

[Amended Date]

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08-xxxE CAB
File No. 0255-04

Mr. Steve Swanson
Vice President - Western Region
Covanta Energy
4040 Fink Road
P.O. Box 278
Crows Landing, California 95313

Dear Mr. Swanson:

**Subject: Covered Source Permit (CSP) No. 0255-01-C
Minor Modification Application No. 0255-04
Replacement of Two (2) Existing Electrostatic Precipitators (ESP) with Fabric Filters
Honolulu Resource Recovery Venture (HRRV) or
Honolulu Program of Waste Energy Recovery (HPOWER)
Two (2) Municipal Waste Combustors (MWCs)
Located at 91-174 Hanua Street, Kapolei, Oahu
Date of Expiration: February 27, 2011**

In accordance with Hawaii Administrative Rules, Chapter 11-60.1, and pursuant to your application for a Minor Modification dated July 13, 2007 and revised application dated February 5, 2008, the Department of Health hereby amends Covered Source Permit (CSP) No. 0255-01-C issued to Honolulu Resource Recovery Venture. The amendment replaces the two (2) existing electrostatic precipitators (ESP) with fabric filters.

The enclosed Attachment IIA supersedes in its entirety the corresponding Attachment IIA issued with CSP No. 0255-01-C on February 28, 2006, except as follows: the permit conditions pertaining to each of the two (2) respective electrostatic precipitators (ESP) shall remain valid until each of the two (2) respective fabric filters are initially operated. All other permit conditions issued with CSP No. 0255-01-C on February 28, 2006 shall not be affected and shall remain valid. A receipt for the application filing fee of \$200.00 is enclosed.

If there are any questions regarding these matters, please contact Mr. Darin Lum of the Clean Air Branch at (808) 586-4200.

Sincerely,

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

DL:
Enclosures

c: Robert Webster, HPOWER, 91-174 Hanua St., Kapolei, HI 96707
CAB Monitoring Section

**ATTACHMENT IIA: SPECIAL CONDITIONS
MUNICIPAL WASTE COMBUSTORS
COVERED SOURCE PERMIT NO. 0255-01-C**

[Amended Date]

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. This portion of the covered source permit (CSP) encompasses the following equipment and associated appurtenances (Unit Nos. for Department of Health use):

<u>Unit No.</u>	<u>Description</u>
1,2	Two (2) Combustion Engineering (C-E) model VU-40 Municipal Waste Combustor (MWC) boilers, each designed to combust refuse-derived fuel (RDF), specification (spec) used oil, fuel oil no. 2, or other municipal solid waste (MSW) in bulk quantities as allowed in Attachment IIA, Special Condition C.2.i.
3,4	Two (2) C-E ESD spray dryer absorbers (SDA), with 14,000 rpm spray nozzles.
5,6	Two (2) Fabric Filters, model numbers to be identified following the selection of the equipment supplier.

(Auth.: HAR §11-60.1-3)

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 MWCs 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 Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (applies to steam generating units constructed after June 19, 1984;

affected facilities also subject to Subpart E (Incinerators) must meet the nitrogen oxides and particulate matter standards of this subpart);

- d. 40 CFR Part 60 Standards of Performance for New Stationary Sources, Subpart E - Standards of Performance for Incinerators (applies to incinerators burning 50 percent or more municipal solid waste constructed after August 17, 1971);
- e. 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); and
- f. 40 CFR Part 62 Subpart FFF - Federal Plan Requirements for Large Municipal Waste Combustors Constructed on or before September 20, 1994.

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

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 §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) for the control of sulfur dioxide and acid gas emissions;
- 3) Each primary shredder shall be equipped with a baghouse for the control of particulate emissions;
- 4) Each of the RDF processing lines shall be equipped with a baghouse for the control of particulate emissions; and
- 5) Each building vent shall be equipped with removable filters for the control of particulate emissions.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

2. MWCs

- a. The MWCs 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)

- 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, §11-60.1-90)

- 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)

- 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)

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). Monitoring shall be done according to Attachment IIA, Special Condition No. E.3.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

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 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 §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 §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:

<u>Constituent/Property</u>	<u>Allowable Limit</u>
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 §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 SO₂. 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. For any six (6) minute averaging period, the MWCs shall not exhibit visible emissions greater than ten (10) percent, except during warm-up, start-up, shut-down, or malfunction periods. During warm-up, start-up, shut-down, or malfunction periods, for any six (6) minute averaging period, the MWCs shall not exhibit visible emissions twenty (20) percent opacity or greater except as follows: during warm-up, start-up, shut-down, or malfunction periods the MWCs 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) minutes.
- 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 §60.33b(a)(1)(iii), §60.36b, §60.55b(a) - (c))^{1,2}

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 Limits¹**

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

Notes:

- Emission limits shall not be exceeded by each MWC (except during warm-up, start-up, shut-down, or malfunction).
- All emission limits are corrected to 7% O₂ except for Pb, Be, and HF.
- 24-hr daily and 8-hr block geometric average.
- Or 75% reduction by weight or volume (whichever is less stringent).
- 24-hr daily arithmetic average.
- Or 85% reduction by weight (whichever is less stringent).
- Or 95% reduction by weight or volume (whichever is less stringent).
- Before April 28, 2009, all emission limits identified in Table No. 1 shall remain in effect. On and after April 28, 2009, the following revisions to the emission limits for each MWC 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% O₂.

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

Section E. Monitoring and Recordkeeping Requirements

1. Records

These records, including support information, shall be maintained for at least five (5) years following the date of such records compiled in a permanent form suitable for inspection and made available to the EPA, the DOH, or their representatives upon request.

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

2. The permittee shall operate, maintain, and calibrate continuous emission monitoring systems (CEMS) at each of the MWC exhaust streams to measure opacity, NO_x (as NO₂), SO₂, CO, and O₂ concentrations in the flue gas as follows:
- a. Hourly averages shall be recorded for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter that the MWCs are in operation.
 - b. At least two (2) data points per hour shall be used to calculate each 1-hour arithmetic average.
 - c. Each 1-hour average for NO_x, SO₂, and CO shall be corrected to 7 percent oxygen on an hourly basis using the 1-hour average of the oxygen CEMS data.
 - d. The 1-hour averages for NO_x, SO₂, and CO shall be expressed in parts per million by volume (dry basis) and used to calculate the 24-hour and 8-hour concentrations.
 - e. All valid CEMS data must be used in calculating emission averages even if the minimum CEMS data requirements are not met.
 - f. The procedures under 40 CFR §60.13 shall be followed for installation, evaluation, and operation of the CEMS.
 - g. The CEMS shall be operated according to Performance Specifications 1,2,3, and 4A in 40 CFR Appendix B and shall follow the procedures and methods specified as follows:
 - 1) During each relative accuracy test audit (RATA) of the CEMS, NO_x, SO₂, CO, and O₂, data shall be collected concurrently (or within a 30 to 60-minute period) by both the CEMS and test methods as follows:
 - a) For NO_x, EPA Reference Method 7, 7A, 7C, 7D, or 7E shall be used.
 - b) For SO₂, EPA Reference Method 6, 6A, or 6C shall be used.
 - c) For CO, EPA Reference Method 10, 10A, or 10B shall be used.
 - d) For O₂, EPA Reference Method 3, 3A, or 3B shall be used.

O₂ data shall be collected concurrently with each NO_x, SO₂, and CO data collection.

- 2) The span value of the CEMS shall be 125 percent of the maximum estimated hourly potential emissions.
- h. Quarterly accuracy audits and daily calibration drift tests shall be performed in accordance with 40 CFR 60 Appendix F. Successively quarterly audits shall occur no closer than two months. RATA must be conducted at least once every four calendar quarters.
- i. When continuous emissions data cannot be obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained using other monitoring systems as approved by the DOH or the following (to provide valid emissions data for a minimum of 75 percent of the hours per day for 90 percent of the days per calendar quarter the MWCs are operated):
 - 1) For NO_x, EPA Reference Method 19 shall be used.
 - 2) For SO₂, EPA Reference Method 19 shall be used.
 - 3) For CO, EPA Reference Method 10 shall be used.
- j. Records shall be kept on all 6-minute average opacity levels as recorded by CEMS.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.38b(a), §60.39b(a), §60.58b(b), (c), (e), (h), (i), §60.59b(d))¹

3. The permittee shall operate, maintain, and calibrate a continuous monitoring system to measure and record the flue gas temperatures (in °F) immediately downstream of the MWC superheaters and at the inlet of the fabric filter (in 4-hour block averages) for each MWC. For purposes of monitoring, the flue gas temperature as measured downstream of the superheaters shall be maintained at or above the value that correlated to 1800°F in the boilers, as obtained during the performance tests required under Attachment IIA, Special Condition No. G.8.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.38b(a), §60.39b(a), §60.58b(i)(7), §60.59b(d)(2)(i)(D))¹

4. The permittee shall operate, maintain, and calibrate a flow meter (in pounds per hour) to monitor and record (in 4-hour block averages) the steam (or feedwater) flow rate for each MWC as follows:
 - a. The method included in Section 4 of the "American Society of Mechanical Engineers Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1 -- 1964 (R1991)" shall be used for calculating the steam (or feedwater) flow.
 - b. The recommendations in Chapter 4 of the "American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid

Meters, 6th Edition” shall be followed for design, construction, installation, calibration, and use of nozzles and orifices.

- c. Measurement devices such as flow nozzles and orifices are not required to be recalibrated after they are installed.
- d. All signal conversion elements associated with steam (or feedwater flow) measurements must be calibrated according to the manufacturer's instructions before each dioxin/furan performance test, and at least once per year.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.38b(a), §60.39b(a), §60.58b(i)(6), §60.59b(d)(2)(i)(D))¹

- 5. Records shall be kept of all exceedances of any applicable emission limits and/or operating parameters. The records shall also include the reasons for such exceedances and a description of corrective actions taken.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(d)(3))¹

- 6. Records shall be kept of all time periods when data was not obtainable for the minimum hours of NO_x, SO₂, CO, and O₂ emission concentrations, fabric filter inlet temperatures, and MWC unit steam load (or boiler feedwater) levels. The records shall also include the reasons for not obtaining sufficient data and a description of actions taken.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(d)(6))¹

- 7. Records shall be kept of all occurrences when any data was excluded from the calculation of NO_x, SO₂, CO, and O₂ average emission concentrations, fabric filter inlet temperatures, and MWC unit load levels and the reasons for excluding the data.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(d)(7))¹

- 8. Records shall be kept of the results of all daily calibration drift tests and quarterly accuracy audits for the CEMS.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(d)(8), 40 CFR 60 Appendix F)¹

- 9. Records shall be kept of all test reports documenting the results of all annual performance tests conducted. Also (for all dioxin/furan performance tests) the maximum RDF loads and fabric filter inlet temperatures shall be recorded.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(d)(9)(i), (ii))¹

- 10. Records shall be kept showing the names of the MWC chief facility operator, shift supervisors, and control room operators who have been provisionally certified by ASME (or

DOH approved equivalent) and the dates of initial and renewal certifications and documentation of the current certification.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(d)(12)(I))¹

11. Records shall be kept showing the names of the MWC chief facility operator, shift supervisors, and control room operators who have been fully certified by ASME (or DOH approved equivalent) and the dates of initial and renewal certifications and documentation of the current certification.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(d)(12)(ii))¹

12. Records shall be kept showing the names of the MWC chief facility operator, shift supervisors, and control room operators who have completed the EPA MWC operator training course (or DOH approved equivalent). A copy of documentation of the training completion shall also be kept.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(d)(12)(iii))¹

13. Records shall be kept showing the names of persons who have completed a review of the operating manual including the date of the initial review and subsequent annual reviews.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(d)(13))¹

14. Fuel Usage

- a. A non-resetting fuel meter (in gallons) shall be operated and maintained on each MWC for the continuous and permanent recording of the total fuel oil consumed. Each meter shall permanently record the total fuel oil consumed for the purpose of monitoring the fuel oil limitations specified in Attachment IIA, Special Condition Nos. C.2.b and c. The permittee shall periodically check the fuel meter for its accuracy and provide maintenance as necessary.

Fuel oil no. 2, spec used oil and used cooking oil consumption shall be calculated and recorded in gallons per hour and gallons per rolling twelve (12) month period for the purpose of monitoring the fuel oil limitations specified in Attachment IIA, Special Condition Nos. C.2.b and c.

- b. The following information shall be recorded for the fuel oil consumption meter reading for each MWC:
 - 1) Date of meter readings;
 - 2) Beginning meter readings for each hour;
 - 3) Total fuel oil consumption for each hour;

- 4) Beginning meter readings for each month;
- 5) Total fuel oil consumption for each month; and
- 6) Total fuel oil consumption on a rolling twelve (12) month basis.

c. Records shall be kept for supplemental wastes as required in Attachment IIA, Special Condition No. C.2.i.3).

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

15. Invoices on the amount of fuel oil no. 2 delivered to the facility for the MWCs shall be maintained. The invoice or supplier's specification sheet for the fuel oil no. 2 shall show the sulfur content by weight.

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

16. Spec Used Oil

The permittee shall maintain records on the analyses of all spec used oil stored on-site. At a minimum, these records shall include: the sampling date; the amount of fuel delivered (in gallons); the analysis report; and the supplier name. Summaries shall include the monthly total and the total based on a rolling twelve (12) month basis for the purposes of monitoring the annual spec used oil consumption.

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

17. Fabric Filter

The permittee shall monitor and maintain records on the fabric filter replacement.

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

18. Inspection, Maintenance, and Repair Log

The permittee shall maintain records on inspections, maintenance, and any repair work conducted on the MWCs, SDAs, fabric filters, and/or monitoring devices mentioned above. At a minimum, these records shall include: the date of the inspection; the name and title of the inspector; a short description of the action and/or any such repair work; and a description of the part(s) inspected or repaired.

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

19. All test/sampling/records shall include, if applicable:

- a. Monitoring location, date and time of sampling or measurements;
- b. Dates sampling analyses were performed;
- c. Name and address of the company or entity that performed the analyses;
- d. Analytical techniques or methods used;

- e. Analysis of results; and
- f. Operating conditions during the time of sampling or measurement.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.59(d))¹

Section F. Notification and Reporting Requirements

1. Notification and reporting pertaining to the following events shall be done in accordance with Attachment I, Standard Condition Nos. 16, 17 and 25, respectively:

- a. *Intent to shut down air pollution control equipment for necessary scheduled maintenance;*
- b. *Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and*
- c. *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; SIP §11-60-10, §11-60-16)²

2. Deviations

The permittee shall report (in writing) **within five (5) working days** any deviations from 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 stack testing, or more frequent monitoring, or could trigger implementation of a corrective action plan.

(Auth.: HAR §11-60.1-3, §11-60.1-15, §11-60.1-16, §11-60.1-90)

3. Compliance Certification

- a. 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; and
6) Any additional information as required by the Department of Health including information to determine compliance.

- b. *The compliance certification shall be submitted **within ninety (90) days after** the end of each calendar year, and shall be signed and dated by a responsible official.*
- c. *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.*

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

4. Semi-Annual Reports

a. Summary Reports

The owner or operator shall submit a semi-annual report (submitted by August 1 and February 1 following the first calendar half and second calendar half, respectively) which includes the following:

- 1) Any recorded emission and/or parameter that did not comply with the specified limit for opacity, SO₂, NO_x, and CO emissions concentrations, MWC unit load levels (i.e., steamload/feedwater), and fabric filter inlet temperatures.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(h)(1))¹

- 2) The date of exceedance, the corrective actions taken, and the concurrent data recorded for opacity, SO₂, NO_x, and CO emissions concentrations, MWC unit load levels, and fabric filter inlet temperatures.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(h)(2))¹

- 3) A summary of the test report and the corrective actions taken if there were any exceedances during the most recent annual performance test for the emissions of opacity, PM, SO₂, NO_x, CO, VOC, HCl, Cd, Pb, Hg, Be, HF, dioxin/furan, and fugitive ash.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(g)(1)(i), §60.59b(h)(3))¹

- 4) A list of the highest results recorded for opacity, SO₂, NO_x, and CO emissions concentrations, MWC unit load levels, and fabric filter inlet temperatures recorded during the semi-annual period.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(g)(1)(ii), (iii))¹

- 5) The total number of days that the minimum number of hours of data for SO₂, NO_x, and CO emissions concentrations, MWC unit load levels, and fabric filter inlet temperatures were not obtained.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(g)(1)(iv))¹

- 6) The total number of hours that data for SO₂, NO_x, and CO emissions concentrations, MWC unit load levels, and fabric filter inlet temperature were excluded from the calculation of average emission concentrations or parameters.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(g)(1)(v))¹

- 7) A summary of the data (as submitted for Attachment IIA, Special Condition Nos. F.4.a.1) through F.4.a.6) above) for the previous year in order to have a summary of performance over a 2-year period.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(g)(2))¹

- 8) A separate summary shall identify all emission and/or parameter levels that did not achieve the specified limits over the 2-year period.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(g)(3))¹

- 9) A notification of the intent to begin the waiving of an annual performance test for dioxin/furan for the following year (if applicable).

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.39b(a), §60.59b(g)(4))¹

b. Excess Emissions

The permittee shall submit a semi-annual report (submitted by August 1 and February 1 following the first calendar half and second calendar half, respectively) of all excess emissions to the DOH. The report shall include the following:

- 1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any concurrent data, any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and corrective actions taken.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.59b(h))¹

- 2) Specific identification of each period of excess emissions that occurs during start-ups, shut-downs, and malfunctions of the MWC systems. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted, shall also be reported.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.59b(h))¹

- 3) The date and time identifying each period during which CEMS was inoperable except for zero and span checks. The nature of each system repair or adjustment shall be described.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.59b(h))¹

- 4) The report shall so state if no excess emissions have occurred. Also, the report shall so state if the CEMS operated properly during the period and was not subject to any repairs or adjustments except for zero and span checks.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.59b(h))¹

- 5) Excess emissions of NO_x (as NO₂) shall be defined as any 24-hour daily period during which the average emissions, as measured by the CEMS, exceeds the maximum emissions specified for NO_x in Attachment IIA, Section D.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.59b(h))¹

- 6) Excess emissions of SO₂ shall be defined as any 8-hour block and/or any 24-hour daily period during which the average emissions, as measured by the CEMS, exceeds the maximum emissions specified for SO₂ pollutants in Attachment IIA, Section D.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.59b(h))¹

- 7) Excess emissions of CO shall be defined as any 24-hour daily period during which the average emissions, as measured by the CEMS, exceeds the maximum emissions specified for CO pollutants in Attachment IIA, Section D.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.59b(h))¹

- 8) Excess emissions of opacity shall be defined as any six-minute period during which the opacity as measured by Method 9 or the CEMS exceeds the opacity limits set in Attachment IIA, Section D.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.59b(h))¹

- 9) The enclosed Excess Emissions and Monitoring System Performance Summary Report form shall be used in conjunction with the reporting of excess emissions.

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

c. Fuel Monitoring Reports

The permittee shall submit the following written reports to the DOH. The reports shall be submitted **within sixty (60) days after the end of each semi-annual calendar period** (January 1 to June 30 and July 1 to December 31), and shall be signed and dated by a responsible official.

- 1) The permittee shall report the monthly and rolling twelve (12) month total of spec used oil consumed for both MWCs. The permittee shall also report the used oil analyses which indicated exceedances of the limits specified in Attachment IIA, Special Condition No. C.2.h.8). If there were no exceedances, the permittee shall submit in writing a statement indicating that there were no exceedances for that semi-annual period. The enclosed *Monitoring Report Form: Spec Used Oil* shall be used for both MWCs.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

- 2) The permittee shall report the analyses of the sulfur contents in the fuel oil for which there are exceedances of the limits specified in Attachment IIA, Special Condition No. C.2.d. If there were no exceedances, the permittee shall submit (in writing) a statement indicating that there were no exceedances for that semi-annual period. The enclosed *Monitoring Report Form: Auxiliary Fuel Consumption/Certification* shall be used for both MWCs.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

- 3) The permittee shall report the monthly and rolling twelve (12) month total of fuel oil no. 2, spec used oil, and cooking oil consumed per MWC. The maximum hourly fuel consumption (per MWC) shall be noted in the comment column for each month. The enclosed *Monitoring Report Form: Auxiliary Fuel Consumption/Certification* shall be used (one form per MWC for the total fuel oil no. 2, spec used oil, and cooking oil consumption).

(Auth.: HAR §11-60.1-3, §11-60.1-90)

5. Annual Emissions

- a. As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall report **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: MWC Boilers*, shall be used.

- b. Upon the written request of the permittee, the deadline for reporting of annual emissions may be extended, if the DOH determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

Section G. Testing Requirements

1. On an annual basis, or at such times as specified by the DOH, the permittee shall conduct or cause to be conducted stack performance tests on the MWCs to determine the rate of discharge of opacity, particulate matter (PM), volatile organic compounds (VOC), hydrogen chloride (HCl), cadmium (Cd), lead (Pb), mercury (Hg), beryllium (Be), fluorides (HF), dioxin/furan, and fugitive ash.

The DOH may require additional testing for wastes identified in Attachment IIA, Special Condition No. C.2.i.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161, 40 CFR §60.38b, §60.58b, §60.672)¹

2. Upon written request and justification by the permittee, the DOH may waive the requirement for a specific annual source 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 tests 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 §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161, 40 CFR §60.672)¹

3. Performance tests for the emissions of opacity, PM, VOC, HCl, Cd, Pb, Hg, Be, HF, dioxin/furan, and fugitive ash shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR 60, Part 60.8 and Appendix A. The following test methods or U.S. EPA-approved equivalent methods with prior written consent from the DOH shall be conducted:

- a. Performance tests for opacity shall be conducted using EPA Method 9 and procedures in 40 CFR §60.11, including additional procedures listed in 40 CFR §60.675.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.58b(c))¹

- b. Performance tests for the emissions of PM shall be conducted using EPA Methods 1-5. The minimum sample volume shall be 1.7 cubic meters. The probe and filter holder heating systems in the sample train shall be set to provide a gas temperature no greater than $160 \pm 14^{\circ}\text{C}$.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.58b(c))¹

- c. Performance tests for the emissions of VOC shall be conducted using EPA Methods 1-4 and 18 or 25.

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

- d. Performance tests for the emissions of HCl shall be conducted using EPA Methods 1-4 and 26 or 26A.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.58b(f))¹

- e. Performance tests for the emissions of Cd shall be conducted using EPA Methods 1-4 and 29.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.58b(d)(1))¹

- f. Performance tests for the emissions of Pb shall be conducted using EPA Methods 1-4 and 29.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.58b(d)(1))¹

- g. Performance tests for the emissions of Hg and Be shall be conducted using EPA Methods 1-4 and 29.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.58b(d)(2))¹

- h. Performance tests for the emissions of HF shall be conducted using EPA Methods 1-4 and 13B.

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

- i. Dioxin/Furan

- 1) Performance tests for the emissions of dioxin/furan shall be conducted using EPA Methods 1-4 and 23. The minimum sample time shall be 4 hours per test run. The maximum MWC unit load and maximum fabric filter inlet temperature shall be recorded for each test.
- 2) The permittee may conduct annual performance tests for one (1) MWC per year if performance tests (over a 2-year period) indicate that dioxin/furan emissions are less than or equal to 15 nanograms per dry standard cubic meter (total mass). At a minimum, a performance test for dioxin/furan emissions shall be conducted annually (no more than 12-months following the previous performance test) for one (1) MWC. Each year a different MWC shall be tested in sequence (e.g., unit 1 for the first year, unit 2 for the second year, then back to unit 1 for the third year, as applicable). If each annual performance test continues to indicate a dioxin/furan emission level less than or equal to 15 nanograms per dry standard cubic meter (total mass), the permittee may continue conducting a performance

test on only one (1) MWC per year. If any annual performance test indicates a dioxin/furan emission level greater than 15 nanograms per dry standard cubic meter (total mass), performance tests thereafter shall be conducted annually on all MWCs until and unless all annual performance tests for all MWCs over a 2-year period indicate a dioxin/furan emission level less than or equal to 15 nanograms per dry standard cubic meter (total mass). The procedure in Attachment IIA, Special Condition No. F.4.a.9) shall be used to notify the DOH.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.38b(b), §60.58b(g), §60.59b(d)(9)(ii))¹

- j. Performance tests for the emissions of fugitive ash from the ash conveying system (including conveyor transfer points) shall be conducted using EPA Method 22. The minimum observation time shall be a series of three (3) 1-hour observations. The observation period shall include times when the facility is transferring ash from the MWCs to the area where ash is stored or loaded into containers or trucks. The average duration of visible emissions per hour shall be calculated from the three (3) 1-hour observations. The average shall be used to determine compliance.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.58b(k))¹

4. **At least 30 calendar days prior** to performing a test, the owner or operator shall submit a written performance test plan to the DOH that describes the test duration, test locations, test methods, source operation and other parameters that may affect test results. Such a plan shall conform to U.S. EPA guidelines including quality assurance procedures. A test plan or quality assurance plan that does not have the approval of the DOH may be grounds to invalidate any test and require a retest.

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

5. The performance tests shall consist of a minimum of three (3) separate runs for a minimum of 1-hour each (except as noted) using the applicable test methods. For the purpose of determining compliance with an applicable regulation, the arithmetic mean of the results from the three (3) runs shall apply.

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

6. For each run, the RDF feed rate in tons per hour shall be provided. The permittee shall document the methodology by which each RDF feed rate was determined. Separate determinations shall be made for each run on each MWC.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

7. Where reporting values are required in parts per million by volume (ppmv), the concentration shall be by volume and the dry standard cubic feet of flue gas shall be corrected to 7 percent O₂.

(Auth.: HAR §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.58)¹

8. During the performance tests, the correlated superheater temperatures for each MWC and the fabric filter inlet temperatures shall be recorded.

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

9. The permittee shall provide sampling and testing facilities at its own expense. The tests shall be conducted at the maximum expected operating capacity of the facility. The DOH may also monitor the tests.

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

10. For performance test purposes, sampling ports, platforms, and access shall be provided by the permittee on each MWC exhaust system in accordance with 40 CFR §60.8(e) and 40 CFR §61.12.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

11. **Within sixty (60) days after a performance test**, the permittee shall submit to the DOH the test report which shall include the operating conditions of the MWCs at the time of the test, the summarized test results, and other pertinent field and laboratory data.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.59b(d)(9); SIP§11-60-15)^{1,2}

12. Any deviations from these conditions, test methods, or procedures may be cause for the rejection of the test results unless such deviations are approved by the DOH before the tests.

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

Section H. Agency Notification

Any document (including reports) required to be submitted by this permit shall be done in accordance with Attachment I, Standard Condition No. 29.

(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.