LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:
File:

December 23, 2009

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
(7004 2510 0004 3155 9475)

09-1099E CAB
File No. 0255

Mr. William C. Goldate
Vice President, Engineering and Construction
Covanta Energy
40 Lane Road
Fairfield, New Jersey 07004

Dear Mr. Goldate:

Subject: Covered Source Permit (CSP) No. 0255-01-C
Application for Modification No. 0255-05
Covanta Honolulu Resource Recovery Venture (CHRRV)
Honolulu Program of Waste Energy Recovery (H-POWER)
H-POWER Municipal Waste Combustor Facility
Located at: 91-174 Hanua Street, Kapolei, Oahu
UTM - 592,618 Meters East and 2,356,415 Meters North, Zone 4 (NAD-27)
Date of Expiration: February 27, 2011

The subject covered source permit is issued in accordance with Hawaii Administrative Rules (HAR), Title 11, Chapter 60.1, Air Pollution Control and 40 Code of Federal Regulations (CFR) §52.21, Prevention of Significant Deterioration (PSD). The issuance of this permit is based on the plans, specifications, and information that you submitted as part of your application for modification on October 24, 2008 to expand the facility by adding a 900 ton per day mass-burn municipal waste combustor (MWC) boiler to the existing facility. Existing equipment for the facility includes two (2) 854 ton per day refuse derived fuel (RDF) MWC boilers. The issuance of this permit is also based on the additional information received on March 4 and 9, April 3 and 14, May 18, 22, and 26, August 10, 17, 19, 20, 25, and 31, September 1, 2 and October 5, 6, 8, and 12, 2009 as part of your application.

The conditions of this permit modification supersede all conditions contained in all prior permits. Permit conditions pertaining to each of the two electrostatic precipitators in Attachment IIB shall remain valid until the fabric filter baghouse replacements for the applicable unit are installed and initially operated.

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

Attachment I:	Standard Conditions
Attachment IIA:	Special Conditions – Mass-Burn MWC Boiler
Attachment IIB:	Special Conditions – RDF MWC Boilers
Attachment IIC	Special Conditions – Waste Processing Facility
Attachment IID	Special Conditions – Cooling Towers
Attachment II - INSIG:	Special Conditions - Insignificant Activities
Attachment III:	Annual Fee Requirements
Attachment IV:	Annual Emissions Reporting Requirements

The following forms are enclosed your use and submittal as required:

Compliance Certification Form
Excess Emission and Monitoring System Performance Summary Report
Annual Emissions Report Form: MWC Boilers
Annual Emissions Report Form: Waste Processing Facility Baghouses
Annual Emissions Report Form: Cooling Towers
Monitoring Report Form: MWC Boiler Fuel Consumption
Monitoring Report Form: MWC Boiler Operation
Monitoring Report Form: Waste Processing Facility Baghouses
Monitoring Report Form: Cooling Towers

The following plans are enclosed for compliance assurance monitoring requirements:

Compliance Assurance Monitoring Plan:	Fluorides and Sulfuric Acid Mist
Compliance Assurance Monitoring Plan:	PM, PM_{10}, $PM_{2.5}$, and MWC Metals

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 Hawaii 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,

THOMAS E. ARIZUMI, P.E., CHIEF
Environmental Management Division

MM:nn
Enclosures

c: Robert Webster, H-POWER
CAB Monitoring Section

APPROVAL TO CONSTRUCT A STATIONARY PSD SOURCE
(CSP NO. 0255-01-C)
COVANTA HONOLULU RESOURCE RECOVERY VENTURE
H-POWER FACILITY EXPANSION, KAPOLEI, OAHU

In compliance with the provisions of the Clean Air Act, as amended, and the PSD delegation agreement of August 15, 1983, as amended on January 5, 1989, between the U.S. Environmental Protection Agency (EPA), Region 9, and the State of Hawaii, CHRRV is hereby granted approval to construct a stationary source for the H-POWER facility expansion which includes a 900 ton per day mass-burn MWC boiler, associated air pollution control equipment and systems, and three-cell cooling tower. Air pollution control for the new boiler will include a spray dryer absorber to minimize (sulfur dioxide (SO_2), hydrochloric acid (HCl), sulfuric acid mist (H_2SO_4), and hydrogen fluoride (HF)), baghouse for particulate removal, baghouse combined with carbon injection to control MWC metals, spray dryer absorber and baghouse combined with carbon injection and good combustion control to minimize MWC organics, good combustion control for reducing carbon monoxide (CO) emissions, and selective non-catalytic reduction (SNCR) combined with Covanta very low-NO_X (VLN) system to minimize nitrogen oxide (NO_X) emissions. Approval to construct is granted in accordance with the plans submitted with the application and with the federal regulations governing the prevention of significant air quality deterioration (40 CFR §52.21) and other conditions attached to this document and made part of this approval.

Failure to comply with any condition or term set forth in this approval will be considered grounds for enforcement action pursuant to Section 113 of the Clean Air Act.

This approval to construct and operate a stationary PSD source grants no relief from the responsibility for compliance with any other applicable provisions of 40 CFR, Parts 52, 60, 61, 63, and 64 or any applicable federal, state, or local air quality regulations.

Thomas Arizumi
Chief, Environmental Management Division
Hawaii Department of Health

Date: 12/15/09

for Deborah Jordan
Director, Air Division
U.S. Environmental Protection Agency, Region 9

Date: 12/23/09

ATTACHMENT IIA: SPECIAL CONDITIONS – MASS-BURN MWC BOILER
COVERED SOURCE PERMIT NO. 0255-01-C

Issuance Date: December 23, 2009 **Expiration Date: February 27, 2011**

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. Attachment IIA of this permit encompasses a 900 ton per day Martin mass-burn waterwall MWC boiler with Covanta VLN system, feed chute, moving grate, integrated furnace/boiler, associated ash collection systems, 277 feet high x 7.3 feet diameter exhaust stack, and the following post combustion controls;

   a. SNCR system;
   c. Powdered activated carbon injection system;
   d. Lime injection system;
   e. Spray dryer absorber; and
   f. Fabric filter baghouse.

   (Auth.: HAR §11-60.1-3)

2. The permittee shall permanently attach an identification tag or name plate on the 900 ton per day MWC boiler, SNCR system, powdered activated carbon injection system, spray dryer absorber, and fabric filter baghouse which identifies the applicable model no., serial no., and manufacturer. The identification tag or name plate shall be permanently attached to the equipment at a conspicuous location.

   (Auth.: HAR §11-60.1-5)

Section B. Applicable Federal Regulations

1. The mass-burn MWC boiler and associated equipment are subject to the following federal regulations:

   a. 40 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 Eb, Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996;
   c. 40 CFR Part 64, Compliance Assurance Monitoring; and
   d. 40 CFR Part 52, §52.21, Prevention of Significant Deterioration of Air Quality.

2. The permittee shall comply with all applicable provisions of these standards, including all emission limits and all notification, testing, monitoring, and reporting 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 §52.21, §60.50b; §64.2)[1]

Section C. Operational and Emissions Limitations

1. Fuel Limits

   a. Except as provided in Attachment IIA, Special Condition No. C.12, the mass-burn MWC boiler shall be fired only on municipal solid waste (MSW), fuel oil No. 2, and used cooking oil.

   b. The maximum firing rate of the mass-burn MWC boiler shall not exceed 1,200 gallons per hour for the total combined firing of fuel oil No. 2 and used cooking oil auxiliary fuels.

   c. The total combined fuel oil No. 2 and used cooking oil auxiliary fuel consumption for the mass-burn MWC boiler shall not exceed 869,250 gallons in any rolling twelve-month (12-month) period.

   d. The maximum sulfur content of the fuel oil No. 2 auxiliary fuel fired by the mass-burn MWC boiler shall not to exceed 0.05% by weight.

   e. The mass-burn MWC boiler shall only be fired on fuel oil No. 2 auxiliary fuel during warm-up periods.

   f. The mass-burn MWC boiler shall only be fired on fuel oil No. 2 auxiliary fuel and MSW during start-up and shut-down periods.

   (Auth.: HAR §11-60.1-3, §11-60.1-38, §11-60.1-90; 40 CFR §52.21)[1]

2. Warm-up, Start-up, Shut-down, and Malfunction

   a. Except as provided in Attachment IIA, Special Condition No. C.2.b, the duration of start-up, shut-down, or malfunction periods for the mass-burn MWC boiler shall be limited to three (3) hours per occurrence. A start-up period commences when the boiler begins the continuous burning of MSW and does not include any warm-up period. A warm-up period is when the boiler is combusting fossil fuel or other nonmunicipal solid waste fuel, and no MSW is being fed to the combustor. Continuous burning is the continuous, semi-continuous, or batch feeding of MSW for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of MSW solely to

provide thermal protection of the grate or hearth during the start-up period when MSW is not being fed to the grate is not considered to be continuous burning. Shut-down commences when the MSW feed is stopped and fuel oil No. 2 auxiliary fuel is added to burn the remaining MSW in the mass-burn MWC boiler.

b. For purposes of compliance with the carbon monoxide emission limit specified in Attachment IIA, Special Condition No. C.8.d, if a loss of boiler water level control (e.g., boiler waterwall tube failure) or loss of combustion air control (e.g., loss of combustion air fan, induced air fan, combustion grate bar failure) is determined to be a malfunction, the duration of the malfunction period is limited to fifteen (15) hours per occurrence.

c. The duration of warm-up periods for the mass-burn MWC boiler shall not exceed 12 hours at a time.

d. Except for compliance calculations for opacity and mass emission limits specified in Attachment IIA, Special Condition Nos. C.8.a, C.8.b, and C.8.c, during periods of warm-up, start-up, shut-down, or malfunction of the mass-burn MWC boiler, continuous monitoring system (CMS) data shall be dismissed or excluded from compliance calculations, but shall be recorded and reported pursuant to Attachment IIA, Special Condition No. D.14. Monitoring data to determine compliance with the limits specified in Attachment IIA, Special Condition Nos. C.8.a, C.8.b, C.8.c, and C.9 shall not be excluded from compliance calculations.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §52.21, §60.58b(a)(1))[1]

3. Combustion Temperature

In any 4-hour block arithmetic average, except during warm-up, start-up, shut-down, or malfunction, the combustion temperature of the mass-burn MWC boiler shall be maintained at or above 1,800 ^{O}F. Combustion temperature is defined as the temperature of combustion gases at a point above the grate and below secondary air injection. Compliance with this criterion shall be established based upon correlated furnace roof thermocouple measurements. The correlated roof thermocouple temperature (based upon an average of thermocouples across the furnace width) shall be established during initial performance testing.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90; 40 CFR §52.21)[1]

4. Air Pollution Control Equipment and Systems

a. The permittee shall continuously operate and maintain the following air pollution control equipment and systems to minimize air emissions:

1) Covanta VLN system;

2) SNCR system;
3) Powdered activated carbon injection system;
4) Lime injection system;
5) Spray dryer absorber; and
6) Fabric filter baghouse.

b. Post combustion air pollution control systems shall be placed into service as follows:

1) On a continuous basis for the fabric filter baghouse;
2) Prior to initiation of waste combustion for the Covanta VLN system, SNCR system, powdered activated carbon injection system, lime injection system, and spray dryer absorber; and
3) Until cessation of continuous MSW combustion for the Covanta VLN system, SNCR system, powdered activated carbon injection system, lime injection system, and spray dryer absorber.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-140; 40 CFR §52.21)[1]

5. Operating Loads

a. In any 4-hour block arithmetic average, the mass-burn MWC boiler shall not operate at a load, based on steam or feedwater flow rate, greater than 110 percent of the highest 4-hour arithmetic average load as measured during the most recent dioxin/furan performance test that shows compliance with the emissions limit for MWC organics.

b. Attachment IIA, Special Condition No. C.5.a is not applicable during the dioxin/furan or mercury performance test, 2 weeks preceding the dioxin/furan or mercury performance test, and as provided in Attachment IIA, Special Condition No. C.5.c.

c. The mass-burn MWC boiler load limit may be waived in writing by the Department of Health for purpose of evaluating system performance, testing new technology or control technology, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90; 40 CFR §52.21, §60.53b(b))[1]

6. Baghouse Inlet Temperature

a. In any 4-hour block arithmetic average, the flue gas temperature at the inlet of the baghouse servicing the mass-burn MWC boiler shall not exceed 17 ^{O}C (approximately 30.6 ^{O}F if the temperature change is determined in ^{O}F) above the highest 4-hour arithmetic average temperature measured during the most recent dioxin/furan performance test demonstrating compliance with the emissions limit for MWC organics.

b. Attachment IIA, Special Condition No. C.6.a is not applicable during MWC boiler warm-up, start-up, shut-down, and malfunction, the dioxin/furan or mercury performance test, 2 weeks preceding the dioxin/furan or mercury performance test, and as provided in Attachment IIA, Special Condition No. C.6.c.

c. The flue gas temperature limit at the inlet of the baghouse servicing the mass-burn MWC boiler may be waived in writing by the Department of Health for purpose of evaluating system performance, testing new technology or control technology, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90; 40 CFR §52.21, §60.53b(c))[1]

7. Activated Carbon Mass Feed Rate

a. In any 8-hour block average, the activated carbon mass feed rate in pounds per hour for the activated carbon injection system shall equal or exceed the carbon mass feed rate established during the most recent performance test of the MWC boiler demonstrating compliance with the mercury and dioxin/furan emission limits specified in Attachment IIA, Special Condition No. C.8.d.

b. Attachment IIA, Special Condition No. C.7.a is not applicable during MWC boiler warm-up, start-up, shut-down and malfunction, the dioxin/furan or mercury performance test, 2 weeks preceding the dioxin/furan or mercury performance test, and as provided in Attachment IIA, Special Condition No. C.7.c.

c. The activated carbon mass feed rate limit may be waived in writing by the Department of Health for purpose of evaluating system performance, testing new technology or control technology, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90; 40 CFR §52.21, §60.53b, §60.58b)[1]

8. Maximum Emission Limits

a. For each warm-up period, the mass-burn MWC boiler shall not exceed the following emission limits:

Pollutant	Maximum Emission Limit
SO_2	102 lbs
CO	72 lbs
NO_X	346 lbs

b. For each start-up period, the mass-burn MWC boiler shall not exceed the following emission limits:

Pollutant	Maximum Emission Limit
SO_2	98 lbs
CO	414 lbs
NO_X	579 lbs

c. For each shut-down period, the mass-burn MWC boiler shall not exceed the following emission limits:

Pollutant	Maximum Emission Limit
SO_2	98 lbs
CO	414 lbs
NO_X	579 lbs

d. Except during warm-up, start-up, shut-down, and malfunction, the mass-burn MWC boiler shall not exceed the following emission limits:

Pollutant		Maximum Emission Limit[1,2]
SO_2	Annual[3,9]	26 ppmdv
	24-hour[4,9]	26 ppmdv
	3-hour[5,9]	44 ppmdv
PM (filterable only)		12 mg/dscm
PM_{10} (filterable + condensable)		32 mg/dscm
$PM_{2.5}$ (filterable + condensable)		30 mg/dscm
NO_X	Annual[3]	90 ppmdv
	24-hour[6]	110 ppmdv
CO	4-hour[7]	100 ppmdv
	30-day[8]	80 ppmdv
VOC (as CH_4)		10 ppmdv
Ammonia (from ammonia slip)		15 ppmdv
Cadmium		10 ug/dscm
Lead		140 ug/dscm
Mercury[10]		28 ug/dscm
Fluorides (as HF)		3.5 ppmdv
H_2SO_4		5 ppmdv
HCl[11]		25 ppmdv
MWC Metals (as PM)		12 mg/dscm
Dioxin/Furans		13 ng/dscm

Table Notes:

1. Emission limits shall not be exceeded for the mass burn MWC boiler except for warm-up, start-up, shut-down, and malfunction.
2. All emission limits are referenced to 7% O_2, dry gas basis.
3. Annual arithmetic average emissions limit.
4. 24-hour daily geometric average emissions limit.

5. 3-hour block arithmetic average.
6. 24-hour daily arithmetic average.
7. 4-hour block arithmetic average.
8. 30-day rolling average.
9. Maximum emissions limit indicated or at least 80% reduction by weight or volume (whichever is less stringent).
10. Maximum emissions limit indicated, or at least 85% reduction by weight (whichever is less stringent).
11. Maximum emissions limit indicated or at least 95% reduction by weight or volume (whichever is less stringent).

e. For applicable limits specified in Attachment IIA, Special Condition Nos. C.8.b and C.8.c, a minimum concentration of 5.0% CO_2 and a maximum concentration of 14.0% O_2 may be substituted for the measured diluent gas concentration values during hours when the hourly average concentration of CO_2 is less than 5.0% CO_2 or the hourly average concentration of O_2 is greater than 14.0% O_2.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90; 40 CFR §52.21, §60.52b, Part 75 Appendix F)[1]

9. MWC Boiler Opacity Limits

The mass-burn MWC boiler shall not exhibit greater than 10 percent opacity for any six (6) minute averaging period, except as follows: during warm-up, start-up, shut-down, or malfunction the mass-burn MWC boiler 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.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-32, §11-60.1-90; SIP §11-60-24; 40 CFR§52.21, §60.52b)[1,2]

10. Fugitive Emission Limits

a. The permittee shall take measures to control fugitive dust throughout the facility that includes sweeping access roads, maintaining enclosures for the ash conveying systems, conditioning the fly ash, and covering haul trucks. 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.

c. The permittee shall not cause to be discharged to the atmosphere visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) in excess of 5% of the observation period (i.e., 9 minutes per 3 hour period).

d. The fugitive emission limit specified in Attachment IIA, Special Condition No. C.10.c applies to visible emissions discharged to the atmosphere from buildings or enclosures of an ash conveying system.

e. The fugitive emission limit specified in Attachment IIA, Special Condition No. C.10.c does not apply to:

1) Visible emissions discharged inside buildings or enclosures of an ash conveying system; and
2) During maintenance and repair of an ash conveying system.

(Auth.: HAR §11-60.1-3, §11-60.1-33, §11-60.1-90, §11-60.1-161; 40 CFR §52.21, §60.55b)[1]

11 Operation and Maintenance

The permittee must operate and maintain the mass-burn MWC boiler, air pollution control equipment and systems, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including warm-up, start-up, shut-down, and malfunction. Scheduled inspections and maintenance shall be conducted as recommended by the manufacturer and as needed.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90; 40 CFR §52.21)[1]

12. Alternate Operating Scenario

a. The mass-burn MWC boiler may combust supplemental waste defined as discrete deliveries of waste components normally found in MSW, but delivered to the facility in quantities greater than those normally found in MSW. For combusting the supplemental waste, the permittee shall blend and mix the supplemental waste with MSW to ensure compliance with the permit limits specified in Attachment IIA, Special Condition Nos. C.8 and C.9. The following supplemental wastes and conditions apply to the alternate operating scenario:

1) Commodity Wastes – Waste generated by commercial operations or retail outlets and are accumulated as a result of material being off-specification, outdated, or deemed no longer fit for distribution, sale, or consumption. Commodity waste includes, but is not limited to, food products, health care products, cosmetics, and other store products.

2) Pharmaceutical Wastes – Waste that include prescription and non-prescription pharmaceuticals, controlled substances, and pharmaceutical waste regulated by the U.S. Drug Enforcement Agency (DEA). The waste is accumulated by pharmaceutical manufacturers, wholesalers, retailers, and hospitals or confiscated by law enforcement officers.

3) Manufacturing Wastes – Waste generated as a result of industrial and manufacturing processes. This category of waste would include floor sweepings, nonhazardous sludge, industrial filters (e.g., paint filters, air filters, etc.), adhesives, paints, and inks. No bulk liquid manufacturing wastes shall be accepted.

4) Oily Wastes – Include any of the following waste categories: (1) filters, (2) solid wastes containing "virgin oil", and (3) solid wastes containing used oil. The oily waste streams include, but are not limited to, rags, paper towels, granular or fiber absorbents, fabric pads and booms. Booms and pads shall be prepared as needed for processing. Commercial businesses such as spill cleanup companies and automobile repair shops generate oily wastes. Filters shall only be accepted if classified as nonhazardous, punctured, and drained of free liquids (40 CFR Part 261). Solid wastes containing "virgin oil" shall only be accepted if certified as a nonhazardous waste and if the waste contains no free liquid.

   Solid wastes containing used oil are considered Hawaii Special Waste and shall be managed as such. The used oil waste shall also be managed in accordance with federal standards outlined in 40 CFR Part 279 (EPA Standards for the Management of Used Oil). Waste oil products containing equal to or greater than 2 ppm of polychlorinated biphenyls (PCBs) shall not be accepted.

5) Used Cooking Oil – Waste generated primarily by restaurants. The used cooking oil shall be transported and decanted by contractors to remove water and particles.

6) Triple-Rinsed Containers – Waste containers comprised primarily of high density polyethylene plastic (HDPE) and may include polystyrene and polyurethane containers. Containers used to store pesticides are the major component of this waste type. Prior to delivery, the containers shall be cut into halves. The containers shall also be triple rinsed according to federal regulation 40 CFR Part 261.7 or the definition set forth in the Hawaii Solid Waste Management Control Regulations (Title 11), whichever is less stringent. The supplier shall provide a statement certifying that the containers were triple-rinsed according to acceptable rinsing methods.

7) Shredded Tires and Automobile Shredder Residue – Tire and automobile shredder residue are both considered Hawaii Special Wastes and shall be managed as such. Shredded tires shall be blended with other MSW prior to charging the MWC boiler with the waste. Mitigation of effects from tire sulfur content shall be accomplished by materials management and blending. Automobile shredder residue consists of items such as foam rubber, seat covers, gaskets, plastics, etc. Prior to acceptance, the supplier must analyze representative samples of automotive shredder residue for hazardous constituents, such as PCBs and heavy metals. Automobile shredder residue shall be blended with MSW prior to charging the MWC boiler if the automobile

shredder residue is determined to be nonhazardous and acceptable for processing.

8) Treated Medical Wastes – Treated medical wastes include sterilized waste generated from medical, veterinary, or other health care facilities and are considered Hawaii Special Wastes. Waste components include bandages, dressings, syringes, cultures, injectables, and infectious or pathological wastes that have been subject to sterilization (i.e., autoclave). The supplier is required to provide a statement that the treated medical wastes were sterilized appropriately.

9) Treated Foreign Wastes – Treated foreign wastes include sterilized solid waste generated by carriers leaving foreign ports and entering Hawaii and are considered Hawaii Special Wastes. Waste components include airline carrier garbage or solid waste from sea-going vessels. Foreign waste must comply with regulations set forth by the U.S. Department of Agriculture. In addition, foreign waste shall be processed in a manner similar to that for the management and processing of medical wastes in accordance with Hawaii regulations. The supplier is required to provide a statement certifying that the treated foreign wastes were sterilized appropriately.

b. The terms and conditions under the alternate operating scenario shall meet all applicable requirements including all conditions of this permit.

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

13. Operator Certification

No later than six (6) months after initial start-up of the mass-burn MWC boiler and associated equipment, each chief facility operator and shift supervisor shall:

a. Obtain and maintain a current provisional operator certification from the American Society of Mechanical Engineers (ASME) QRO-1-1994, or from an equivalent certification program approved by the Department of Health; and
b. Have completed full certification or shall have scheduled a full certification exam with ASME QRO-1-1994, or with an equivalent certification program approved by the Department of Health.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.54b)[1]

14. Staff on Duty

One of the following persons must always be on duty for operating the mass-burn MWC boiler: a fully certified chief facility operator, a provisionally certified chief facility operator who is scheduled to take the full certification exam according to the schedule specified in Attachment IIA, Special Condition No. C.13(b), a fully certified shift supervisor, or a provisionally certified shift supervisor who is scheduled to take the full certification exam according to the schedule specified in Attachment IIA, Special Condition No. C.13(b).

ATTACHMENT IIB: SPECIAL CONDITIONS – RDF MWC BOILERS
COVERED SOURCE PERMIT NO. 0255-01-C

Issuance Date: December 23, 2009 **Expiration Date: February 27, 2011**

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. Attachment IIB of this permit encompasses the following equipment and associated appurtenances:

   a. 854 ton per day Combustion Engineering RDF MWC boiler, model no. VU-40, serial no. 28185-01 with 290 feet high x 6.3 feet diameter flue stack in common stack for both RDF MWC boilers and the following post combustion controls:

      1) Combustion Engineering spray dryer absorber, model no. C-E ESD, serial no. 85187-01 with 189,500 acfm capacity and 14,000 rpm spray nozzles;
      2) Lime injection system servicing the spray dryer absorber;
      3) SPE-Amerex baghouse, model no. RA-35-180-D12, serial no. 1921-01 with 8-10 modules and 175-200 bags per module; and
      4) Combustion Engineering electrostatic precipitator, model no. 1P1C3D5F, serial no. 34185-01 with 174,155 acfm capacity.

   b. 854 ton per day Combustion Engineering RDF MWC boiler, model no. VU-40, serial no. 28185-02 with 290 feet high x 6.3 feet diameter flue stack in common stack for both RDF MWC boilers and the following post combustion controls:

      1) Combustion Engineering spray dryer absorber, model no. C-E ESD, serial no. 85187-02 with 189,500 acfm capacity and 14,000 rpm spray nozzles;
      2) Lime injection system servicing the spray dryer absorber;
      3) SPE-Amerex baghouse, model no. RA-35-180-D13, serial no. 1921-02 with 8-10 modules and 175-200 bags per module; and
      4) Combustion Engineering electrostatic precipitator, model no. 1P1C3D5F, serial no. 34185-02 with 174,155 acfm capacity.

   (Auth.: HAR §11-60.1-3; 40 CFR §52.21)

2. An identification tag or name plate shall be displayed on the equipment listed above which identifies the model no., serial no., and manufacturer. The identification tag or name plate shall be permanently attached to the equipment at a conspicuous location.

   (Auth.: HAR §11-60.1-5)

Section B. Applicable Federal Regulations

1. The RDF MWC boilers and associated equipment are subject to the provisions of the following federal regulations:

a. 40 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 Cb - Emission Guidelines and Compliance Times for Municipal Waste Combustors Constructed on or Before September 20, 1994;
c. 40 CFR Part 60 Standards of Performance for New Stationary Sources, Subpart Eb - Standards of Performance for Large Municipal Waste Combustors for which Construction is Commenced after September 20, 1994 or for which Modifications or Reconstruction is Commenced after June 19, 1996 (as referenced by Subpart Cb);
d. 40 CFR Part 62 Subpart FFF - Federal Plan Requirements for Large Municipal Waste Combustors Constructed on or before September 20, 1994; and
e. 40 CFR Part 52, §52.21, Prevention of Significant Deterioration of Air Quality.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §52.21, §60, §62)[1]

2. The permittee shall comply with all applicable provisions of these standards, including all emission limits, notification, testing, monitoring, and reporting 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 §52.21, §60, §62)[1]

Section C. Operational Limitations

1. General

a. Facilities Operation

All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this CSP shall at all times be maintained in good working order and be operated as efficiently as possible to minimize air pollutant emissions.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90; 40 CFR §52.21)[1]

b. Malfunction

The Department of Health (DOH) shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit as stated in Section D., Emission Limitations. In addition, the DOH shall be notified in writing within five (5) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section D., Emission Limitations, and the methods utilized to restore normal operations. Compliance with this

malfunction notification shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. Malfunction periods shall not exceed 3 hours per occurrence except as follows: if a loss of boiler water level control (e.g., boiler waterwall tube failure) or a loss of combustion air control (e.g., loss of combustion air fan, induced draft fan, combustion grate bar failure) is determined to be a malfunction, the duration of the malfunction period is limited to 15 hours per occurrence for carbon monoxide emission limits.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §52.21, §60.58b(a)(1))[1]

c. Right to Entry

The Director for the DOH, the Regional Administrator for the Environmental Protection Agency (EPA), Region 9 and/or their authorized representatives, upon the presentation of credentials, shall be permitted:

1) To enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this CSP;
2) At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this CSP;
3) To inspect any equipment, operation, or method required in this CSP; and
4) To sample emissions from the source.

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

d. Fugitive Emissions

1) The permittee shall take measures to control fugitive dust throughout the facility, including but not limited to the following precautions with the ash handling system: the pugmill, conditioning the flyash, sweeping access roads, and covering haul trucks. The DOH may at any time require the permittee to further abate fugitive dust emissions if an inspection indicates poor or insufficient control.

2) The permittee shall not cause or permit fugitive dust to become airborne without taking reasonable precautions and shall not cause the discharge of visible emissions of fugitive dust beyond the lot line of the property on which the emissions originate.

(Auth.: HAR §11-60.1-3, §11-60.1-33, §11-60.1-90)[2]

e. Air Pollution Control Equipment

The permittee shall continuously operate and maintain the following air pollution controls to minimize air emissions:

1) Each MWC shall be equipped with a fabric filter for the control of particulate emissions;
2) Each MWC shall be equipped with a spray dryer absorber (SDA) to control of sulfur dioxide and acid gas emissions;
3) Each primary shredder shall be equipped with a baghouse to control particulate emissions; and
4) Each of the RDF processing lines shall be equipped with a baghouse to control particulate emissions.

(Auth.: HAR §11-60.1-3, §11-60.1-90; 40 CFR §52.21)[1]

2. MWCs

a. The MWC boilers shall be fired only on RDF, fuel oil no. 2, specification (spec) used oil, used cooking oil, or any combination thereof, except for the Alternate Operating Scenarios listed in Attachment IIA, Special Condition No. C.2.i.

(Auth.: HAR §11-60.1-3, §11-60.1-90; 40 CFR §52.21)[1]

b. The maximum firing rate of fuel oil (fuel oil no. 2, spec used oil, and used cooking oil) per MWC shall not exceed 1,770 gallons per hour.

(Auth.: HAR §11-60.1-3, §11-60.1-9; 40 CFR §52.21)[1]

c. The total fuel oil (fuel oil no. 2, spec used oil, and used cooking oil) consumption of each MWC shall not exceed 1,738,500 gallons in any rolling twelve (12) month period.

(Auth.: HAR §11-60.1-3, §11-60.1-90; 40 CFR §52.21)[1]

d. The MWCs shall be fired only on fuel oil no. 2 with a maximum sulfur content not to exceed 0.5 percent by weight.

(Auth.: HAR §11-60.1-3, §11-60.1-38, §11-60.1-90; 40 CFR §52.21)[1]

e. Combustion Temperature

In any 4-hour block average, the combustion temperature in the MWCs shall be maintained at or above 1800°F (except during MWC warm-up, start-up, shut-down, or malfunction). Combustion temperature is defined as the temperature of combustion gases at a point above the grate and below secondary air injection. Compliance with this criterion shall be established based upon correlated furnace roof thermocouple measurements. The correlated roof thermocouple temperature (based upon an average of thermocouples across the furnace width) shall be established during initial performance testing.

Combustion temperature monitoring shall be done according to Attachment IIA, Special Condition No. E.3.

(Auth.: HAR §11-60.1-3, §11-60.1-90; 40 CFR §52.21)[1]

f. Fabric Filter Inlet Temperature

1) In any 4-hour block average (except during and 2 weeks preceding the dioxin/furan performance tests and during MWC warm-up, start-up, shutdown, or malfunction), the flue gas temperature at the inlet of the fabric filter shall not exceed 17°C (approximately 30.6 ^{O}F if the temperature change is determined in ^{O}F) above the highest 4-hour arithmetic average measured during the most recent dioxin/furan performance test.

2) Upon DOH approval, this condition may be waived for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

(Auth.: HAR §11-60.1-3, §11-60.1-90; 40 CFR §52.21, §60.34b(b), §60.53b(c))[1]

g. MWC Load Level

1) In any 4-hour block average (except during and 2 weeks preceding the dioxin/furan performance tests), the MWCs shall not operate at a load based on steam (or feedwater) flow rate greater than 110 percent of the highest 4-hour arithmetic average measured during the most recent dioxin/furan performance test.

2) Upon DOH approval, this condition may be waived for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §52.21, §60.34b(b), §60.53b(b))[1]

h. Spec Used Oil

1) The permit conditions prescribed herein may be revised at any time by the DOH to reflect state or federal promulgated rules on used oil.

2) This permit shall not release the permittee from compliance with all applicable state and federal rules and regulations on the handling, transporting, storing and burning of used oil.

3) The used oil generated within the HPOWER facility may be burned in accordance with the procedures specified in this permit. Used oil may also be obtained from other sources, provided a written notification identifying the new source is submitted to the DOH, and approved, prior to the acceptance of the used oil.

4) The total amount of spec used oil fired in the MWCs shall not exceed 430,000 gallons in any rolling twelve (12) month period.

5) Samples shall be taken of the used oil from the onsite facility emptied into each 55-gallon drum. The samples shall be taken in such a manner that the composite sample obtained is representative of all the oil in the drums. Samples taken in this manner shall be composited for analysis. The composite sample shall represent no more than 1,500 gallons of spec used oil or all of the oil collected in any three (3) month period, whichever is less.

6) Each composite sample shall be submitted in a timely manner to a qualified laboratory and an analysis report shall be obtained for the constituents/properties for which limits are given in Attachment IIA, Special Condition No. C.2.h.8).

7) This permit does not authorize the permittee to burn hazardous waste. The permittee shall not burn the used oil if declared or determined to be a hazardous waste.

8) The following constituents/properties of the specification used oil shall not exceed the specified limits listed below:

Constituent/Property	Allowable Limit
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Total Halogens	1000 ppm maximum
Sulfur	0.5% maximum by weight
Flash Point	100°F minimum
Polychlorinated Biphenyls (PCB)	<2 ppm

9) Should the results of any used oil analyses exceed the limits specified in Attachment IIA, Special Condition No. C.2.h.8), the contaminated containers shall be identified and isolated from the non-contaminated containers and properly disposed of.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-38, §11-60.1-90, 40 CFR §52.21, §279.11)

i. Alternate Operating Scenarios

1) Terms and conditions for reasonably anticipated alternate operating scenarios identified by the permittee in the covered source permit application and approved by the DOH are as follows:

a) Supplemental Waste

Supplemental waste is defined as discrete deliveries of waste components normally found in MSW, but delivered to the facility in quantities greater than those normally found in MSW.

The facility shall blend and mix the supplemental waste with MSW so that maximum emissions will not differ from those described in Attachment IIA, Section D for the processing of garbage. At a minimum, records shall be kept on the dates, the type and detailed description of supplemental waste, the amount in tons, and the supplier of each supplemental waste that is received. Each type of supplemental waste is defined below:

Commodity Wastes - Generated by commercial operations or retail outlets, and are accumulated as a result of the material being off-specification, outdated, or deemed no longer fit for distribution, sale, or consumption. Includes but not limited to: food products, health care products, cosmetics, and other retail store products.

Pharmaceutical Wastes - Includes prescription and non-prescription pharmaceuticals, controlled substances and pharmaceutical waste regulated by the US Drug Enforcement Agency (DEA). The waste will be accumulated by pharmaceutical manufacturers, wholesalers, retailers and hospitals, or confiscated by law enforcement officers.

Manufacturing Wastes - Generated as the result of industrial and manufacturing processes. This category would include floor sweepings, non-hazardous sludge, industrial filters (paint filters, air filters, etc.), adhesives, paints, and inks. No bulk liquids of this type shall be accepted.

Oily Wastes - Includes any of the following three categories: (1) filters, (2) solid wastes containing "virgin oil," and (3) solid wastes containing used oil. The oily waste streams include, but are not limited to rags, paper towels, granular or fiber absorbents, fabric pads and booms. Booms and pads would be prepared as needed for processing. Commercial businesses such as spill clean-up companies and automobile repair shops generate these types of wastes.

Filters will only be accepted if classified as non-hazardous, punctured and drained of free liquids (40 CFR Part 261). Solid waste containing "virgin oil" will only be accepted if certified as non-hazardous solid waste and if it contains no free liquid. Solid wastes containing used oil is considered a Hawaii Special Waste and will be managed as such. The used oil waste will also be managed in accordance with Federal standards outlined in 40 CFR Part 279 (EPA Standards for the Management of Used Oil). Waste oil products containing equal to or greater than 2 ppm of PCBs shall not be accepted in any form by the permittee.

Used Cooking Oil - Generated mainly by restaurants. The used cooking oil will be transported and decanted by contractors to remove water and unwanted particles.

Triple-Rinsed Containers - These containers will mainly be comprised of high density polyethylene plastic (HDPE). Polystyrene and polyurethane containers may also be included in waste deliveries. Containers that were initially used to store pesticides are the major component of this waste type. Prior to delivery, the containers shall be cut into halves. Also, they shall be triple-rinsed according to Federal Regulation 40 CFR Part 261.7 or the definition set forth in the Hawaii Solid Waste Management Control Regulations (Title 11), whichever is more stringent. The supplier is required to provide a statement certifying that the containers were triple-rinsed according to acceptable rinsing methods.

Shredded Tires and Automobile Shredder Residue - Tires and automobile shredder residue are both considered Hawaii Special Wastes and will be managed as such. Shredded tires will be blended with other MSW prior to charging to the combustors. If the sulfur content of the tires is high, mitigation shall be accomplished by materials management and blending.

Automobile shredder residue consists of items such as foam rubber, seat covers, gaskets, plastics, etc. Prior to acceptance, the supplier must analyze representative samples of automobile shredder residue for hazardous constituents, such as PCBs and heavy metals. After being determined acceptable for processing, it will be blended with other MSW prior to combustion.

Treated Medical Wastes - Includes sterilized waste generated from medical, veterinary or other health care facilities and considered a Hawaii special waste. Components include bandages, dressings, syringes, cultures, injectables, infectious or pathological wastes that has been subjected to sterilization (i.e., autoclave). The supplier is required to provide a statement certifying that the treated medical wastes were sterilized appropriately.

Treated Foreign Wastes - Includes sterilized solid waste generated by carriers leaving foreign ports and entering Hawaii. Considered a special waste in Hawaii. Components include airline carrier garbage or solid waste from sea-going vessels. Foreign waste received by the permittee must comply with regulations set forth by the U.S. Department of Agriculture. In addition, foreign waste would be processed in a manner similar to that for the management and processing of medical wastes, in accordance with Hawaii regulations. The supplier is required to provide a statement certifying that the treated foreign wastes were sterilized appropriately.

b) MWC Warm-Up

During periods of warm-up, not to exceed 12 hours at a time, the SDAs need not be operated until the SDA inlet temperature reaches 250°F. At this temperature, the MWCs and the SDAs shall be brought up to normal operating temperatures and efficiencies simultaneously. During these warm-ups, the MWCs shall be fired on fuel oil only, and shall not exceed 63 lb/hr of SO_2. Records during these periods shall be kept on the CEMS reading and corresponding calculations.

c) MWC Start-Up

Start-up, not to exceed 3 hours at a time, shall follow the warm-up period. Start-up commences when RDF is added gradually to the fuel stream and the fuel oil is decreased at a rate which insures the MWC temperatures remain in the normal operating condition range until full-load, steady-state conditions can be reached. The start-up period does not include any warm-up period.

d) MWC Shut-Down

Shut-down, not to exceed 3 hours at a time, shall follow normal operating conditions. Shut-down commences when the RDF feed is stopped and fuel oil is added to burn remaining RDF in the MWCs.

2) The permittee shall contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility the scenario under which it is operating and, if required by any applicable requirement or the DOH, submit written notification to the DOH.

3) The permittee shall maintain invoices and supplier certifications for each delivery of supplemental wastes as listed in Attachment IIA, Special Condition No. C.2.i.1)a).

4) The terms and conditions under each alternative operating scenario shall meet all applicable requirements including all conditions of this permit.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.38b(a), §60.58b(a)(1), 40 CFR Part 261, 40 CFR Part 279)[1]

j. Operator Certification

1) Provisional Certification

Each chief facility operator and shift supervisor shall obtain and maintain a current provisional operator certification from the American Society of Mechanical Engineers (ASME) QRO-1-1994 (or equivalent certification program with approval from the DOH).

2) Full Certification

Each chief facility operator and shift supervisor shall have completed full certification or have scheduled a full certification exam from the ASME QRO-1-1994 (or equivalent certification program with approval from the DOH).

3) Staff on Duty

One of the following must always be on duty: a fully certified chief facility operator, a provisionally certified chief facility operator who has scheduled a full certification exam, a fully certified shift supervisor, or a provisionally certified shift supervisor who has scheduled a full certification exam.

If one of the above must leave during a shift, a provisionally certified control room operator may fulfill the requirement for Attachment IIA, Special Condition No. C.2.j.3) using the following guidelines ("stand-in" provisions):

a) No notification is required if a control room operator is "standing-in" for 8 hours or less.

b) If a control room operator is "standing-in" between 8 hours and 2 weeks, then the permittee shall notify the DOH by phone within the first 24 hours and notify the EPA and the DOH in writing within the first five (5) working days. At a minimum, the notification shall include date and time of the expected "stand-in," the person who is "standing-in," person's qualifications, and the reason for the "stand-in."

c) If a control room operator is "standing-in" for 2 weeks or more, then the permittee shall fulfill the requirements of Attachment IIA, Special Condition No. C.2.j.3)b) plus provide corrective actions and expected date of return of a fully certified operator. The permittee shall submit the written status summary every two weeks up until the return of a fully certified operator. The DOH may impose stricter conditions as necessary.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.35b, §60.54b(a) - (c))[1]

k. Operator Training

1) All chief facility operators, shift supervisors, and control room operators must complete the EPA MWC operator training course (or equivalent training course with approval from the DOH) as of January 3, 2002. This condition does not apply to those who have obtained full certification from ASME.

   The permittee may request that the DOH waive the EPA training course requirement for those who have obtained provisional certification from ASME (or equivalent training course with approval from the DOH).

2) The permittee shall develop and update on an annual basis a site-specific operating manual that shall, at a minimum, address the elements of MWC unit operation specified as follows:

   a) A summary of the applicable standards under 40 CFR 60 Subparts Cb and Eb;
   b) A description of basic combustion theory applicable to a MWC unit;
   c) Procedures for receiving, handling, and feeding MSW;
   d) MWC warm-up, start-up, shut-down, and malfunction procedures;
   e) Procedures for maintaining proper combustion air supply levels;
   f) Procedures for operating the MWC unit within the standards established by 40 CFR 60 Subparts Cb and Eb;
   g) Procedure for responding to periodic upset or off-specification conditions;
   h) Procedures for minimizing particulate matter carryover;
   i) Procedures for handling ash;
   j) Procedures for monitoring MWC unit emissions;
   k) Reporting and recordkeeping procedures; and
   l) Include all sample forms used for reporting and recordkeeping as required by this CSP.

3) The permittee shall establish an annual training program to review the operating manual and conduct the initial training program with each person who has responsibilities affecting the operation of an affected facility including, but not limited to, chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers. These persons shall undergo initial training no later than the date prior to the day the person assumes responsibilities affecting MWC unit operation.

4) The operating manual shall be kept in a readily accessible location for all persons required to undergo training.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.35b, §60.39b(c)(4), §60.54b(d) - (g))[1]

Section D. Emission Limitations

1. Visible Emissions

   a. Each RDF MWC boiler shall not exhibit visible emissions greater than ten (10) percent opacity, for any six (6) minute averaging period, except as follows: during warm-up, start-up, shut-down, or malfunction each RDF MWC boiler 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 permittee shall not cause to be discharged to the atmosphere visible emissions of combustion ash from an ash conveying system or enclosure (including conveyor transfer points) in excess of 5 percent of the observation period (i.e., 9 minutes per 3-hour period). This condition does not apply for the following:

      1) Visible emissions discharged inside buildings or enclosures of ash conveying systems; and

      2) During maintenance and repair of ash conveying systems.

(Auth.: HAR §11-60.1-3, §11-60.1-32, §11-60.1-90, §11-60.1-161; 40 CFR §52.21, §60.33b(a)(1)(iii), §60.36b, §60.55b(a) - (c))[1]

2. Each MWC shall not exceed the following emission limits at all times (except during periods of warm-up, start-up, shut-down, or malfunction):

Table No. 1
Emission Limits[1]

Pollutant		Emission Limits [2,8]
SO_2	24-hr [3,4]	29 ppmv
	8-hr [3]	70 ppmv
PM		27 mg/dscm
NO_2	24-hr [5]	250 ppmv
CO	24-hr [5]	200 ppmv
VOC		21 ppmv
Pb		0.20 lb/hr
Be		0.0009 lb/hr
Hg [6]		0.080 mg/dscm
HF		2.6 lb/hr
HCl [7]		29 ppmv
Dioxin/Furan		60 ng/dscm
Cd		0.040 mg/dscm

Table No. 1 Notes:
1. Emission limits shall not be exceeded by each MWC (except during warm-up, start-up, shut-down, or malfunction).
2. All emission limits are corrected to 7% O_2 except for Pb, Be, and HF.
3. 24-hr daily and 8-hr block geometric average.
4. Or 75% reduction by weight or volume (whichever is less stringent).
5. 24-hr daily arithmetic average.
6. Or 85% reduction by weight (whichever is less stringent).
7. Or 95% reduction by weight or volume (whichever is less stringent).
8. Before April 29, 2011, all emission limits identified in Table No. 1 shall remain in effect. On and after April 29, 2011, the following revisions to the emission limits for each RDF MWC boiler with a fabric filter takes into effect: PM reduced to 25 mg/dscm, Cd reduced to 0.035 mg/dscm, Hg reduced to 0.050 mg/dscm, dioxin/furan reduced to 30 ng/dscm, and Pb reduced to 0.400 mg/dscm @ 7% O_2.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §52.21, §60.33b, §60.34b, 60.58b(a)(1))[1]