal of any annual fees and be submitted on forms furnished by the Department of Health.
4. The annual fees and the emission data shall be mailed to:

**Clean Air Branch
Environmental Management Division
Hawaii Department of Health
919 Ala Moana Boulevard, Room 203
Honolulu, HI 96814**

**ATTACHMENT IV: ANNUAL EMISSIONS REPORTING REQUIREMENTS
COVERED SOURCE PERMIT NO. 0650-01-C**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the nature and amounts of emissions.

1. Complete the attached form(s):

Annual Emission Report Form: Boiler

2. The reporting period shall be from January 1 to December 31 of each year. All reports shall be submitted to the Department of Health within **sixty (60) days** after the end of each calendar year and shall be mailed to the following address:

**Clean Air Branch
Environmental Management Division
Hawaii Department of Health
919 Ala Moana Boulevard, Room 203
Honolulu, HI 96814**

3. The permittee shall retain the information submitted, including all emission calculations. These records shall be in a permanent form suitable for inspection, retained for a minimum of five (5) years, and made available to the Department of Health upon request.
4. Any information submitted to the Department of Health without a request for confidentiality shall be considered public record.
5. In accordance with HAR, Section 11-60.1-14, the permittee may request confidential treatment of specific information, including information concerning secret processes or methods of manufacture, by submitting a written request to the Director and clearly identifying the specific information that is to be accorded confidential treatment.

COMPLIANCE CERTIFICATION FORM
[TEMPORARY] COVERED SOURCE PERMIT NO. 0650-01-C

PAGE 1 OF ____

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following certification at least annually, or more frequently as requested by the Department.

(Make Copies of the Compliance Certification Form for Future Use)

For Period: _____ Date: _____

Company/Facility Name: _____

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by Department of Health as public record. I further state that I will assume responsibility for the construction, modification, or operation of the source in accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, and any permit issued thereof.

**COMPLIANCE CERTIFICATION FORM
[TEMPORARY] COVERED SOURCE PERMIT NO. 0650-01-C
(CONTINUED, PAGE 2 OF ___)**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

The purpose of this form is to evaluate whether or not the facility was in compliance with the permit terms and conditions during the covered period. If there were any deviations to the permit terms and conditions during the covered period, the deviation(s) shall be certified as *intermittent compliance* for the particular permit term(s) or condition(s). Deviations include failure to monitor, record, report, or collect the minimum data required by the permit to show compliance. In the absence of any deviation, the particular permit term(s) or condition(s) may be certified as *continuous compliance*.

Instructions:

Please certify Sections A, B, and C below for continuous or intermittent compliance. Sections A and B are to be certified as a group of permit conditions. Section C shall be certified individually for each operational and emissions limit condition as listed in the Special Conditions section of the permit (list all applicable equipment for each condition). Any deviations shall also be listed individually and described in Section D. The facility may substitute its own generated form in verbatim for Sections C and D.

A. Attachment I, Standard Conditions

<u>Permit term/condition</u>	<u>Equipment</u>	<u>Compliance</u>
All standard conditions	All Equipment listed in the permit	Continuous Intermittent

B. Special Conditions - Monitoring, Recordkeeping, Reporting, Testing, and INSIG

<u>Permit term/condition</u>	<u>Equipment</u>	<u>Compliance</u>
All monitoring conditions	All Equipment listed in the permit	Continuous Intermittent
All recordkeeping conditions	All Equipment listed in the permit	Continuous Intermittent
All reporting conditions	All Equipment listed in the permit	Continuous Intermittent
All testing conditions	All Equipment listed in the permit	Continuous Intermittent
All INSIG conditions	All Equipment listed in the permit	Continuous Intermittent

COMPLIANCE CERTIFICATION FORM
[TEMPORARY] COVERED SOURCE PERMIT NO. 0650-01C
(CONTINUED, PAGE ____ OF ____)

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

C. Special Conditions - Operational and Emissions Limitations

Each permit term/condition shall be identified in chronological order using attachment and section numbers (e.g., Attachment II, B.1, Attachment IIA, Special Condition No. B.1.f, etc.). Each equipment shall be identified using the description stated in Section A of the Special Conditions (e.g., unit no., model no., serial no., etc.). Check all methods (as required by permit) used to determine the compliance status of the respective permit term/condition.

<u>Permit term/condition</u>	<u>Equipment</u>	<u>Method</u>	<u>Compliance</u>
		monitoring recordkeeping reporting testing none of the above	Continuous Intermittent
		monitoring recordkeeping reporting testing none of the above	Continuous Intermittent
		monitoring recordkeeping reporting testing none of the above	Continuous Intermittent
		monitoring recordkeeping reporting testing none of the above	Continuous Intermittent
		monitoring recordkeeping reporting testing none of the above	Continuous Intermittent
		monitoring recordkeeping reporting testing none of the above	Continuous Intermittent
		monitoring recordkeeping reporting testing none of the above	Continuous Intermittent

(Make Additional Copies if Needed)

COMPLIANCE CERTIFICATION FORM
[TEMPORARY] COVERED SOURCE PERMIT NO. 0650-01-C
(CONTINUED, PAGE ___ OF ___)

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

D. Deviations

<u>Permit Term/ Condition</u>	<u>Equipment / Brief Summary of Deviation*</u>	<u>Deviation Period time (am/pm) & date (mo/day/yr)</u>	<u>Date of Written Deviation Report to DOH (mo/day/yr)</u>
		Beginning: Ending:	

*Identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR 64 occurred.

(Make Additional Copies if Needed)

**EXCESS EMISSION AND MONITORING SYSTEM
PERFORMANCE SUMMARY REPORT
COVERED SOURCE PERMIT NO. 0650-01-C
PAGE 1 OF 2**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually.

(Make Copies for Future Use)

Company name: _____

Facility name: _____

Equipment location: _____

Equipment description: _____

Serial/ID Number: _____

Pollutant Monitored: Opacity

From: Date: _____ Time: _____

To: Date: _____ Time: _____

Emission Limitation: _____

Date of Last CMS Certification/Audit: _____

Total Source Operating Time: _____

EMISSION DATA SUMMARY

1. Duration (Hours) of Excess Emissions in Reporting Period due to:
 - a. Startup/Shutdown..... _____
 - b. Cleaning/Soot Blowdown..... _____
 - c. Control Equipment Failure..... _____
 - d. Process Problems..... _____
 - e. Other Known Causes..... _____
 - f. Unknown Causes..... _____
 - g. Fuel Problems..... _____Number of incidents of excess emissions..... _____
2. Total Duration of Excess Emissions..... _____
3. Total Duration of Excess Emissions..... _____
(% of Total Source Operating Time)

**EXCESS EMISSION AND MONITORING SYSTEM
PERFORMANCE SUMMARY REPORT
COVERED SOURCE PERMIT NO. 0650-01-C
(PAGE 2 OF 2)**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

(Make Copies for Future Use)

COMS PERFORMANCE SUMMARY

1. CMS Downtime (Hours) in Reporting Period Due to:
 - a. Monitor Equipment Malfunctions..... _____
 - b. Non-Monitor Equipment Malfunctions..... _____
 - c. Quality Assurance Calibration..... _____
 - d. Other Known Causes..... _____
 - e. Unknown Causes..... _____Number of incidents of monitor downtime..... _____
2. Total CMS Downtime..... _____
3. Total CMS Downtime..... _____
(% of Total Source Operating Time)

CERTIFICATION by Responsible Official

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.

Responsible Official (PRINT): _____

TITLE: _____

Responsible Official (Signature): _____

**ANNUAL EMISSIONS REPORT FORM
BOILER
COVERED SOURCE PERMIT NO. 0650-01-C**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the nature and amounts of emissions.

(Make Copies for Future Use)

For Period: _____ Date: _____

Company name: _____

Facility name: _____

Equipment location: _____

Equipment description: _____

Serial/ID Number: _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

For the reporting period:

1. Wood Fired in Boiler

a. Total wood chip heat input^a to the boiler (MMBtu/year): _____

b. Total quantity of wood chips fired by the boiler (tons/yr): _____

c. Total quantity of steam produced by the boiler (lbs/yr): _____

d. Total number of startups for the boiler: _____

^aWood chip heat input shall include all periods of operation, including startup and shutdown.

2. Fuel Oil No. 2 Fired in the Boiler

a. Total quantity of fuel oil no. 2 fired in the boiler (gal/year): _____

3. Biodiesel Fired in the Boiler

a. Total quantity of biodiesel fired in the boiler (gal/year): _____

**MONITORING REPORT FORM
BOILER
COVERED SOURCE PERMIT NO. 0650-01-C
PAGE 1 OF 9**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

(Make Copies for Future Use)

For Period: _____ Date: _____

Company name: _____

Facility name: _____

Equipment location: _____

Equipment description: _____

Serial/ID Number: _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

For the reporting period:

- Total heat input to the boiler from the combustion of wood, fuel oil no. 2, and biodiesel:

Month	Total Heat Input to the Boiler ^a (MMBtu/month)	Total Heat Input to the Boiler (MMBtu/rolling twelve-month (12-month) period)
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

^aTotal heat input shall include all operating conditions, including but not limited to, startup and shutdown of the boiler.

The permittee shall provide the supporting calculations used to determine the total heat input to the boiler.

**MONITORING REPORT FORM
BOILER
COVERED SOURCE PERMIT NO. 0650-01-C
PAGE 2 OF 9**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

(Make Copies for Future Use)

2. Startup and Shutdown Durations

Provide dates, times and durations of each startup exceeding eight (8) hours and each shutdown exceeding two (2) hours.

Date and Time	Indicate if Startup or Shutdown	Total Duration of Startup or Shutdown (hours and minutes)	Reason for Noncompliance/Final Outcome/Corrective Actions Taken

**MONITORING REPORT FORM
BOILER
COVERED SOURCE PERMIT NO. 0650-01-C
PAGE 3 OF 9**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

(Make Copies for Future Use)

3. Air Pollution Controls

Provide dates, times, and durations when the air pollution control(s) was not operated as specified in Attachment II, Special Condition No. C.3.a, C.3.b, or C.3.c.

Date and Time	Identify Special Condition No.	Specify Air Pollution Control Out of Compliance (ESP and/or SNCR)	Duration Out of Compliance (hours and minutes)	Reason for Noncompliance/Final Outcome/Corrective Actions Taken

Indicate in the table above if there were no such incidences during the reporting period.

4. Identify all periods of time the boiler was operated when a problem affecting the NO_x control efficiency of the Ammonia/Urea injection system or the PM control efficiency of the electrostatic precipitator was observed or apparent at any time

Date and Time	Specify Air Pollution Control Out of Compliance (ESP and/or SNCR)	Duration Out of Compliance (hours and minutes)	Reason for Noncompliance/Final Outcome/Corrective Actions Taken

Indicate in the table above if there were no such incidences during the reporting period.

**MONITORING REPORT FORM
BOILER
COVERED SOURCE PERMIT NO. 0650-01-C
PAGE 4 OF 9**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

(Make Copies for Future Use)

5. Minimum Ammonia/Urea Injection Rate

Noncompliance with Attachment II, Special Condition No. C.3.e (minimum ammonia/urea injection rate) shall only be reported for the periods following the initial performance test establishing the minimum ammonia/urea injection rate

Date	Three Hour Average Ammonia/Urea Injection Rate (lb/MMBtu)	Duration Out of Compliance (hours and minutes)	Reason for Noncompliance/Final Outcome/Corrective Actions Taken

Indicate in the table above if there were no such incidences during the reporting period.

**MONITORING REPORT FORM
BOILER
COVERED SOURCE PERMIT NO. 0650-01-C
PAGE 5 OF 9**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

(Make Copies for Future Use)

6. Noncompliance with Attachment II, Special Condition No. C.3.f (minimum second stage voltage) shall only be reported for the periods following the initial performance test establishing the minimum second stage voltage.

Date	Second Stage Voltage	Duration Out of Compliance (hours and minutes)	Reason for Noncompliance/Final Outcome/Corrective Actions Taken

Indicate in the table above if there were no such incidences during the reporting period.

**MONITORING REPORT FORM
BOILER
COVERED SOURCE PERMIT NO. 0650-01-C
PAGE 6 OF 9**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

(Make Copies for Future Use)

7. Fuel Certification

Type of wood fired in the Boiler	If type of wood indicated is wood other than albizia or eucalyptus, indicate whether or not approval was received from the Department of Health prior to its introduction to the boiler (yes/no)

Indicate noncompliance with Attachment II, Special Condition No. C.4.b. (The wood chips shall be untreated and uncontaminated by paint, oils, salts, pressure treated material, glues, preservatives, added chemicals, or similar foreign substances. Use of construction demolition debris of any type as wood fuel is explicitly prohibited.)

Date	Description of Wood Treatment, Contamination, or whether Construction Debris was used in the Boiler	Quantity Fired (tons)

Indicate in the table above if there were no such incidences during the reporting period.

**MONITORING REPORT FORM
BOILER
COVERED SOURCE PERMIT NO. 0650-01-C
PAGE 7 OF 9**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

(Make Copies for Future Use)

8. Fuel Oil No. 2 and Biodiesel Fuel Consumption

Month	Total Combined Quantity of Fuel Oil No. 2 and Biodiesel Fired in the Boiler (gal/month)	Total Combined Quantity of Fuel Oil No. 2 and Biodiesel Fired in the Boiler (gal/rolling 12-month period)
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

9. Fuel Oil No. 2 and Biodiesel Annual Capacity Factor

Month	Total Actual Heat Input to the Boiler from Fuel Oil No. 2 and Biodiesel (MMBtu/month)	Annual Capacity Factor (%/rolling 12-month period)
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

Supporting information showing details of how the Actual Heat Input and Annual Capacity Factors were determined shall be submitted with this semi-annual monitoring report.

**MONITORING REPORT FORM
BOILER
COVERED SOURCE PERMIT NO. 0650-01-C
PAGE 8 OF 9**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

10. Fuel Oil No. 2 and Biodiesel Sulfur Content

Type of Fuel	Maximum Fuel Sulfur Content (% by weight)
Fuel Oil No. 2	
Biodiesel	

Indicate in the table above if any fuels other than wood, fuel oil no. 2, or biodiesel were fired in the boiler. Provide the type of fuel, quantity fired, and sulfur content in percent by weight.

If not already on file at the Department of Health, provide the supplier's fuel specification sheet for the type of fuel indicated in the above table. The fuel specification sheet shall indicate the % sulfur content by weight.

11. Total NO_x Emissions from the Boiler

Month	Total NO _x Emissions from the Boiler (tons/month)	Total NO _x Emissions from the Boiler (tons/rolling twelve-month (12-month) period)
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

**MONITORING REPORT FORM
BOILER
COVERED SOURCE PERMIT NO. 0650-01-C
PAGE 9 OF 9**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

12. Malfunction of Boiler, Ammonia/Urea Injection System, Electrostatic Precipitator, or Continuous Monitoring System

Date, time, description, and duration of any malfunctions in the operation of the boiler, Ammonia/Urea injection system, electrostatic precipitator, or continuous monitoring system.

Date	Time	Duration (hours and minutes)	Description

Explain for each incidence the reason why it occurred, the final outcome, and any actions taken to correct the situation. If no incidences of the above were experienced during the reporting period, the report shall so state.

**COMPLIANCE ASSURANCE MONITORING PLAN
OXIDES OF NITROGEN
COVERED SOURCE PERMIT NO. 0650-02-C
(PAGE 1 OF 2)**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

I. Background

A. Emissions Unit

Boiler

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation: BACT (Significant modification to CSP No. 0650-01-C)

Emission Limits: NO_x: 0.25 lb/MMBtu (HHV) and 25 lb/hr (both 3-hour average basis)

Pre CAM Monitoring Requirements: None (new unit)

C. Control Technology

Selective non-catalytic reduction (ammonia/urea injection)

II. Monitoring Approach

A. Indicators

Ammonia/urea injection rate.

B. Measurement Approach

Continuous monitoring and recording of ammonia/urea injection rate in gallons per minute.

C. Indicator Range

Excursions for NO_x occur when the ammonia feed rate, as measured by the CMS, is less than the minimum ammonia feed rate in pounds per MMBtu of heat input that demonstrates compliance with the applicable emission limit for NO_x over any three-hour (3-hour) period, as determined based on analyses of the results of the most recent performance test.

**COMPLIANCE ASSURANCE MONITORING PLAN
OXIDES OF NITROGEN
COVERED SOURCE PERMIT NO. 0650-02-C
(PAGE 2 OF 2)**

Issuance Date: June 20, 2011

Expiration Date: June 12, 2013

D. Performance Criteria

Data Representativeness: CMS will be installed and maintained in accordance with manufacturer's instructions.

Verification of Operational Status: Completion of the manufacturer's written requirements for installation, operation, and calibration of the CMS.

QA/QC Practices and Criteria: The CMS will be calibrated and maintained in accordance with manufacturer's instructions and specifications.

Monitoring Frequency: Ammonia/urea injection rate will be monitored continuously.

Data Collection Procedures: Ammonia/urea injection rate will be recorded continuously.

Averaging Period: Ammonia/urea injection rate averaged over three-hour (3-hour) period.