

# Hillsborough County

## Hillsborough County Resource Recovery Facility

Facility ID No. 0570261

Hillsborough County

Title V Air Operation Permit Revision

**Permit No. 0570261-017-AV**

(Revision of Title V Air Operation Permit No. 0570261-014-AV)



**Permitting Authority:**

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Department of Environmental Protection

Division of Air Resource Management

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## Title V Air Operation Permit Revision

Permit No. 0570261-017-AV

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332 North Falkenburg Road  
Tampa, Florida 33619

Permit No. 0570261-017-AV  
Hillsborough County Resource Recovery Facility  
Facility ID No. 0570261  
Title V Air Operation Permit Revision

The purpose of this permit is to revise the Title V air operation permit for the above referenced facility and to incorporate the modification of air construction permit No.0570261-016 (PSD-FL-121E and PSD-FL-369D) into the current Title V air operation permit No. 0570261-014-AV. The existing Hillsborough County Resource Recovery Facility is located in Hillsborough County at 350 North Falkenburg Road in Tampa, Florida 33619. The UTM Coordinates are: Zone 17, 268.2 kilometers (km) East and 3092.7 km North.

The Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named permittee is hereby authorized to operate the facility in accordance with the terms and conditions of this permit.

Effective Date: May 4, 2012  
Renewal Application Due Date: September 21, 2016  
Expiration Date: May 4, 2017  
Executed in Tallahassee, Florida

*For:* Jeffery F. Koerner, Program Administrator  
Office of Permitting and Compliance  
Division of Air Resource Management

JFK/dr/yha

## SECTION I. FACILITY INFORMATION.

### **Subsection A. Facility Description.**

This existing facility consists of: four municipal solid waste combustors (Unit Nos. 1, 2, 3 and 4) with auxiliary burners; lime & carbon storage and processing facilities; ash storage and processing facilities; cooling towers; and, ancillary support equipment. Also included in this permit are miscellaneous insignificant emissions units and/or activities.

The total capacity of the Hillsborough County Resource Recovery Facility is 1,800 tons/day (TPD) of municipal solid waste fuel. The gross nominal electric generating capacity of the facility is 47 megawatts (MW).

The facility is owned by Hillsborough County and is currently operated by Covanta Hillsborough, Inc. a subsidiary of Covanta Energy Corporation.

### **Subsection B. Summary of Emissions Units.**

<b>E.U. ID No.</b>	<b>Brief Description</b>
<i>Regulated Emissions Units</i>	
<b>001</b>	Municipal Waste Combustor Unit 1
<b>002</b>	Municipal Waste Combustor Unit 2
<b>003</b>	Municipal Waste Combustor Unit 3
<b>107</b>	Municipal Waste Combustor Unit 4
	Ash Building and Handling System
<b>100</b>	Ash Building and Handling System - Baghouse
<b>112</b>	Ash Building and Handling System - Wet Scrubber
<b>101, 102, 108 &amp; 110</b>	Lime & Activated Carbon Storage Silos
<b>113</b>	Fire Pump (Diesel) - 235 HP
<b>114</b>	Emergency Generator - No. 1 at Falkenburg Advanced WWTP
<b>115</b>	Emergency Generator - No. 2 at Falkenburg Advanced WWTP
<b>116</b>	Emergency Generator - No. 3 at Falkenburg Advanced WWTP
<b>117</b>	Emergency Generator - No. 4 at Falkenburg Advanced WWTP
<i>Unregulated Emissions Units and/or Activities</i>	
<b>103</b>	Cooling Tower for MWC Units 1-3
<b>104</b>	Waste Water Treatment Plant
<b>105</b>	NaOH Storage Tank
<b>111</b>	Cooling Tower Cell for MWC Unit 4

Also included in this permit are miscellaneous insignificant emissions units and/or activities (see Appendix I, List of Insignificant Emissions Units and/or Activities).

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**SECTION I. FACILITY INFORMATION.**

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**Subsection C. Applicable Regulations.**

Based on the Title V air operation permit revision application received March 31, 2014, this facility is a major source of hazardous air pollutants (HAP). The existing facility is classified as a prevention of significant deterioration (PSD) major source of air pollutants in accordance with Rule 62-212.400, F.A.C. A summary of applicable regulations is shown in the following table.

Regulation	EU No(s).
Federal Rule Citations	
40 CFR 60, Subpart A, New Stationary Source Performance Standards (NSPS) General Provisions	001, 002, 003, 107,100, 112, 115, 116 &117
40 CFR 60, Subpart IIII, NSPS for Compression Ignition Internal Combustion Engines (CI-ICE)	115, 116, 117
40 CFR 60, Subpart Cb, Emissions Guidelines (EG) and Compliance Times for Large Municipal Waste Combustors	001, 002, 003, 100 & 112
40 CFR 60, Subpart Eb, Standards of Performance for Large Municipal Waste Combustors	107
40 CFR 63, Subpart A, General Provisions	113, 114, 115, 116, 117
40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE)	
State Rule Citations	
Rule 62-210.300, F.A.C., Permits Required	111
Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD)	001, 002, 003, 107,100, 112, 101, 102, 108 & 110
Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT)	
Rule 62-296.416, F.A.C., Waste-to-Energy Facilities	001, 002, 003, 107
Rule 62-296.700(6), F.A.C., RACT PM - O&M Plan	001, 002, 003

## SECTION II. FACILITY-WIDE CONDITIONS.

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**The following conditions apply facility-wide to all emission units and activities:**

**FW1. Appendices.** The permittee shall comply with all documents identified in Section IV., Appendices, listed in the Table of Contents. Each document is an enforceable part of this permit unless otherwise indicated. [Rule 62-213.440, F.A.C.]

### **Emissions and Controls**

**FW2. Not federally Enforceable. Objectionable Odor Prohibited.** No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An “objectionable odor” means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rule 62-296.320(2) and 62-210.200(Definitions), F.A.C.]

**FW3. General Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions.** The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed-necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]

*{Permitting Note: Nothing is deemed necessary and ordered at this time.}*

**FW4. General Visible Emissions.** No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. Emissions from the following types of activities in Hillsborough County are further subject to a general 5% opacity standard: loading or unloading of materials to or from containers such as rail cars, trucks, ships, storage structures and stockpiles; permanent conveyor systems; storage of materials in structures such as silos or enclosed bins, which have a storage capacity of fifty cubic yards or more; crushing, grinding, sizing and screening operations; and, static drop transfer points. These regulations do not impose a specific testing requirement. [Rules 62-296.320(4)(b)1, F.A.C. and Rule 1-3.52, HCEPC]

**FW5. Unconfined Particulate Matter.** No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction; alteration; demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:

- a. All roads shall be adequately paved, and vacuum swept if appropriate, to minimize accumulations of ash and dust.<sup>1</sup>
- b. Parking areas and maintenance driveways shall be paved with asphalt or concrete.
- c. A vacuum street sweeper shall be used to remove particulate matter from other paved areas on as-needed basis.
- d. The unpaved areas of the facility are maintained with a vegetative cover (grass, ground cover, and plants) or mulch (wood chips and rock).
- e. The conveyor systems at the facility are enclosed or covered.
- f. The ash is wetted before being stored in the ash handling building.
- g. Ash and metal recovery processes, including storage and truck load out, are fully enclosed within the ash handling building.
- h. Metal trucks are covered with tarps prior to shipping.
- i. Watering of roads and haul routes for dust control is provided during any demolition, grading, construction and land clearing on as needed basis.
- j. Speed limit signs shall be posted.<sup>1</sup>
- k. Unprocessed refuse storage areas which must be open for operational purposes (e.g., tipping floor or the refuse bunker while trucks are entering or leaving) shall be under negative air pressure.<sup>1</sup>

## SECTION II. FACILITY-WIDE CONDITIONS.

[Rule 62-296.320(4)(c), F.A.C.; <sup>1</sup> PSD-FL-121(C), Specific Condition III.D.4.; and, proposed by applicant in the Title V air operation permit renewal application received on December 21, 2011]

### **Annual Reports and Fees**

See Appendix RR, Facility-wide Reporting Requirements for additional details.

**FW6. Electronic Annual Operating Report and Title V Annual Emissions Fees.** The information required by the Annual Operating Report for Air Pollutant Emitting Facility [Including Title V Source Emissions Fee Calculation] (DEP Form No. 62-210.900(5)) shall be submitted by April 1 of each year, for the previous calendar year, to the Department of Environmental Protection's Division of Air Resource Management. Each Title V source shall submit the annual operating report using the DEP's Electronic Annual Operating Report (EAOR) software, unless the Title V source claims a technical or financial hardship by submitting DEP Form No. 62-210.900(5) to the DEP Division of Air Resource Management instead of using the reporting software. Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C. Each Title V source must pay between January 15 and April 1 of each year an annual emissions fee in an amount determined as set forth in subsection 62-213.205(1), F.A.C. The annual fee shall only apply to those regulated pollutants, except carbon monoxide and greenhouse gases, for which an allowable numeric emission-limiting standard is specified in the source's most recent construction permit or operation permit. Upon completing the required EAOR entries, the EAOR Title V Fee Invoice can be printed by the source showing which of the reported emissions are subject to the fee and the total Title V Annual Emissions Fee that is due. The submission of the annual Title V emissions fee payment is also due (postmarked) by April 1<sup>st</sup> of each year. A copy of the system-generated EAOR Title V Annual Emissions Fee Invoice and the indicated total fee shall be submitted to: **Major Air Pollution Source Annual Emissions Fee, P.O. Box 3070, Tallahassee, Florida 32315-3070.** Additional information is available by accessing the Title V Annual Emissions Fee On-line Information Center at the following Internet web site: <http://www.dep.state.fl.us/air/emission/tvfee.htm>. [Rules 62-210.370(3), 62-210.900 & 62-213.205, F.A.C.; and, §403.0872(11), Florida Statutes (2013)]

*{Permitting Note: Resources to help you complete your AOR are available on the electronic AOR (EAOR) website at: <http://www.dep.state.fl.us/air/emission/eaor>. If you have questions or need assistance after reviewing the information posted on the EAOR website, please contact the Department by phone at (850) 717-9000 or email at [eaor@dep.state.fl.us](mailto:eaor@dep.state.fl.us).}*

*{Permitting Note: The Title V Annual Emissions Fee form (DEP Form No. 62-213.900(1)) has been repealed. A separate Annual Emissions Fee form is no longer required to be submitted by March 1st each year.}*

**FW7. Annual Statement of Compliance.** The permittee shall submit an annual statement of compliance to the compliance authority at the address shown on the cover of this permit within 60 days after the end of each calendar year during which the Title V permit was effective. [Rules 62-213.440(3)(a)2. & 3. and (b), F.A.C.]

**FW8. Prevention of Accidental Releases (Section 112(r) of CAA).** If, and when, the facility becomes subject to 112(r), the permittee shall:

- a. Submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent electronically through EPA's Central Data Exchange system at the following address: <https://cdx.epa.gov>. Information on electronically submitting risk management plans using the Central Data Exchange system is available at: <http://www.epa.gov/osweroel/content/rmp/index.htm>. The RMP Reporting Center can be contacted at: RMP Reporting Center, Post Office Box 10162, Fairfax, VA 22038, Telephone: (703) 227-7650.
- b. Submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.

[40 CFR 68]

## SECTION II. FACILITY-WIDE CONDITIONS.

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### **Other Requirements**

**FW9. Waste Disposal.** The owner or operator shall treat, store, and dispose of all liquid, solid, and hazardous wastes in accordance with all applicable federal, state, and local regulations. This air pollution permit does not preclude the permittee from securing any other types of required permits, licenses, or certifications. [Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition II.E.1.]



### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection A. Emissions Units 001, 002 & 003 Municipal Waste Combustor Units 1, 2 & 3.

The specific conditions in this section apply to the following emissions units:

EU No.	Brief Description
001	Municipal Waste Combustor Unit 1
002	Municipal Waste Combustor Unit 2
003	Municipal Waste Combustor Unit 3

Emissions Unit ID Nos. 001, 002 and 003 are municipal solid waste (MSW) combustors designated as “Unit 1,” “Unit 2” and “Unit 3,” respectively. The units are identical in configuration. Each unit consists of a mass burn water wall boiler with one auxiliary natural gas fired burner. The combustion system incorporates the technology of German-based Martin GmbH. Waste is combusted at furnace temperatures exceeding 1,800 degrees Fahrenheit (°F), and reduced to an inert ash residue. The burners are used to fire the MSW combustors during startup, shutdown, and at other times when necessary and consistent with good combustion practices.

Each of the three municipal waste combustors (MWCs) has a nominal design rate capacity of 400 tons MSW per day, 150 million British thermal units per hour (MMBtu/hr) (excluding 9.9 MMBtu/hr from the combustion air preheaters) and 94,270 lbs steam/hour with MSW having a heating value of 4,500 Btu/lb. The “operating window” of 115 percent (%) over the nominal design rate of 150 MMBtu/hr heat input corresponds to 172.5 MMBtu/hr heat input and 102,000 lbs steam/hour per each boiler. By letter dated March 17, 1998, D.B Riley, Inc. (the boilers’ manufacturer) indicated that it performed an evaluation of each boiler’s ability to operate at the proposed increase steam flow of 102,000 lbs steam/hr and concluded that each boiler can safely operate at an increased continuous steam generation rate of 103,700 lbs steam/hr. Short-term capacity is limited by limiting steam production (102,000 lbs steam/hr), which effectively limits heat input. The net design steam enthalpy for useful work is 1,158 Btu/lb (1,378.86 Btu/lb steam enthalpy - 220 Btu/lb feed water enthalpy). Units 1, 2 and 3 share a common steam turbine generator rated at an electrical output of 29 megawatts (MW).

Odor is controlled by drawing combustion air from the refuse tipping floor area. Spray dry absorbers (SDAs) and baghouses are used for the control of acid gases and particulate matter, selective non-catalytic reduction (SNCR) systems for the control of nitrogen oxides (NO<sub>x</sub>), and activated carbon injection (ACI) systems for the control of mercury (Hg) and certain organic emissions. Activated carbon is injected into the flue gases prior to the baghouses to control Hg emissions. Captured dry ash particles fall into hoppers and are transported by an enclosed conveyor system to the bottom ash discharger where they are wetted to prevent dust, and mixed with the bottom ash.

All four units, Units 1, 2, 3 and 4 (see Subsection III.B.), exhaust to a common stack consisting of four separate flues. The stack parameters for each unit’s flue are: height, 220 feet; diameter, 5.1 feet; exit temperature, 290 °F, and, actual stack gas flow rate, 89,000 actual cubic feet per minute (acfm).

Each unit commenced commercial operation on December 18, 1986.

*{Permitting notes: These emissions units are regulated under 40 CFR 60, Subpart Cb, Emissions Guidelines (EG) and Compliance Times for Large Municipal Waste Combustors adopted and incorporated by reference in Rule 62-204.800(9)(b), F.A.C.; Rule 62-296.416, F.A.C., Waste-to-Energy Facilities; Rule 62-296.700(6), F.A.C., RACT PM - O&M Plan; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) [PSD-FL-121, as amended]; Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT); and, Florida Electrical Power Plant Site Certifications [PA83-19].}*

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## SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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### Subsection A. Emissions Units 001, 002 & 003 Municipal Waste Combustor Units 1, 2 & 3.

#### Equipment and Operational Limitations

- A.1. Name Plate.** The combustors (boilers) shall have a metal name plate affixed in a conspicuous place on the shell showing the manufacturer, model number, type of waste, and rated capacity. [Rules 62-4.160(2) and 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.; and, Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.1.]
- A.2. Boiler Stack Height.** The height of the boiler exhaust stack shall not be less than 220 feet above grade. [Rule 62-4.160(2), F.A.C.; and, Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.5.]

#### Essential Potential to Emit (PTE) Parameters

- A.3. Hours of Operation.** These emissions units may operate continuously (8,760 hours/year). [Rule 62-210.200 (PTE), F.A.C.; and, Permit No. 0570261-002-AC/PSD-FL-121C.]
- A.4. Capacity.** The maximum operating rate applicable to each of MWC Units 1, 2 and 3 measured as steam flow shall not exceed 102,000 pounds/hour based on 4-hour block averaged measurements and shall not exceed the “maximum demonstrated MWC unit load” defined as 110% of the highest 4-hour average MWC unit load achieved during 4 consecutive hours during the most recent dioxin/furan performance test.
- {Permitting note: The nominal design rate capacity of each MWC Units 1, 2 and 3 is 400 tons/day and has been determined to be greater than 250 tons per day, thus classifying the units as a “large MWC units” under NSPS - 40 CFR 60, Subpart Eb.}*
- [Rules 62-4.160(2) and 62-210.200 (PTE), F.A.C.; 40 CFR 60.31b & 40 CFR 60.58b(j); and Permit No. 0570261-016-AC/PSD-FL-121E and PSD-FL-369D, Specific Condition 6.]
- A.5. Emissions Unit Operating Rate Limitation After Testing.** See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. See the “maximum demonstrated municipal waste combustor unit load” provisions of 40 CFR 60.34b(b) and 40 CFR 60.51b for additional restrictions on operating rate. [Rule 62-297.310(2), F.A.C.; and, 40 CFR 60.34b(b) & 40 CFR 60.51b.]
- A.6. MWCs - Methods of Operation - Fuels.**
- a. Allowable Fuels.
- (1) The only fuels allowed to be burned in the MWCs are municipal solid waste (MSW), with natural gas as an auxiliary fuel. Other fuels or wastes, not specifically listed herein, shall not be burned without written prior approval from the Department. Fuels or wastes specifically authorized herein do not require prior Department approval before combustion.
  - (2) The primary fuel for the facility is MSW, including the items and materials that fit within the definition of MSW contained in either 40 CFR 60.51b or Section 403.706(5), Florida Statutes (2010).
  - (3) Sewage sludge may be utilized as a fuel after dewatering, as biosolids (containing at least 12% solids by weight).
- b. Unauthorized Fuels. Subject to the limitations contained in this permit, the authorized fuels for the facility also include the other solid wastes that are not MSW, which are described in d. - f., below.
- However, the facility
- (1) Shall not burn:
    - (a) Those materials that are prohibited by state or federal law;
    - (b) Those materials that are prohibited by this permit;
    - (c) Lead acid batteries;
    - (d) Hazardous waste;
    - (e) Nuclear waste;
    - (f) Radioactive waste;
    - (g) Grease, scum and grit screenings <sup>2</sup>;
    - (h) Explosives;

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection A. Emissions Units 001, 002 & 003

##### Municipal Waste Combustor Units 1, 2 & 3.

- (i) beryllium-containing waste, as defined in 40 CFR 61, Subpart C. *{The U.S. EPA letter dated April 6, 2000 (see attached), on 40 CFR 61, Subpart C further addresses the applicability of this federal regulation with regard to beryllium-containing waste(s).}*
- (2) And shall not knowingly burn:
  - (a) Untreated biomedical waste from biomedical waste generators regulated pursuant to Chapter 64E-16, F.A.C., and from other similar generators (or sources). See the attached Appendix BW, Biomedical Waste Definitions, for definitions of what constitutes biomedical waste;
  - (b) Segregated loads of biological waste;
- c. **Fuel Handling.** The fuel may be received either as a mixture or as a single-item stream (segregated load) of discarded materials. If the facility intends to use an authorized fuel that is segregated non-MSW material, the fuel shall be either:
  - (1) Well mixed with MSW in the refuse pit; or
  - (2) Alternately charged with MSW in the hopper.For the purposes of this permit, a segregated load is defined to mean a container or truck that is almost completely or exclusively filled with a single item or homogeneous composition of waste material, as determined by visual observation.
- d. **Other Solid Waste.** Subject to the conditions and limitations contained in this permit, the following other solid waste may be used as fuel at the facility:
  - (1) Confidential, proprietary or special documents (including but not limited to business records, lottery tickets, event tickets, coupons and microfilm);
  - (2) Contraband which is being destroyed at the request of appropriately authorized local, state or federal governmental agencies, provided that such material is not an explosive, a propellant, a hazardous waste, or otherwise prohibited at the facility. For the purposes of this section, contraband includes but is not limited to drugs, narcotics, fruits, vegetables, plants, counterfeit money, and counterfeit consumer goods;
  - (3) Wood pallets, clean wood, and land clearing debris;
  - (4) Packaging materials and containers;
  - (5) Clothing, natural and synthetic fibers, fabric remnants, and similar debris, including but not limited to aprons and gloves; or
  - (6) Rugs, carpets, and floor coverings, but not asbestos-containing materials or polyethylene or polyurethane vinyl floor coverings.
- e. **Waste Tires.** Subject to the conditions and limitations contained in this permit, waste tires may be used as fuel at the facility. The total quantity of waste tires received as segregated loads and burned at the facility shall not exceed 3%, by weight, of the facility's total fuel. <sup>1</sup> Compliance with this limitation shall be determined on a calendar month basis.
- f. **Non-MSW Material.** Subject to the conditions and limitations contained in this permit, the following other solid waste materials may be used as fuel at the facility (i.e., the following are authorized fuels that are non-MSW material). The total quantity of the following non-MSW material received as segregated loads and burned at the facility shall not exceed 5%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined on a calendar month basis.
  - (1) Construction and demolition debris.
  - (2) Oil spill debris from aquatic, coastal, estuarine or river environments. Such items or materials include but are not limited to rags, wipes, and absorbents.
  - (3) Items suitable for human, plant or domesticated animal use, consumption or application where the item's shelf-life has expired or the generator wishes to remove the items from the market. Such items or materials include but are not limited to off-specification or expired consumer products, pharmaceuticals, medications, health and personal care products, cosmetics, foodstuffs, nutritional supplements, returned goods, and controlled substances.

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### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection A. Emissions Units 001, 002 & 003

##### Municipal Waste Combustor Units 1, 2 & 3.

- (4) Consumer-packaged products intended for human or domesticated animal use or application but not consumption. Such items or materials include but are not limited to carpet cleaners, household or bathroom cleaners, polishes, waxes and detergents.
- (5) Waste materials that:
  - (a) Are generated in the manufacture of items in categories f.(3) or f.(4), above and are functionally or commercially useless (expired, rejected or spent); or
  - (b) Are not yet formed or packaged for commercial distribution. Such items or materials must be substantially similar to other items or materials routinely found in MSW.
- (6) Waste materials that contain oil from:
  - (a) The routine cleanup of industrial or commercial establishments and machinery; or
  - (b) Spills of virgin or used petroleum products. Such items or materials include but are not limited to rags, wipes, and absorbents.
- (7) Used oil and used oil filters. Used oil containing a polychlorinated biphenyls (PCB) concentration equal or greater than 50 parts per million (ppm) shall not be burned, pursuant to the limitations of 40 CFR 761.20(e).
- (8) Waste materials generated by manufacturing, industrial or agricultural activities, provided that these items or materials are substantially similar to items or materials that are found routinely in MSW, subject to written prior approval of the Department.

[Rules 62-4.070(1)&(3), 62-213.410 and 62-213.440, F.A.C.; <sup>1</sup> Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.6.; and Permit No. 0570261-016-AC/PSD-FL-121E and PSD-FL-369D, Specific Condition 4.]

**A.7. Limitation of Biosolids.** The owner or operator is authorized to combust up to 5% by weight (90 wet tons per day, as received) of biosolids that contain at least 12% solids, by weight, in MWC Units 1, 2, 3 and 4 combined. [Permit No. 0570261-016-AC/PSD-FL-121E and PSD-FL-369D, Specific Condition 5.]

**A.8. Auxiliary Burners - Methods of Operation - Fuels.** Auxiliary burners for each unit shall be fired only by natural gas. During boiler startup, the auxiliary burners shall be operating at their maximum capacity prior to the introduction of municipal solid waste to the boilers, and shall remain in operation until the lime spray dryer absorber (SDA) and particulate matter control device (baghouse) are fully operational. [Rules 62-4.160(2), 62-210.200 (PTE), and 62-213.440(1), F.A.C.; and, Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.17.]

#### **Air Pollution Control Technologies and Measures**

**A.9. Carbon Usage Rate.** The carbon injection rate operating standard and monitoring requirements set forth in 40 CFR 60.58b(m) of 40 CFR 60, Subpart Eb, incorporated by reference in Rule 62-204.800, F.A.C., shall apply. See Appendix 40 CFR 60, Subpart Eb. [Rule 62-296.416(5), F.A.C.]

#### **A.10. Air Pollutant Emission Control Equipment.**

- a. *Particulate Matter.* The unit shall maintain a particulate matter control baghouse designed, constructed and operated so as not to exceed a maximum emission rate of 25 mg/dscm corrected to 7 percent O<sub>2</sub>. The baghouse shall be equipped with pressure drop monitoring equipment.
- b. *Spray Dryer Scrubber.* The unit shall maintain a spray dryer scrubber designed, constructed and operated so as to remove SO<sub>2</sub> at an efficiency of 75 percent, or not to exceed a maximum emission rate of 29 ppmvd corrected to 7 percent O<sub>2</sub> based upon a 24-hour block geometric mean, whichever is less stringent.
- c. *Carbon Injection.* The unit shall maintain a carbon injection system. The carbon injection rate must be measured continuously and maintained in compliance with the requirements set forth in this permit as well as 40 CFR 60.58b(m).

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection A. Emissions Units 001, 002 & 003

##### Municipal Waste Combustor Units 1, 2 & 3.

- d. *Selective Non Catalytic Reduction System.* The unit shall maintain a selective non catalytic reduction system designed, constructed and operated so as not to exceed a maximum NO<sub>x</sub> emission rate of 205 ppmvd corrected to 7 percent O<sub>2</sub> on a 24-hour block arithmetic mean (midnight to midnight).

[Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.4. and Rule 62-4.070(1)&(3), F.A.C.]

- A.11. Operation and Maintenance (O&M) Plans.** An O&M plan shall be on file with the Compliance Authority for each MWC unit and associated air pollution control devices. These emissions units and associated air pollution control devices shall be operated and maintained in accordance with the submitted O&M plans. The O&M documentation logs shall be maintained for a minimum of the most recent five years and be made available for inspection upon request. [Rules 62-213.440(1), 62-213.440(1)(b)2.b. & 62-296.700(6), F.A.C.]

#### **Emission Limitations and Standards**

*{Permitting note: Table 1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}*

*{Permitting note: The May 10, 2006 amendments to 40 CFR 60 Subpart Cb changed some of the emission standards and limitations for MWC Units 1-3. Four (4) air pollutant standards/limitations were lowered under the amendments: PM, Cd, Hg, and Pb.}*

Unless otherwise specified, the averaging times for Specific Conditions **A.11. - A.20.** are based on the specified averaging time of the applicable test method.

#### **Stack Emissions**

- A.12. Particulate Matter.** The emission limit for particulate matter (PM) contained in the gases discharged to the atmosphere is 25 milligrams per dry standard cubic meter (mg/dscm), corrected to 7 percent oxygen.

[Rule 62-204.800(9)(b)3.a., F.A.C.; 40 CFR 60.33b(a)(1)(i); and, Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.8.]

- A.13. Opacity.** As determined by the continuous opacity monitoring system (COMS) or EPA Method 9, the emission limit for opacity exhibited by the gases discharged to the atmosphere is 10 percent (6-minute average). [Rule 62-204.800(9)(b)3.b., F.A.C.; 40 CFR 60.33b(a)(1)(iii); and, Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.8.]

- A.14. Cadmium.** The emission limit for cadmium (Cd) contained in the gases discharged to the atmosphere is 35 micrograms per dry standard cubic meter (µg/dscm), corrected to 7 percent oxygen. [Rule 62-204.800(9)(b)3.c., F.A.C.; 40 CFR 60.33b(a)(2)(i); and, Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.8.]

- A.15. Mercury.** The emission limit for mercury (Hg) contained in the gases discharged to the atmosphere is 50 micrograms per dry standard cubic meter (µg/dscm) or 15 percent of the potential mercury emission concentration (85-percent reduction by weight), corrected to 7 percent oxygen, whichever is less stringent. Mercury emissions from MWC Units 1, 2, 3 and 4 combined shall not exceed 7.1 pounds per 24-hour period when combusting sewage sludge biosolids. [Rule 62-204.800(9)(b)3.d., F.A.C.; 40 CFR 60.33b(a)(3); and, Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.8., and Permit No. 0570261-016-AC/PSD-FL-121E and PSD-FL-369D, Specific Condition 7.]

- A.16. Lead.** The emission limit for lead (Pb) contained in the gases discharged to the atmosphere is 400 micrograms per dry standard cubic meter (µg/dscm), corrected to 7 percent oxygen. [Rule 62-204.800(9)(b)3.c., F.A.C.; and, 40 CFR 60.33b(a)(4); and, Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.8.]

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## SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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### Subsection A. Emissions Units 001, 002 & 003

#### Municipal Waste Combustor Units 1, 2 & 3.

- A.17. Sulfur Dioxide.** As determined by the continuous emissions monitoring system (CEMS), the emission limit for sulfur dioxide (SO<sub>2</sub>) contained in the gases discharged to the atmosphere is 29 parts per million by volume (ppmv) or 20 percent of the potential sulfur dioxide emission concentration (80-percent reduction by weight or volume), corrected to 7 percent oxygen (dry basis), whichever is less stringent. Compliance with this emission limit is based on a 24-hour daily geometric mean. [Rule 62-204.800(9)(b)3.e., F.A.C.; 40 CFR 60.33b(b)(3)(i); and, Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.8.]
- A.18. Hydrogen Chloride.** The emission limit for hydrogen chloride (HCl) contained in the gases discharged to the atmosphere is 29 parts per million by volume (ppmv) or 5 percent of the potential hydrogen chloride emission concentration (95-percent reduction by weight or volume), corrected to 7 percent oxygen (dry basis), whichever is less stringent. [Rule 62-204.800(9)(b)3.f., F.A.C.; 40 CFR 60.33b(b)(3)(ii); and, Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.8.]
- A.19. Dioxin/Furan.** The emission limit for dioxin/furan (D/F) contained in the gases discharged to the atmosphere from designated facilities that do not employ an electrostatic precipitator-based emission control system is 30 nanograms per dry standard cubic meter (ng/dscm) (total mass), corrected to 7 percent oxygen. [Rule 62-204.800(9)(b)3.g., F.A.C.; 40 CFR 60.33b(c)(1)(iii); and, Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.8.]
- A.20. Nitrogen Oxides.** As determined by the CEMS, the emission limit for nitrogen oxides (NO<sub>x</sub>) contained in the gases discharged to the atmosphere is 205 parts per million by volume (ppmv), corrected to 7 percent oxygen, dry basis. Compliance with this emission limit is based on the 24-hour daily arithmetic average of the hourly emission concentrations using continuous emission monitoring system outlet data. Emissions averaging pursuant to 40 CFR 60.33b(d)(1) shall be allowed. 40 CFR 60.33b(d)(2) shall not apply. [Rule 62-204.800(9)(b)3.h., F.A.C.; 40 CFR 60.33b(d) and, Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.8.]
- {Permitting note: Nitrogen oxide emissions from the auxiliary burners are approximately 3.45 lbs/hr and 15.1 tons/yr per unit. These emissions are part of, and not in addition to, combustor emissions. Allowable emissions for MSW combustors include auxiliary burners. Auxiliary burners for each MWC unit shall be fired only by natural gas.}*
- A.21. Carbon Monoxide.** As determined by the CEMS, the emission limit for carbon monoxide (CO) contained in the gases discharged to the atmosphere from a mass burn waterwall type municipal waste combustor technology is 100 parts per million by volume, measured at the combustor outlet in conjunction with a measurement of oxygen concentration, corrected to 7 percent oxygen, dry basis, and calculated on a 4-hour block average. [Rule 62-204.800(9)(b)3.i., F.A.C.; and, 40 CFR 60.34b(a); and, Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.8.]

#### **Fugitive Ash Emissions**

- A.22. Fugitive Ash Emissions.**
- No owner or operator of an affected facility shall 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 percent of the observation period (i.e., 9 minutes per 3-hour period), as determined by EPA Reference Method 22 observations as specified in 40 CFR 60.58b(k), except as provided in paragraphs b. and c.
  - The emission limit specified in paragraph a. does not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however, the emission limit specified in paragraph a. does cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.
  - The provisions of paragraph a. do not apply during maintenance and repair of ash conveying systems. [Rule 62-204.800(9)(b)6., F.A.C.; and, 40 CFR 60.36b and 40 CFR 60.55b.]

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## SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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### Subsection A. Emissions Units 001, 002 & 003 Municipal Waste Combustor Units 1, 2 & 3.

#### Excess Emissions

Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any requirement of an EG, NSPS or NESHAP provision.

**A.23. Excess Emissions Allowed - Startup, Shutdown or Malfunction.** Excess emissions resulting from startup, shutdown or malfunction shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. The Department authorizes three hours per occurrence in any 24-hour period for these emissions units. A malfunction means any unavoidable failure of air pollution control equipment or process equipment to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, any other preventable upset condition, or preventable equipment breakdown shall not be considered malfunctions.<sup>1</sup> [Rule 62-210.700(1)&(5), F.A.C.; <sup>1</sup> Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.7.]

**A.24. NSPS Startup, Shutdown and Malfunction Provisions.**

- a. For the purpose of compliance with the carbon monoxide emission limits in 40 CFR 60.53b(a), 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. During such periods of malfunction, monitoring data shall be dismissed or excluded from compliance calculations, but shall be recorded and reported in accordance with the provisions of 40 CFR 60.59b(d)(7). [40 CFR 60.38b & 40 CFR 60.58b(a)(1)(iii)]
- b. During a loss of boiler water level control or loss of combustion air control malfunction period as specified in paragraph (a)(1)(iii) of 40 CFR 60.58b, a diluent cap of 14 percent for oxygen or 5 percent for carbon dioxide may be used in the emissions calculations for sulfur dioxide and nitrogen oxides. [40 CFR 60.38b & 40 CFR 60.58b(b)(8)]

*{Permitting note: See Appendices Cb and Eb.}*

**A.25. Best Operational Practices.** The owner or operator shall maintain a manual that identifies and describes best operational practices that will be used during periods of startup, shut down and malfunction at this facility. [Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.D.3.(c).]

**A.26. Excess Emissions Prohibited.** Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C. and Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.7.]

#### Continuous Monitoring Requirements

*{Permitting Note: The following continuous monitors are installed on these emissions units: steam flow, inlet temperature to baghouse, opacity, SO<sub>2</sub>, NO<sub>x</sub>, CO, O<sub>2</sub> and carbon dioxide (CO<sub>2</sub>).}*

**A.27. Steam Flow Meter.** The owner or operator shall calibrate, maintain, and operate a steam flow meter or a feedwater flow meter; to measure steam (or feedwater) flow in kilograms per hour (or lbs/hour) on a continuous basis; and record the output of the monitor. Steam (or feedwater) flow shall be calculated in 4-hour block arithmetic averages. [Rule 62-213.440, F.A.C.; 40 CFR 60.34b, 40 CFR 60.53b & 40 CFR 60.58b(i)(6).]

**A.28. Inlet Temperature to Particulate Matter Control Device (Baghouse).** The owner or operator shall calibrate, maintain, and operate a device for measuring on a continuous basis the temperature of the flue gas stream at the inlet to each particulate matter control device utilized. Temperature shall be calculated in 4-hour

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection A. Emissions Units 001, 002 & 003 Municipal Waste Combustor Units 1, 2 & 3.

block arithmetic averages. [Rule 62-213.440, F.A.C.; and, 40 CFR 60.34b, 40 CFR 60.53b & 40 CFR 60.58b(i)(7).]

- A.29. Pressure Drop Monitoring Equipment for Baghouse.** The baghouses shall be equipped with pressure drop monitoring equipment. [Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.4.]
- A.30. Continuous Emissions Monitoring Systems (CEMS) Required.** The owner or operator shall calibrate, operate and maintain continuous emissions monitoring systems (CEMS) for monitoring opacity, sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO). [Rule 62-213.440, F.A.C.; 40 CFR 60.38b; 40 CFR 60.58b(c)(8) (opacity); 40 CFR 60.58b(e)(5) (SO<sub>2</sub>); 40 CFR 60.58b(h)(4) (NO<sub>x</sub>) & 40 CFR 60.58b(i)(3) (CO); and Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.12.&18.]
- A.31. Oxygen (O<sub>2</sub>) or Carbon Dioxide (CO<sub>2</sub>) CEMS.** The owner or operator shall calibrate, maintain, and operate a continuous emission monitoring system (CEMS) for measuring the oxygen or carbon dioxide content of the flue gas at each location where carbon monoxide, sulfur dioxide, or nitrogen oxides emissions are monitored and record the output of the system. [Rule 62-213.440, F.A.C.; 40 CFR 60.38b, 40 CFR 60.58b(b); and Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.18.]
- A.32. Continuous Monitoring System (CMS).** CMS with recorders shall be installed, calibrated, maintained and operated for each unit, subject to review by the Department, for the following operational parameter: Power Generation (in MW).  
Unless required in 40 CFR 60, Subpart Cb, operational data monitoring systems (power generation) shall be calibrated annually and operated in accordance with good engineering practice.  
[Rule 62-213.440, F.A.C.; and Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.18.]

#### **Monitoring Requirements**

- A.33. Charging Rate Monitoring.** The average daily solid waste charging rate shall be determined on a monthly basis and recorded for the MWC unit. The daily charging rate shall be determined each month on an average daily basis for the MWC unit using the facility's truck scale weight data, refuse pit inventory data and MWC operating data for the preceding calendar month. Monthly truck scale weight records of the weight of solid waste received and processed at the unit, and refuse pit inventory data, shall be used to determine the amount of solid waste charged during the preceding calendar month on an average daily basis. The MWC load level measurements or other operating data shall be used to determine the number of operating hours for each day during the preceding calendar month. [Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.14.; and, Rule 62-4.070(1)&(3), F.A.C.]

#### **Test Methods and Procedures**

*{Permitting note: Table 2, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}*

- A.34. Test Methods.** Required tests shall be performed in accordance with the following reference methods:

Method(s)	Description of Method(s) and Comment(s)
EPA Methods 1-4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content. Methods shall be performed as necessary to support other methods.
EPA Methods 5	Methods for Determining PM Emissions. The minimum sample volume shall be 1.7 cubic meters.
EPA Methods 6, 6A or 6C	Determination of SO <sub>2</sub> Emissions (6C is Instrumental).



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**SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.**

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**Subsection A. Emissions Units 001, 002 & 003  
Municipal Waste Combustor Units 1, 2 & 3.**

Method(s)	Description of Method(s) and Comment(s)
EPA Methods 7, 7C, 7E or 19	Determination of NO <sub>x</sub> Emissions (7E is Instrumental).
EPA Method 9	Visual Determination of the Opacity of Emissions (VE).
EPA Method 10	Measurement of CO Emissions (Instrumental). The method shall be based on a continuous sampling train.
EPA Method 22	Visual Determination of Fugitive Emissions from Material Sources.
EPA Method 23	Measurement of D/F Emissions. Authorized to omit methylene chloride rinse. <sup>1</sup>
EPA Method 26 or 26A	Determination of HCl Emissions from Stationary Sources.
EPA Method 29	Determination of Metal (e.g., Cd, Hg and Pb) Emissions from Stationary Sources.

The above methods are described in Chapter 62-297, F.A.C. and/or 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Chapter 62-297, F.A.C.; Rule 62-204.800(9)(b)7., F.A.C.; and, <sup>1</sup> Appendix ATP, U.S. EPA Alternative Test Procedure Approval dated June 3, 2004.]

- A.35. Common Testing Requirements.** Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]
- A.36. Annual Compliance Test.** The owner or operator shall conduct a performance test for PM, opacity, Cd, Hg, Pb and D/F emissions on a calendar year basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test; and must complete five performance tests in each 5-year calendar period). The owner or operator shall conduct a performance test for HCl emissions on an annual basis (no more than 12 calendar months following the previous performance test). [Rules 62-297.310(7) & 62-204.800(9)(b)7., F.A.C.; and Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.9.]
- A.37. Dioxins/Furans.** The alternative performance testing schedule for dioxins/furans (D/F) specified in 40 CFR 60.58b(g)(5)(iii) shall apply to municipal waste combustor plants that achieve a dioxin/furan emission level less than or equal to 15 nanograms per dry standard cubic meter, corrected to 7 percent oxygen. [Rule 62-204.800(9)(b)7.b, F.A.C.]
- A.38. VE Testing Conditions.** At least one 1-hour VE test run shall be conducted simultaneously with particulate matter emissions testing. [Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.10.]
- A.39. PM Testing Conditions.** Testing of the MWC units for particulate matter emissions shall be performed during normal operation and one 1-hour PM test run shall be conducted during soot blowing conditions. [Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.10.]
- A.40. Continuous Compliance.** The permittee shall demonstrate continuous compliance with the CO, NO<sub>x</sub>, and SO<sub>2</sub> emissions standards based on data collected by the certified CEMS. The permittee shall demonstrate continuous compliance with the opacity limit based on data collected by the required COMS. [Rule 62-210.200 (BACT), F.A.C., and Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.12.&18.]

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection A. Emissions Units 001, 002 & 003 Municipal Waste Combustor Units 1, 2 & 3.

##### Recordkeeping and Reporting Requirements

**A.41. Reporting Schedule.** The following report shall be submitted to the Compliance Authority:

Report	Reporting Deadline(s)	Related Condition(s)
Excess Emissions from Malfunctions, if requested by the Compliance Authority	Every 3 months (quarter)	<b>A.42.</b>
Excess Emissions	Every 3 months (quarter)	<b>A.43.</b>
NSPS Excess Emissions and Monitoring System Performance	Every 6 months (semi-annual), except when more frequent reporting is specifically required	<b>A.54.</b>
EG Cb (Eb) Semi-Annual Report	Every 6 months (semi-annual)	<b>A.52. &amp; 53.</b> Appendix Cb/Appendix Eb - 40 CFR 60.59b(g)
EG Cb (Eb) Semi-Annual Report	Every 6 months (semi-annual)	<b>A.52. &amp; 53.</b> Appendix Cb/Appendix Eb - 40 CFR 60.59b(h)

[Rule 62-210.700(6), F.A.C.; 40 CFR 60, Subparts A, Cb & Eb.]

**A.42. Excess Emissions from Malfunctions.** In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Compliance Authority. [Rule 62-210.700(6), F.A.C.]

**A.43. Quarterly Excess Emissions Report.** Submit to the Department a written report of emissions in excess of emission limiting for each calendar quarter. The nature and cause of the excess emissions shall be explained. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report quarterly stating that no excess emissions occurred. This report does not relieve the owner or operator of the legal liability for violations. [Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.21.1.]

**A.44. Other Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440, F.A.C.]

**A.45. Reporting and Recordkeeping.** The reporting and recordkeeping requirements applicable to each municipal waste combustor unit subject to Rule 62-204.800(9)(b), F.A.C., shall be the same as set forth in 40 CFR 60.59b, except for the siting requirements under 40 CFR 60.59b(a), (b)(5) and (d)(11). [Rule 62-204.800(9)(b)7.b, F.A.C.]

**A.46. Records of Non-MSW.** The facility operator shall prepare and maintain records concerning the description and quantities of all segregated loads of non-MSW material which are received and used as fuel at the facility, and subject to a percentage weight limitation (see Specific Conditions **A.6.e.** and **A.6.f.**). The following records shall be prepared and maintained to demonstrate compliance with the segregated non-MSW percentage limitations:

- a. *Segregated Loads of non-MSW Materials.* Each segregated load of non-MSW materials, that is subject to the percentage weight limitations (see Specific Conditions **A.6.e.** and **A.6.f.**), which is received for processing shall be documented as to the description and weight of the waste. The weight of all waste materials received for processing shall be measured using the facility truck scale and recorded.

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection A. Emissions Units 001, 002 & 003

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- b. *Waste Tires.* Each day the total weight of segregated tires received shall be computed, and the daily total shall be added to the sum of the daily totals from the previous days in the current calendar month. At the end of each calendar month, the resultant monthly total weight of tires shall be divided by the total weight of all waste materials received in the same calendar month, and the resultant number shall be multiplied by 100 to express the ratio in percentage terms. The percentage computed shall be compared to the 3% limitation.<sup>1</sup>
- c. *Non-MSW Material.* Each day the total weight of segregated non-MSW materials received that are subject to the 5% restriction shall be computed, and the daily total shall be added to the sum of the daily totals from the previous days in the current calendar month. At the end of each calendar month, the resultant monthly total weight of segregated non-MSW materials subject to the 5% restriction shall be divided by the total weight of all waste materials received in the same calendar month, and the resultant number shall be multiplied by 100 to express the ratio in percentage terms. The percentage computed shall be compared to the 5% limitation.

[Rules 62-4.070(1)&(3), 62-213.410 and 62-213.440, F.A.C.; and, <sup>1</sup> Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.25.]

- A.47. Central File.** The permittee shall maintain a central file containing all measurements, records, and other data that are required to be collected pursuant to the various specific conditions of this permit. This file shall include but not be limited to:
- a. Data collected from monitoring instruments, including CEMS/COMS, steam or feed water flow measurements and PM control device temperatures.
  - b. Continuous steam flow or feed water flow records on 4-hour block average basis.
  - c. Records on daily solid waste charging rates and hours of operation derived from monthly truck scale data, refuse pit inventory, and operational records.
  - d. Results of all source tests or performance tests; and records of the maximum demonstrated unit load specified by this permit.
  - e. Amounts of activated carbon used for mercury control.
  - f. Calibration logs for all instruments subject to this permit.
  - g. Maintenance/repair logs for any work performed which is subject to this permit.
  - h. Records showing the names of facility personnel who have been provisionally or fully certified, and who have completed the MWC operator training course, and who have completed reviews of the operating manual, including the dates and documentation of certification/review.
  - i. Records demonstrating compliance with the percentage limitations on segregated solid wastes required by this permit.

[Permit No. 0570261-002-AC/PSD-FL-121C, Specific Condition III.B.20.]

#### **Operator Practices, Training and Certification**

- A.48. Operating Practices.** The owner or operator shall comply with the operating practices as set forth in 40 CFR 60.53b(b) and (c) of 40 CFR 60, Subpart Eb. [Rule 62-204.800(9)(b)4., F.A.C.; and, 40 CFR 60.34b & 40 CFR 60.53b.]
- A.49. Operator Training and Certification.** The owner or operator shall comply with the operator training and certification requirements of 40 CFR 60.54b of 40 CFR 60, Subpart Eb. Compliance with these requirements shall be conducted according to the schedule specified in 40 CFR 60.39b(c)(4) of 40 CFR 60, Subpart Cb. [Rule 62-204.800(9)(b)5., F.A.C.; and, 40 CFR 60.35b & 40 CFR 60.54b.]
- A.50. Best Management Practices (BMP's) for Biosolids Utilization.** To ensure good mixing of biosolids with other waste processed in MWC Units 1, 2, 3 and 4, the owner or operator shall document and employ best management practices (BMP's) when utilizing biosolids (dewatered sewage sludge) and include the following minimum requirements:

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### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection A. Emissions Units 001, 002 & 003 Municipal Waste Combustor Units 1, 2 & 3.

- a. The BMP's shall be incorporated into the site-specific municipal waste combustor operator training and certification pursuant to Department's MWC Rule and 40 CFR 60, Subpart Eb, 60.54b, Standards for Municipal Waste Combustor Operator Training and Certification.
  - b. The BMP's shall provide for operator training and identify and implement practices that promote good mixing and combustion.
  - c. All mixing shall occur in a waste storage bunker or refuse pit. Biosolids shall not be placed on the tipping floor, or alone, in a waste storage bunker.
  - d. The operator shall evenly spread biosolids with the crane grapple(s) over the top of the MSW in the waste storage bunker. Other MSW may be spread over the top of the biosolids.
  - e. Well-mixed (combined) materials shall be fed directly into the combustor feed hopper.
  - f. The owner or operator shall maintain records including the source, classification and typical characteristics (e.g. metals, pathogen results, solids) and amount introduced into the process.
- [Rules 62-4.070(1) and (3), F.A.C., Reasonable Assurance; Department's MWC Rule and 40 CFR 60, Subpart Eb, and Permit No. 0570261-016-AC/PSD-FL-121E and PSD-FL-369D, Specific Condition 11.]

#### **EG 40 CFR 60 Requirements**

**A.51. EG Requirements - General Applicability and Definitions.** These emissions units shall comply with all applicable requirements of 40 CFR 60, Emission Guidelines and Compliance Times which have been adopted by reference in Rule 62-204.800(9), F.A.C., except that the term "Administrator," when used in any provision of 40 CFR 60 that is delegated to the Department by the U.S. Environmental Protection Agency, shall mean the Secretary or the Secretary's designee. [Rule 62-204.800(9)(a), F.A.C.]

*{Permitting note: Pursuant to Rule 62-204.800(9)(a)1., F.A.C., the Emission Guidelines for Existing Sources shall be controlling over other standards in the air pollution rules of the Department except that any emissions limiting standard contained in or determined pursuant to the air pollution rules of the Department which is more stringent than one contained in an Emission Guideline, or which regulates emissions of pollutants or emissions units not regulated by an applicable Emission Guideline, shall apply.}*

**A.52. EG Requirements - Subpart Cb.** These emissions units shall comply with all applicable requirements of 40 CFR 60, Subpart Cb, Emissions Guidelines (EG) and Compliance Times for Large Municipal Waste Combustors, which have been adopted and incorporated by reference in Rule 62-204.800(9), F.A.C. These emissions units shall comply with Appendix 40 CFR 60 Subpart Cb included with this permit. [Rule 62-204.800(9)(b), F.A.C.]

#### **NSPS 40 CFR 60 Requirements**

*{Permitting note(s): The EG 40 CFR 60, Subpart Cb, cross references conditions (applicable requirements) that are contained in the NSPS 40 CFR 60, Subparts A and Eb.}*

**A.53. NSPS Requirements - Subpart Eb.** Except as otherwise provided in this permit, these emissions units shall comply with all applicable provisions of 40 CFR 60, Subpart Eb, Large Municipal Waste Combustors, adopted and incorporated by reference in Rule 62-204.800(8)(b), F.A.C.; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 CFR 60.50b(n). These emissions units shall comply with all applicable provisions of Appendix 40 CFR 60 Subpart Eb included with this permit. [Rule 62-204.800(8)(b)7., F.A.C.]

**A.54. NSPS Requirements - Subpart A.** This emissions unit shall comply with all applicable requirements of 40 CFR 60, Subpart A, General Provisions, including:  
40 CFR 60.7, Notification and Recordkeeping  
40 CFR 60.8, Performance Tests  
40 CFR 60.11, Compliance with Standards and Maintenance Requirements  
40 CFR 60.12, Circumvention

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection A. Emissions Units 001, 002 & 003 Municipal Waste Combustor Units 1, 2 & 3.

40 CFR 60.13, Monitoring Requirements

40 CFR 60.19, General Notification and Reporting Requirements, which have been adopted by reference in Rule 62-204.800(8)(d), F.A.C.; except that the Secretary is not the Administrator for purposes of 40 CFR 60.4, 40 CFR 60.8(b)(2) and (3), 40 CFR 60.11(e)(7) and (8), 40 CFR 60.13(g), (i) and (j)(2), and 40 CFR 60.16. This emissions unit shall comply with all applicable provisions of Appendix 40 CFR 60 Subpart A included with this permit. [Rule 62-204.800(8)(d), F.A.C.]

#### **Other Requirements**

**A.55. Acid Rain Part Application.** For any unit which is a solid waste incinerator, burning less than 20 percent fossil fuel as described in 40 CFR 72.6(b)(7), adopted and incorporated by reference at Rule 62-204.800, F.A.C., the designated representative of the source containing the unit shall submit a complete Acid Rain Part application governing such unit to the Department before March 1<sup>st</sup> of the year following the three calendar year period in which the incinerator consumed 20 percent or more fossil fuel on a British thermal unit (BTU) basis. [Rule 62-214.320(1)(h), F.A.C.]

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection B. Emissions Unit 107 Municipal Waste Combustor Unit 4.

The specific conditions in this section apply to the following emissions unit:

E.U. ID No.	Brief Description
107	Municipal Waste Combustor Unit 4

Emissions Unit ID No. 107, referred to as “Unit 4,” consists of a nominal design rated capacity 600 tons of MSW per day (TPD) mass-burn municipal waste combustor (MWC) manufactured by Riley Power Inc. Unit 4 has a mass burn waterwall furnace, two nominal 50 MMBtu/hr natural gas-fired auxiliary burners and a nominal 17 megawatt (MW) steam turbine-electrical generator. The combustion system technology is similar to Units 1, 2, and 3 where combustion takes place on a reverse-reciprocating grate system. The combustion system incorporates the technology of German-based Martin GmbH. Waste is combusted at furnace temperatures exceeding 1,800 °F, and reduced to an inert ash residue. The auxiliary burners are used to fire the MSW combustors during startup, shutdown, and at other times when necessary and consistent with good combustion practices.

The nominal steam production rate is 170,790 lbs steam/hour and the maximum steam production limit is 200,000 lbs steam/hr (4-hour block average) based on MSW having a heating value of 5,000 Btu/lb. The nominal heat input is approximately 288 MMBtu/hr. Short term capacity is restricted by limiting steam production, which effectively limits heat input. The net design steam enthalpy for useful work is 1,158 Btu/lb. Unit 4 is directly connected to a separate dedicated steam turbine generator with an electrical output of 17 MW.

Odor is controlled by drawing combustion air from the refuse tipping floor area. Air pollution control equipment and measures consist of: efficient combustion on the grate and furnace; the strategic combustion air management system (Covanta low NO<sub>x</sub> (LN<sup>TM</sup>) system) or flue gas recirculation (FGR); a spray dryer absorber (SDA) in conjunction with a fabric filter (baghouse) for control of acid gases, particulate matter, and most metals; activated carbon injection (ACI) system to enhance mercury (Hg) removal; and, selective non-catalytic reduction (SNCR) by ammonia or urea injection for nitrogen oxides (NO<sub>x</sub>) control. Activated carbon is injected into the flue gases prior to the baghouses to control Hg emissions. Captured dry ash particles fall into hoppers and are transported by an enclosed conveyor system to the bottom ash discharger where they are wetted to prevent dust, and mixed with the bottom ash.

All four units, Units 1, 2, 3 (see Subsection III.A.) and 4, exhaust to a common stack consisting of four separate flues. The stack parameters for Unit 4’s flue are: height, 220 feet; diameter, 5.5 feet; exit temperature, 270 °F; and, actual stack gas flow rate, 133,606 acfm.

Unit 4 commenced commercial operation on September 5, 2009.

*{Permitting note(s): This emissions unit is regulated under 40 CFR 60, Subpart Eb, Standards of Performance for Large Municipal Waste Combustors adopted and incorporated by reference in Rule 62-204.800(8)(b)7., F.A.C. Unit 4 is considered a ‘new’ large municipal waste combustor (large MWC) unit regulated under 40 CFR 60, Subpart Eb. This MWC unit commenced construction on December 26, 2006 (the cut-off date for lower emission standards/limitations under 40 CFR 60, Subpart Eb is a “commenced construction date after December 19, 2005”); Rule 62-296.416, F.A.C., Waste-to-Energy Facilities; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) [PSD-FL-369, as amended]; Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT); and, Florida Electrical Power Plant Site Certifications [PA82-19A].}*

#### **Equipment and Operational Limitations**

**B.1. Name Plate.** The combustor (boiler) shall have a metal name plate affixed in a conspicuous place on the shell showing the manufacturer, model number, type waste, and rated capacity. [Rules 62-4.160(2) and 62-210.200 (Definitions - Potential to Emit (PTE)), F.A.C.; and, Permit No. 0570261-007-AC/PSD-FL-369.]

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## SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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### Subsection B. Emissions Unit 107 Municipal Waste Combustor Unit 4.

**B.2. Combustion Practices.** To ensure that the facility's fuel does not adversely affect the facility's combustion process or emissions, the facility operator shall:

- a. Comply with good combustion operating practices in accordance with 40 CFR 60.53b;
- b. Install, operate and maintain continuous emissions monitors (CEMS) for oxygen, carbon monoxide, sulfur dioxide, oxides of nitrogen and temperature in accordance with 40 CFR 60.58b; and
- c. Record and maintain the CEMS data in accordance with 40 CFR 60.59b.

These steps shall be used to ensure and verify continuous compliance with the emissions limitations in this permit. Natural gas may be used as fuel during warm-up, startup, shutdown, and malfunction periods, and at other times when necessary and consistent with good combustion practices.

[Rule 62-4.070(1)&(3), F.A.C.; and, Permit No. 0570261-007-AC/PSD-FL-369.]

#### **Essential Potential to Emit (PTE) Parameters**

**B.3. Hours of Operation.** This emissions unit may operate continuously (8,760 hours/year). [Rule 62-210.200 (PTE), F.A.C.; and, Permit No. 0570261-007-AC/PSD-FL-369.]

**B.4. Capacity.** The maximum steam production rate shall not exceed 200,000 pounds steam per hour (on a 4-hour block arithmetic average).

*{Permitting note: The nominal capacity of Unit 4 is 600 tons per day and has been determined to be greater than 250 tons per day, thus classifying the unit as a "large MWC unit" under NSPS - 40 CFR 60, Subpart Eb.}*

See 40 CFR 60.58b(j) of Appendix 40 CFR 60, Subpart Eb for additional restrictions on capacity. [Rules 62-4.160(2) and 62-210.200 (PTE), F.A.C.; 40 CFR 60.58b(j); 40 CFR 60, Subpart Eb; Design; and, Permit Nos. 0570261-007-AC/PSD-FL-369 & 0570261-009-AC/PSD-FL-369A.]

**B.5. Emissions Unit Operating Rate Limitation After Testing.** See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. See the "maximum demonstrated municipal waste combustor unit load" provisions of 40 CFR 60.51b for additional restrictions on operating rate. [Rule 62-297.310(2), F.A.C.; and, 40 CFR 60.51b.]

**B.6. MWCs - Methods of Operation - Fuels.**

a. Allowable Fuels.

- (1) The only fuels allowed to be burned in the MWCs are municipal solid waste (MSW), with natural gas as an auxiliary fuel. Other fuels or wastes, not specifically listed herein, shall not be burned without written prior approval from the Department. Fuels or wastes specifically authorized herein do not require prior Department approval before combustion.
- (2) The primary fuel for the facility is MSW, including the items and materials that fit within the definition of MSW contained in either 40 CFR 60.51b or Section 403.706(5), Florida Statutes (2010).
- (3) Sewage sludge may be utilized as a fuel after dewatering, as biosolids (containing at least 12% solids by weight).

b. Unauthorized Fuels. Subject to the limitations contained in this permit, the authorized fuels for the facility also include the other solid wastes that are not MSW, which are described in d. - f., below. However, the facility

(1) Shall not burn:

- (a) Those materials that are prohibited by state or federal law;
- (b) Those materials that are prohibited by this permit;
- (c) Lead acid batteries;
- (d) Hazardous waste;
- (e) Nuclear waste;
- (f) Radioactive waste;
- (g) Explosives;

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### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection B. Emissions Unit 107 Municipal Waste Combustor Unit 4.

- (h) beryllium-containing waste, as defined in 40 CFR 61, Subpart C. *{The U.S. EPA letter dated April 6, 2000 (see attached), on 40 CFR 61, Subpart C further addresses the applicability of this federal regulation with regard to beryllium-containing waste(s).}*
- (2) And shall not knowingly burn:
  - (a) Untreated biomedical waste from biomedical waste generators regulated pursuant to Chapter 64E-16, F.A.C., and from other similar generators (or sources). See the attached Appendix BW, Biomedical Waste Definitions, for definitions of what constitutes biomedical waste;
  - (b) Segregated loads of biological waste;
- c. **Fuel Handling.** The fuel may be received either as a mixture or as a single-item stream (segregated load) of discarded materials. If the facility intends to use an authorized fuel that is segregated non-MSW material, the fuel shall be either:
  - (1) Well mixed with MSW in the refuse pit; or
  - (2) Alternately charged with MSW in the hopper.For the purposes of this permit, a segregated load is defined to mean a container or truck that is almost completely or exclusively filled with a single item or homogeneous composition of waste material, as determined by visual observation.
- d. **Other Solid Waste.** Subject to the conditions and limitations contained in this permit, the following other solid waste may be used as fuel at the facility:
  - (1) Confidential, proprietary or special documents (including but not limited to business records, lottery tickets, event tickets, coupons and microfilm);
  - (2) Contraband which is being destroyed at the request of appropriately authorized local, state or federal governmental agencies, provided that such material is not an explosive, a propellant, a hazardous waste, or otherwise prohibited at the facility. For the purposes of this section, contraband includes but is not limited to drugs, narcotics, fruits, vegetables, plants, counterfeit money, and counterfeit consumer goods;
  - (3) Wood pallets, clean wood, and land clearing debris;
  - (4) Packaging materials and containers;
  - (5) Clothing, natural and synthetic fibers, fabric remnants, and similar debris, including but not limited to aprons and gloves; or
  - (6) Rugs, carpets, and floor coverings, but not asbestos-containing materials or polyethylene or polyurethane vinyl floor coverings.
- e. **Waste Tires.** Subject to the conditions and limitations contained in this permit, waste tires may be used as fuel at the facility. The total quantity of waste tires received as segregated loads and burned at the facility shall not exceed 3%, by weight, of the facility's total fuel. <sup>1</sup> Compliance with this limitation shall be determined on a calendar month basis.
- f. **Non-MSW Material.** Subject to the conditions and limitations contained in this permit, the following other solid waste materials may be used as fuel at the facility (i.e., the following are authorized fuels that are non-MSW material). The total quantity of the following non-MSW material received as segregated loads and burned at the facility shall not exceed 5%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined on a calendar month basis.
  - (1) Construction and demolition debris.
  - (2) Oil spill debris from aquatic, coastal, estuarine or river environments. Such items or materials include but are not limited to rags, wipes, and absorbents.
  - (3) Items suitable for human, plant or domesticated animal use, consumption or application where the item's shelf-life has expired or the generator wishes to remove the items from the market. Such items or materials include but are not limited to off-specification or expired consumer products, pharmaceuticals, medications, health and personal care products, cosmetics, foodstuffs, nutritional supplements, returned goods, and controlled substances.



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### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection B. Emissions Unit 107 Municipal Waste Combustor Unit 4.

- (4) Consumer-packaged products intended for human or domesticated animal use or application but not consumption. Such items or materials include but are not limited to carpet cleaners, household or bathroom cleaners, polishes, waxes and detergents.
- (5) Waste materials that:
  - (a) Are generated in the manufacture of items in categories f.(3) or f.(4), above and are functionally or commercially useless (expired, rejected or spent); or
  - (b) Are not yet formed or packaged for commercial distribution. Such items or materials must be substantially similar to other items or materials routinely found in MSW.
- (6) Waste materials that contain oil from:
  - (a) The routine cleanup of industrial or commercial establishments and machinery; or
  - (b) Spills of virgin or used petroleum products. Such items or materials include but are not limited to rags, wipes, and absorbents.
- (7) Used oil and used oil filters. Used oil containing a polychlorinated biphenyls (PCB) concentration equal or greater than 50 parts per million (ppm) shall not be burned, pursuant to the limitations of 40 CFR 761.20(e).
- (8) Waste materials generated by manufacturing, industrial or agricultural activities, provided that these items or materials are substantially similar to items or materials that are found routinely in MSW, subject to written prior approval of the Department.

[Rules 62-4.070(1)&(3), 62-213.410 and 62-213.440, F.A.C.; Permit No. 0570261-007-AC/PSD-FL-369, and Permit No. 0570261-016-AC/PSD-FL-121E and PSD-FL-369D, Specific Condition 4.]

**A.7. Limitation of Biosolids.** The owner or operator is authorized to combust up to 5% by weight (90 wet tons per day, as received) of biosolids that contain at least 12% solids, by weight, in MWC Units 1, 2, 3 and 4 combined. [Permit No. 0570261-016-AC/PSD-FL-121E and PSD-FL-369D, Specific Condition 5.]

#### **Air Pollution Control Technologies and Measures**

- B.8. Carbon Usage Rate.** The carbon injection rate operating standard and monitoring requirements set forth in 40 CFR 60.58b(m) of 40 CFR 60, Subpart Eb, incorporated by reference in Rule 62-204.800, F.A.C., shall apply. See Appendix 40 CFR 60, Subpart Eb. [Rule 62-296.416(5), F.A.C.]
- B.9. Air Pollution Control Equipment.** The owner or operator shall operate and maintain the following air pollution control equipment consistent with the manufacturers' specifications.
- e. *Particulate Matter (PM/PM<sub>10</sub>).* A fabric filter (FF) baghouse, including absorption/adsorption reagent, shall be installed to remove particulate matter.
  - f. *MWC Acid Gas Control.* A spray dryer absorber (SDA) with lime injection will be installed to absorb MWC acid gases.
  - g. *NO<sub>x</sub> Controls.* A strategic combustion air management system (Covanta low NO<sub>x</sub> (LN<sup>TM</sup>) system) or flue gas recirculation system (FGR) shall be used to limit NO<sub>x</sub> formation. An ammonia or urea-based selective non-catalytic reduction (SNCR) system will be employed for the destruction of NO<sub>x</sub>.
  - h. *MWC Organics and Mercury (Hg).* An activated carbon injection (ACI) system shall be installed to adsorb MWC organics and Hg.
- [Permit No. 0570261-007-AC/PSD-FL-369 and Rule 62-4.070(1)&(3), F.A.C.]

#### **Emission Limitations and Standards**

*{Permitting note: Table 1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}*

*{Permitting note: MWC Unit 4 was subject to a Best Available Control Technology (BACT) determination in 0570261-007-AC/PSD-FL-369 for nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), MWC acid gases (SO<sub>2</sub>+HCl); SO<sub>2</sub> as an individual pollutant, MWC organics (dioxins/furans) and opacity.}*

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection B. Emissions Unit 107 Municipal Waste Combustor Unit 4.

Unless otherwise specified, the averaging times for Specific Conditions **B.10.** - **B.18.** & **B.20.** are based on the specified averaging time of the applicable test method.

**B.10.** Emissions from MWC Unit 4 shall not exceed the emissions standards & limits listed in the following table or in the specific conditions and using the test methods & procedures described.

Air Pollutant	Emission Standard/Limit <sup>1</sup>	lb/hour <sup>2</sup>	Basis
Nitrogen Oxides (NO <sub>x</sub> )	110 ppmvd, 24-hour block average; and, 90 ppmvd, 12-month rolling average	58.5 47.9	BACT BACT
Carbon Monoxide (CO)	80 ppmvd, 30-day rolling average; and, 100 ppmvd, 4- hour block average	25.9 32.4	BACT BACT/40 CFR Subpart Eb
Sulfur Dioxide (SO <sub>2</sub> )	26 ppmvd, 24-hour block average or 80% reduction <sup>3</sup>	19.2	BACT/Eb
Hydrogen Chloride (HCl) <sup>4</sup>	25 ppmvd or 95% reduction <sup>3</sup>	25.4	BACT/Eb
Particulate Matter (PM/PM <sub>10</sub> )	12.0 mg/dscm	3.3	Avoid PSD
Lead (Pb)	140 µg/dscm	NA	Subpart Eb
Mercury (Hg)	28 µg/dscm or 85% reduction <sup>3</sup>	0.022	Avoid PSD/Eb
Cadmium (Cd)	10 µg/dscm	NA	Subpart Eb
Dioxins/Furans <sup>5</sup>	13.0 ng/dscm	3.61 x 10 <sup>-6</sup>	BACT/Eb
Opacity	10%, 6-minute average	NA	BACT/Eb
Ammonia Slip	@ 195 MMBtu/hr: 10 ppmvd @ 260 MMBtu/hr: 15 ppmvd	NA	PM, Opacity

Notes:

- <sup>1</sup> All concentration values are corrected to 7% O<sub>2</sub>.  
µg/dscm: micrograms per dry standard cubic meter  
mg/dscm: milligrams per dry standard cubic meter  
ng/dscm: nanograms per dry standard cubic meter  
ppmvd: part per million dry volume  
NA: not applicable

<sup>2</sup> The "lb/hour" limitations specified under this column are determined on the appropriate averaging period specified under the preceding column.

<sup>3</sup> Whichever standard is less stringent.

<sup>4</sup> HCl is not a BACT pollutant. However, it must be limited together with SO<sub>2</sub> because they both comprise MWC-Acid Gases which has its own PSD threshold.

<sup>5</sup> Dioxins/Furans: total tetra through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

[Permit No. 0570261-007-AC/PSD-FL-369.]

**B.11. Nitrogen Oxides (NO<sub>x</sub>).** Emissions of NO<sub>x</sub> in the stack exhaust gas as measured by the required CEMS shall exceed neither 110 ppmvd nor 58.5 lb/hr on a 24-hr daily arithmetic average and shall exceed neither 90 ppmvd nor 47.9 lb/hr on a 12-month rolling average, rolled monthly.

*{Permitting note: The owner or operator may request a permit modification of the 90 ppmvd NO<sub>x</sub> standard if ammonia plume or slip issues arise and persist at the facility. The Department reserves the right to make a final determination on any such request.}*

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### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection B. Emissions Unit 107 Municipal Waste Combustor Unit 4.

[Permit No. 0570261-007-AC/PSD-FL-369.]

- B.12. Carbon Monoxide (CO).** Emissions of CO in the stack exhaust gas as measured by the required CEMS shall exceed neither 100 ppmvd on a 4-hr block average nor 32.4 lb/hr and shall exceed neither 80 ppmvd nor 25.9 lb/hr on a 30-operating day rolling average. [Permit No. 0570261-007-AC/PSD-FL-369.]
- B.13. Sulfur Dioxide (SO<sub>2</sub>).** Emissions of SO<sub>2</sub> as measured by the required CEMS shall exceed neither 26 ppmvd nor 19.2 lb/hr on a 24-hr daily geometric mean, or an emissions reduction of 80 percent shall be achieved. [Permit No. 0570261-007-AC/ PSD-FL-369.]
- B.14. Hydrogen Chloride (HCl).** Emissions of HCl shall exceed neither 25 ppmvd nor 25.4 lb/hr or, an emissions reduction of 95 percent shall be achieved as demonstrated during the required stack test. [Permit No. 0570261-007-AC/PSD-FL-369.]
- B.15. Mercury (Hg).** Emissions of Hg shall not exceed 28 µg/dscm or an emissions reduction of 85 percent shall be achieved as demonstrated during the required annual stack test. During the first two years of operation, emissions of Hg shall not exceed 0.022 lb/hr as measured during quarterly stack tests to provide reasonable assurance that 12-month emissions are less than the applicable PSD threshold of 200 lb/yr. After the certification of the Hg-CEMS or the Hg-CASS as described in Specific Condition **B.35.**, the owner or operator may demonstrate compliance with all Hg limits in this permit with data collected during an annual stack test or from the Hg-CEMS or the Hg-CASS. Mercury emissions from MWC Units 1, 2, 3 and 4 combined shall not exceed 7.1 pounds per 24-hour period when combusting sewage sludge biosolids.  
*{Permitting note: If the Hg-CEMS is certified prior to the end of the first two years of operation, the permittee may use the CEMS in lieu of the remaining quarterly tests.}*  
[Permit No. 0570261-013-AC/PSD-FL-369C, Specific Condition 3.B.19., and Permit No. 0570261-016-AC/PSD-FL-121E and PSD-FL-369D, Specific Condition 7. and Rule 62-212.400(12) (Source Obligation, escape PSD BACT), F.A.C.]
- B.16. Dioxins/Furans.** Emissions of dioxins/furans shall exceed neither 13.0 ng/dscm nor 3.61 x 10<sup>-6</sup> lb/hr. [Permit No. 0570261-007-AC/PSD-FL-369.]
- B.17. Particulate Matter (PM/PM<sub>10</sub>).** Emissions of PM shall exceed neither 12.0 mg/dscm nor 3.3 lb/hr. This will simultaneously demonstrate compliance with the PM<sub>10</sub> limits.  
*{Permitting note: Compliance with this condition will also demonstrate that emissions are less than the 15 TPY PSD thresholds for PM<sub>10</sub> and MWC-Metals.}*  
[Permit No. 0570261-007-AC/PSD-FL-369 and Rule 62-212.400(12) (Source Obligation, escape PSD), F.A.C.]
- B.18. Opacity.** Visible emissions shall not exceed 10% (percent) opacity on a 6-minute average as measured by the required continuous opacity monitoring system (COMS) and measured by an annual visible emissions (VE) test. [Permit No. 0570261-007-AC/PSD-FL-369.]
- B.19. Source Obligation.**
- At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.
  - At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4)

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### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection B. Emissions Unit 107 Municipal Waste Combustor Unit 4.

through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

[Permit No. 0570261-007-AC/PSD-FL-369, Specific Condition 2.7; and, Rule 62-212.400(12) (Source Obligation, Avoid/Escapes PSD), F.A.C.]

#### **Fugitive Ash Emissions**

##### **B.20. Fugitive Ash Emissions.**

- a. No owner or operator of an affected facility shall 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 percent of the observation period (i.e., 9 minutes per 3-hour period), as determined by EPA Reference Method 22 observations as specified in 40 CFR 60.58b(k), except as provided in paragraphs b. and c.
- b. The emission limit specified in paragraph a. does not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however, the emission limit specified in paragraph a. does cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.
- c. The provisions of paragraph a. do not apply during maintenance and repair of ash conveying systems.

[Rule 62-204.800(8)(b)7., F.A.C.; and, 40 CFR 60.55b.]

#### **Excess Emissions**

Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any requirement of an NSPS or NESHAP provision.

##### **B.21. Excess Emissions - Department Regulations.** The following conditions apply only to the emissions limits that were specified pursuant to BACT or to avoid PSD applicability.

- a. Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24-hour period unless specifically authorized by the Department for longer duration. The Department authorizes three hours in any 24-hour period for this emissions unit. A malfunction means any unavoidable failure of air pollution control equipment or process equipment to operate in a normal or usual manner.
- b. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.
- c. The permittee shall notify the Compliance Authority within one working day of discovering any emissions in excess of a CEMS standard subject to the specified averaging period. All such reasonably preventable emissions shall be included in any CEMS compliance determinations. All valid emissions data (including data collected during startup, shutdown and malfunction) shall be used to report emissions for the Annual Operating Report.

[Rule 62-210.700, F.A.C.; and, Permit No. 0570261-007-AC/PSD-FL-369.]

##### **B.22. Excess Emissions - Regulations pursuant to 40 CFR 60, Subpart Eb.** The following conditions apply only to the emissions limits that were specified pursuant to 40 CFR 60, Subpart Eb.

- a. The opacity standards set forth in 40 CFR 60 shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard. [40 CFR 60.11(c)]
- b. *Startup, Shutdown and Malfunction.* Except as provided by 40 CFR 60.56b, the standards under 40 CFR 60, Subpart Eb, as incorporated in Rule 62-204.800(8)(b), F.A.C., apply at all times except during periods of startup, shutdown, or malfunction. Duration of startup or shutdown periods are limited to 3 hours per occurrence, except as provided in 40 CFR 60.58b(a)(1)(iii). During periods of startup, shutdown, or malfunction, monitoring data shall be dismissed or excluded from compliance calculations, but shall be recorded and reported in accordance with the provisions of 40 CFR 60.59b(d)(7).
  - i. The startup period commences when the affected facility begins the continuous burning of municipal solid waste and does not include any warm-up period when the affected facility is combusting fossil

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### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection B. Emissions Unit 107 Municipal Waste Combustor Unit 4.

fuel or other non-municipal solid waste fuel, and no municipal solid waste is being fed to the combustor.

- ii. Continuous burning is the continuous, semi-continuous, or batch feeding of municipal solid waste 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 municipal solid waste solely to provide thermal protection of the grate or hearth during the startup period when municipal solid waste is not being fed to the grate is not considered to be continuous burning.

[40 CFR 60.58b(a)]

- c. *Special Provisions for CO.* For the purpose of compliance with the carbon monoxide emission limits in 40 CFR 60.53b(a), if a loss of boiler water level 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. [40 CFR 60.58b(a)(1)(iii)]

#### **B.23. NSPS Startup, Shutdown and Malfunction Provisions.**

- a. For the purpose of compliance with the carbon monoxide emission limits in 40 CFR 60.53b(a), 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. During such periods of malfunction, monitoring data shall be dismissed or excluded from compliance calculations, but shall be recorded and reported in accordance with the provisions of 40 CFR 60.59b(d)(7). [40 CFR 60.38b & 40 CFR 60.58b(a)(1)(iii)]
- b. During a loss of boiler water level control or loss of combustion air control malfunction period as specified in paragraph (a)(1)(iii) of 40 CFR 60.58b, a diluent cap of 14 percent for oxygen or 5 percent for carbon dioxide may be used in the emissions calculations for sulfur dioxide and nitrogen oxides. [40 CFR 60.38b & 40 CFR 60.58b(b)(8)]

*{Permitting note: See Appendices Cb and Eb.}*

- #### **B.24. Best Operational Practices.** The owner or operator shall maintain a manual that identifies and describes best operational practices that will be used during periods of startup, shut down and malfunction at this facility. [Rules 62-210.700(1)&(5) and 62-213.440, F.A.C.]

- #### **B.25. Excess Emissions Prohibited.** Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

#### **Continuous Monitoring Requirements**

*{Permitting note: MWC Unit 4 is equipped with continuous emissions monitoring systems (CEMS) to measure and record NO<sub>x</sub>, CO, SO<sub>2</sub>, and Hg as well as instrumentation to monitor steam flow, flue gas flow rate, oxygen, temperature, and opacity.}*

- #### **B.26. Steam Flow Meter.** The owner or operator shall calibrate, maintain, and operate a steam flow meter or a feedwater flow meter; to measure steam (or feedwater) flow in kilograms per hour (or lbs/hour) on a continuous basis; and record the output of the monitor. Steam (or feedwater) flow shall be calculated in 4-hour block arithmetic averages. [Rule 62-213.440, F.A.C.; 40 CFR 60.53b & 40 CFR 60.58b(i)(6).]

- #### **B.27. Inlet Temperature to Particulate Matter Control Device (Baghouse).** The owner or operator shall calibrate, maintain, and operate a device for measuring on a continuous basis the temperature of the flue gas stream at the inlet to each particulate matter control device utilized. Temperature shall be calculated in 4-hour block arithmetic averages. [Rule 62-213.440, F.A.C.; and, 40 CFR 60.53b & 40 CFR 60.58b(i)(7).]

- #### **B.28. Continuous Emissions Monitoring Systems (CEMS) Required.** The owner or operator shall calibrate, operate and maintain continuous emissions monitoring systems (CEMS) for monitoring opacity, sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO). [Rule 62-213.440, F.A.C.; 40 CFR

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60.58b(c)(8) (opacity); 40 CFR 60.58b(e)(5) (SO<sub>2</sub>); 40 CFR 60.58b(h)(4) (NO<sub>x</sub>) & 40 CFR 60.58b(i)(3) (CO).]

- B.29. CEMS.** The permittee shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) to measure and record the emissions of CO, NO<sub>x</sub>, Hg and SO<sub>2</sub> from MWC Unit 4 in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this subsection. All continuous monitoring systems other than the Hg CEMS shall be installed and functioning within the required performance specifications by the time of the initial performance tests. The Hg CEMS shall be installed and functioning within the required performance specifications by the end of the third year of operation as specified in Specific Condition **B.35**.
- a. *CO Monitor.* The CO monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A and shall comply with all requirements of 40 CFR 60.58b. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The required RATA tests shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately, considering the allowable methods of operation and corresponding emission standards.
  - b. *NO<sub>x</sub> Monitor.* The NO<sub>x</sub> monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 2 and shall comply with all requirements of 40 CFR 60.58b. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The required RATA tests shall be performed using EPA Method 7E in Appendix A of 40 CFR 60. The NO<sub>x</sub> monitor span values shall be set appropriately, considering the allowable methods of operation and corresponding emission standards.
  - c. *SO<sub>2</sub> Monitor.* The SO<sub>2</sub> monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 2 and shall comply with all requirements of 40 CFR 60.58b. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F. The required RATA tests shall be performed using EPA Method 6C in Appendix A of 40 CFR 60. The SO<sub>2</sub> monitor span values shall be set appropriately, considering the expected range of emissions and corresponding emission standards.
  - d. *Diluent Monitor.* A continuous emission monitoring system for measuring the oxygen content of the flue gas at each location where carbon monoxide, sulfur dioxide, nitrogen oxides emissions are monitored shall be installed, calibrated, maintained, and operated in accordance with the requirements of 40 CFR 60.58b.
  - e. *Mercury Monitor.* A mercury monitor (Hg CEMS) shall be installed, certified and operated as described in Specific Condition **B.35**.
- [Permit No. 0570261-013-AC/PSD-FL-369C, Specific Condition 3.B.30.]
- B.30. Oxygen (O<sub>2</sub>) or Carbon Dioxide (CO<sub>2</sub>) CEMS.** The owner or operator shall calibrate, maintain, and operate a continuous emission monitoring system (CEMS) for measuring the oxygen or carbon dioxide content of the flue gas at each location where carbon monoxide, sulfur dioxide, or nitrogen oxides emissions are monitored and record the output of the system. [Rule 62-213.440, F.A.C.; 40 CFR 60.58b(b).]
- B.31. COMS.** A continuous opacity monitoring system (COMS) shall be installed, calibrated, operated, and maintained in exhaust stack in a manner sufficient to demonstrate continuous compliance with the opacity standard specified in this section. Opacity shall be based on a 6-minute block average computed from at least one observation (measurement) every 15 seconds. For the COMS, the 6-minute block averages shall begin at the top of each hour. The COMS shall meet the applicable requirements of 40 CFR 60.58b(c)(8). [Permit No. 0570261-007-AC/PSD-FL-369.]
- B.32. Hg-CEMS Certification.** The Hg-CEMS shall be installed and functioning within the required performance specifications within the first three years of operation as specified in Specific Condition **B.35**.

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[Rules 62-4.070(3), 62-210.800, 62-210.200(BACT) and 62-297.520, F.A.C.; 40 CFR 60.7(a), 60.13(b), and 60.58b, and Appendix B; and, Permit No. 0570261-013-AC/PSD-FL-369C, Specific Condition 3.B.32.]

- B.33. CEMS Data Requirements.** The CEMS shall express the results in the units of the applicable standard and in accordance with 40 CFR 60 subparts A, and Eb.
- Data Exclusion.* Except for monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, each CEMS shall monitor and record emissions during all operations including episodes of startups, shutdowns, and malfunctions. Limited amounts of CEMS emissions data (other than mercury data) recorded during some of these episodes may be excluded from the corresponding compliance demonstration subject to the provisions of Specific Conditions **B.21.** and **B.22.** in this subsection. The permittee shall minimize the duration of data excluded for such episodes to the extent practicable.
  - Monitor Availability.* Monitor availability for each CEMS used to demonstrate compliance shall be 95% or greater in any calendar quarter. Monitor availability shall be reported in the quarterly excess emissions report. In the event 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit, except as otherwise authorized by the Compliance Authority. The monitor availability requirements of this condition do not apply to the Hg CEMS for the first two years of operation of the CEM system. (This is consistent with the Hg CEMS availability requirement of subpart Eb.) For the Hg-CEMS, the monitor availability for the 2<sup>nd</sup> year of operation of the Hg-CEMS shall be 80% annually and for the 3<sup>rd</sup> year of operation of the Hg-CEMS shall be 90% annually, with a goal to achieve 95% annually afterwards unless the permittee indicates that the monitor is incapable of achieving these data availability requirements. If the Hg-CEMS is requested by the permittee to be used for compliance under 40 CFR 60, Subpart Eb then the applicable % monitor availability from 40 CFR 60, Subpart Eb must be met.

[Permit No. 0570261-013-AC/PSD-FL-369C, Specific Condition 3.B.33.]

- B.34. Continuous Flow Monitor.** A continuous flow monitor shall be operated to determine the stack exhaust flow rate to be used in determining mass emission rates. The flow monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 6. [Rules 62-210.200(BACT), 62-204.800(8), and 62-4.070(1) and (3), F.A.C.; Permit No. 0570261-007-AC/PSD-FL-369.]
- B.35. Mercury Continuous Emissions Monitoring System (Hg-CEMS).** Within 36 months of commencing operation, the owner or operator shall install and certify a mercury CEMS demonstrated to meet the requirements in Performance Specification 12A (PS-12A), "Specifications and Test Procedures for Total Vapor Phase Mercury Continuous Monitoring Systems in Stationary Sources," or that has passed verification tests conducted under the auspices of the U.S. Environmental Protection Agency's (EPA) Environmental Technology Verification (ETV) Program. If the vendor provides to the Department verification of certification difficulties such that the CEMS cannot be certified by the certification deadline, and every reasonable effort has been made to do so, the Department shall grant a reasonable extension of time to certify the CEMS. After certification the owner or operator will begin reporting Hg mass emissions data. The owner or operator shall adhere to the calibration drift and quarterly performance evaluation procedures and ongoing data quality assurance procedures in 40 CFR Part 60, Appendix F or 40 CFR Part 75, Appendix B. The mass emissions shall be estimated based on the actual data collected no later than 10 days following the end of the month. The mercury monitoring data results shall be submitted quarterly. The CEMS shall only be used as the method of compliance if the owner or operator, at a minimum, meets the requirements of 40 CFR 60.58b(n). Prior to use of the Hg-CEMS as the method to demonstrate compliance, the owner or operator shall submit written notice to the Department, and receive approval for missing data substitution and a data calculation approach plans.

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#### Subsection B. Emissions Unit 107 Municipal Waste Combustor Unit 4.

Hg-CEMS Field Test. The permittee shall field test the application of a Hg-CEMS on Unit 4 for 1-year (12-months). After the 1-year of field testing of the Hg-CEMS, the permittee may keep or replace the Hg-CEMS with a mercury continuous automated sampling system (Hg-CASS) such as a sorbent trap system. The permittee shall provide the Department with its review and justification if the Hg-CEMS is replaced with a Hg-CASS.

Hg emissions data shall be made available upon request by the Department.

The Compliance Authority shall be copied on all notifications and reports.

[Rules 62-4.070(1) and (3), and 62-212.400(12) (Source Obligation, escape PSD), F.A.C., 40 CFR 60.58b, and, Hillsborough County Environmental Protection Commission Local Ordinance 1-3.53.1(f), *Municipal Solid Waste Incinerators* (for Hg monitoring); and, Permit No. 0570261-013-AC/PSD-FL-369C, Specific Condition 3.B.35.]

#### **Test Methods and Procedures**

*{Permitting note: Table 2, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}*

**B.36. Test Methods.** Any required tests shall be performed in accordance with the following reference methods:

Method(s)	Description of Method(s) and Comment(s)
EPA Methods 1-4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content. Methods shall be performed as necessary to support other methods.
EPA Methods 5	Methods for Determining PM Emissions. The minimum sample volume shall be 30 dry standard cubic feet.
EPA Methods 6, 6A or 6C	Determination of SO <sub>2</sub> Emissions (6C is Instrumental).
EPA Methods 7, 7C, 7E or 19	Determination of NO <sub>x</sub> Emissions (7E is Instrumental). NO <sub>x</sub> emissions testing shall be conducted with the highest heat input possible during the test. <sup>1</sup>
EPA Method 9	Visual Determination of the Opacity of Emissions (VE).
EPA Method 10	Measurement of CO Emissions (Instrumental). The method shall be based on a continuous sampling train.
EPA Method 22	Visual Determination of Fugitive Emissions from Material Sources.
EPA Method 23	Measurement of D/F Emissions. Authorized to omit methylene chloride rinse. <sup>2</sup>
EPA Method 26 or 26A	Determination of HCl Emissions from Stationary Sources.
EPA Method CTM-027 (Conditional Test Method) <sup>3</sup>	Procedure for Collection and Analysis of Ammonia. <i>{Note: This is an EPA conditional test method. The minimum detection limit shall be 1 ppm.}</i>
EPA Method 29	Determination of Metal (e.g., Cd, Hg and Pb) Emissions from Stationary Sources.

<sup>3</sup> Method CTM-027 is published on EPA's Technology Transfer Network web site at <http://www.epa.gov/ttn/emc/ctm.html>. The above methods are described in Chapter 62-297, F.A.C. and/or 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used



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unless prior written approval is received from the Department. [Chapter 62-297, F.A.C.; Rule 62-204.800(9)(b)7., F.A.C.; <sup>1</sup> Permit No. 0570261-007-AC/PSD-FL-369; and, <sup>2</sup> Appendix ATP, U.S. EPA Alternative Test Procedure Approval dated June 3, 2004.]

- B.37. Common Testing Requirements.** Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]
- B.38. Annual Compliance Test.** The owner or operator shall conduct a performance test for PM, opacity, Cd, Hg, Pb and D/F emissions on a calendar year basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test; and must complete five performance tests in each 5-year calendar period). The owner or operator shall conduct a performance test for HCl emissions on an annual basis (no more than 12 calendar months following the previous performance test). [Rules 62-297.310(7) & 62-204.800(8)(b)7., F.A.C.]
- B.39. Compliance Testing.** Annual compliance stack tests for NO<sub>x</sub>, CO, SO<sub>2</sub>, HCl, PM/PM<sub>10</sub>, lead, cadmium, dioxins/furans, and ammonia slip shall be conducted during each federal fiscal year (October 1st to September 30th). Data collected from the reference method during the required RATA tests for CO, NO<sub>x</sub>, and SO<sub>2</sub> may be used to satisfy the annual testing requirement provided the notification requirements and emission testing requirements for performance and compliance tests of this permit are satisfied.
- Prior to the certification of the Hg-CEMS or the Hg-CASS as described in Specific Condition **B.35.**, performance tests for Hg emissions shall be conducted quarterly during the first two years of operation then on a calendar year basis to demonstrate compliance with the concentration/reduction standards.
- After the certification of the Hg-CEMS or the Hg-CASS as described in Specific Condition **B.35.**, the owner or operator may demonstrate compliance with all Hg limits in this permit with data collected from the Hg-CEMS or the Hg-CASS.
- [Rules 62-297.310(7)(a) and (b), and 62-296.416, F.A.C., and 40 CFR 60.8 and 60.58b; and, [Permit No. 0570261-013-AC/PSD-FL-369C, specific condition 3.B.26.]
- B.40. Continuous Compliance.** The permittee shall demonstrate continuous compliance with the CO, NO<sub>x</sub>, and SO<sub>2</sub> emissions standards based on data collected by the certified CEMS. The permittee shall demonstrate continuous compliance with the opacity limit based on data collected by the required COMS. [Rule 62-210.200 (BACT), F.A.C., and 40 CFR 60, Subpart Eb; and, Permit No. 0570261-007-AC/PSD-FL-369.]

#### **Recordkeeping and Reporting Requirements**

- B.41. Reporting Schedule.** The following report shall be submitted to the Compliance Authority:

Report	Reporting Deadline(s)	Related Condition(s)
Excess Emissions from Malfunctions, if requested by the Compliance Authority	Every 3 months (quarter)	<b>B.42. - B.44.</b>
NSPS Excess Emissions and Monitoring System Performance	Every 6 months (semi-annual), except when more frequent reporting is specifically required	<b>B.49.</b>
Eb Semi-Annual Report	Every 6 months (semi-annual)	<b>B.48.</b> Appendix Eb - 40 CFR 60.59b(g)
Eb Semi-Annual Report	Every 6 months (semi-annual)	<b>B.48.</b> Appendix Eb - 40 CFR 60.59b(h)

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#### Subsection B. Emissions Unit 107 Municipal Waste Combustor Unit 4.

[Rule 62-210.700(6), F.A.C.; 40 CFR 60, Subparts A, Cb & Eb.]

- B.42. Malfunction Notifications.** If temporarily unable to comply with any condition of the permit due to breakdown of equipment (malfunction) or destruction by hazard of fire, wind or by other cause, the permittee shall immediately (within one working day) notify the Compliance Authority. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. If requested by the Compliance Authority, the owner or operator shall submit a quarterly written report describing the malfunction. [Rules 62-210.700(6) and 62-4.130, F.A.C.; and, Permit No. 0570261-007-AC/PSD-FL-369.]
- B.43. Excess Emissions from Malfunctions.** In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Compliance Authority. [Rule 62-210.700(6), F.A.C.]
- B.44. SIP Quarterly Report.** Within 30 days following the end of each calendar quarter, the permittee shall submit a report to the Compliance Authority summarizing: equipment malfunctions resulting in excluded CEMS data and/or excess emissions; and the monitor availability of each CEMS. The report shall contain the information and follow the general format specified in 40 CFR 60.7(c), Subpart A. [Rules 62-4.070(1)&(3), 62-4.130, and 62-210.200 (BACT), F.A.C.; and, Permit No. 0570261-007-AC/PSD-FL-369.]
- B.45. Other Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440, F.A.C.]
- B.46. Records of Non-MSW.** The facility operator shall prepare and maintain records concerning the description and quantities of all segregated loads of non-MSW material which are received and used as fuel at the facility, and subject to a percentage weight limitation (see Specific Conditions **B.6.e.** and **B.6.f.**). The following records shall be prepared and maintained to demonstrate compliance with the segregated non-MSW percentage limitations:
- Segregated Loads of non-MSW Materials.* Each segregated load of non-MSW materials, that is subject to the percentage weight limitations (see Specific Conditions **B.6.e.** and **B.6.f.**), which is received for processing shall be documented as to the description and weight of the waste. The weight of all waste materials received for processing shall be measured using the facility truck scale and recorded.
  - Waste Tires.* Each day the total weight of segregated tires received shall be computed, and the daily total shall be added to the sum of the daily totals from the previous days in the current calendar month. At the end of each calendar month, the resultant monthly total weight of tires shall be divided by the total weight of all waste materials received in the same calendar month, and the resultant number shall be multiplied by 100 to express the ratio in percentage terms. The percentage computed shall be compared to the 3% limitation.<sup>1</sup>
  - Non-MSW Material.* Each day the total weight of segregated non-MSW materials received that are subject to the 5% restriction shall be computed, and the daily total shall be added to the sum of the daily totals from the previous days in the current calendar month. At the end of each calendar month, the resultant monthly total weight of segregated non-MSW materials subject to the 5% restriction shall be divided by the total weight of all waste materials received in the same calendar month, and the resultant number shall be multiplied by 100 to express the ratio in percentage terms. The percentage computed shall be compared to the 5% limitation.

[Rules 62-4.070(1)&(3), 62-213.410 and 62-213.440, F.A.C.; and, <sup>1</sup> Permit No. 0570261-007-AC/PSD-FL-369.]

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#### Operator Practices, Training and Certification

- B.47. Operating Practices.** The owner or operator shall comply with the operating practices as set forth in 40 CFR 60.53b(b) and (c) of 40 CFR 60, Subpart Eb. [Rule 62-204.800(8)(b)7., F.A.C.; and, 40 CFR 60.53b.]
- B.48. Best Management Practices (BMP's) for Biosolids Utilization.** To ensure good mixing of biosolids with other waste processed in MWC Units 1, 2, 3 and 4, the owner or operator shall document and employ best management practices (BMP's) when utilizing biosolids (dewatered sewage sludge) and include the following minimum requirements:
- The BMP's shall be incorporated into the site-specific municipal waste combustor operator training and certification pursuant to Department's MWC Rule and 40 CFR 60, Subpart Eb, 60.54b, Standards for Municipal Waste Combustor Operator Training and Certification.
  - The BMP's shall provide for operator training and identify and implement practices that promote good mixing and combustion.
  - All mixing shall occur in a waste storage bunker or refuse pit. Biosolids shall not be placed on the tipping floor, or alone, in a waste storage bunker.
  - The operator shall evenly spread biosolids with the crane grapple(s) over the top of the MSW in the waste storage bunker. Other MSW may be spread over the top of the biosolids.
  - Well-mixed (combined) materials shall be fed directly into the combustor feed hopper.
  - The owner or operator shall maintain records including the source, classification and typical characteristics (e.g. metals, pathogen results, solids) and amount introduced into the process.
- [Rules 62-4.070(1) and (3), F.A.C., Reasonable Assurance; Department's MWC Rule and 40 CFR 60, Subpart Eb, and Permit No. 0570261-016-AC/PSD-FL-121E and PSD-FL-369D, Specific Condition 11.]

#### NSPS 40 CFR 60 Requirements

- B.49. NSPS Requirements - Subpart Eb.** Except as otherwise provided in this permit, these emissions units shall comply with all applicable provisions of 40 CFR 60, Subpart Eb, Large Municipal Waste Combustors, adopted and incorporated by reference in Rule 62-204.800(8)(b), F.A.C.; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 CFR 60.50b(n). These emissions units shall comply with all applicable provisions of **Appendix 40 CFR 60 Subpart Eb** included with this permit. [Rule 62-204.800(8)(b)7., F.A.C.]
- B.50. NSPS Requirements - Subpart A.** This emissions unit shall comply with all applicable requirements of 40 CFR 60, Subpart A, General Provisions, including:
- 40 CFR 60.7, Notification and Recordkeeping
  - 40 CFR 60.8, Performance Tests
  - 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
  - 40 CFR 60.12, Circumvention
  - 40 CFR 60.13, Monitoring Requirements
  - 40 CFR 60.19, General Notification and Reporting Requirements, which have been adopted by reference in Rule 62-204.800(8)(d), F.A.C.; except that the Secretary is not the Administrator for purposes of 40 CFR 60.4, 40 CFR 60.8(b)(2) and (3), 40 CFR 60.11(e)(7) and (8), 40 CFR 60.13(g), (i) and (j)(2), and 40 CFR 60.16. This emissions unit shall comply with all applicable provisions of **Appendix 40 CFR 60 Subpart A** included with this permit. [Rule 62-204.800(8)(d), F.A.C.]

#### Other Requirements

- B.51. Acid Rain Part Application.** For any unit which is a solid waste incinerator, burning less than 20 percent fossil fuel as described in 40 CFR 72.6(b)(7), adopted and incorporated by reference at Rule 62-204.800, F.A.C., the designated representative of the source containing the unit shall submit a complete Acid Rain Part application governing such unit to the Department before March 1<sup>st</sup> of the year following the three calendar

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year period in which the incinerator consumed 20 percent or more fossil fuel on a British thermal unit (BTU) basis. [Rule 62-214.320(1)(h), F.A.C.]

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### Subsection C. Emissions Units 100 & 112 Ash Building and Handling System.

**Subsection C. The specific conditions in this section apply to the following emissions units:**

EU No.	Brief Description
100	Ash Building and Handling System - Baghouse
112	Ash Building and Handling System - Wet Scrubber

Flyash and bottom ash is collected and conveyed to the ash handling building. The ash handling system is completely enclosed or covered to decrease the potential for fugitive emissions. The ash is quenched and wetted before being temporarily stored in the ash handling facility and loaded onto a truck. A baghouse and wet scrubber are located at the ash handling building as an added precaution for fugitive emissions. The baghouse maintains negative pressure in the ash handling building. The baghouse filters the air at approximately 12,000 acfm and vents directly to a 2 feet diameter outlet with a stack height of approximately 5 feet.

The ash handling system began initial operation on December 18, 1986.

*{Permitting note(s): This emissions unit is regulated under Rule 62-210.300, F.A.C., Permits required; and, Prevention of Significant Deterioration (PSD) [PSD-FL-121 & PSD-FL-369, as amended]. The ash conveying systems of E.U. ID Nos. 100 & 112 are regulated under 40 CFR 60, Subpart Cb, Emissions Guidelines (EG) and Compliance Times for Large Municipal Waste Combustors.}*

#### **Essential Potential to Emit (PTE) Parameters**

- C.1. Hours of Operation.** This emissions unit may operate continuously (8,760 hours/year). [Rule 62-210.200 (Definitions - Potential to Emit (PTE), F.A.C.; and, PSD-FL-121 & PSD-FL-369, as amended.)]
- C.2. Emissions Unit Operating Rate Limitation After Testing.** See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

#### **Air Pollution Control Technologies and Measures**

- C.3. Wet Scrubber Controls.** The ash handling building was expanded during the MWC Unit 4 project. The building exhaust had been controlled by a baghouse installed in accordance with Permit No. PSD-FL-112B issued on October 14, 1987. In conjunction with the ash building expansion, the permittee installed a wet dust collection system in addition to the existing baghouse to control the ventilation exhaust from the ash handling building. The wet scrubber shall be a “Whirl/Wet Dust Collector Size 70, Model H” (or equivalent) designed for the following specifications:
- 7,000 actual cubic feet per minute;
  - Approximately 40% control for submicron particles;
  - 80% control for particles  $\geq 1.0$  micron;
  - 95% control for particles  $\geq 2.0$  micron;
  - 97% control for particles  $\geq 3.0$  micron;
  - 98% control for particles  $\geq 5.0$  micron; and,
  - 99% control for particles  $\geq 10.0$  micron.

A Dwyer magnehelic pressure gauge/switch (or equivalent) shall be operated to measure the differential pressure across the unit control and control the water level to maintain a differential pressure of  $8.0 \pm 1.5$  inches of water column. In addition, an alarm system shall be operated to warn of high water levels and low water levels. [Rule 62-4.070(1)&(3), F.A.C.; Permit Nos. 0570261-010-AC/PSD-FL-369B, Specific Conditions 3.C.3. & 3.C.9. and 0570261-015-AC; and, Applicant Request/Design.]

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## SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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### Subsection C. Emissions Units 100 & 112

#### Ash Building and Handling System.

##### Emission Limitations and Standards

*{Permitting note: Table 1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}*

Unless otherwise specified, the averaging times for Specific Conditions **C.4. - C.8.** are based on the specified averaging time of the applicable test method.

**C.4. Baghouse - PM.** PM emissions from the ash handling facility baghouse shall not exceed 1.63 lbs/hour. [Permit No. 0570261-002-AC/PSD-FL-121C.]

**C.5. Baghouse - VE.** Visible emissions from the ash handling facility baghouse shall not exceed 5 percent opacity. [Permit No. 0570261-002-AC/PSD-FL-121C.]

**C.6. Additional Emission Limitations and Standards.** The following standards apply to each emissions point of this emissions unit:

- a. Visible emissions are limited to 5% opacity from each of the above listed emissions points controlled by a wet scrubber.
- b. Fugitive emissions are limited to 10% opacity from any emissions point not controlled by a wet scrubber.
- c. Emissions of particulate matter (PM) from the wet scrubber shall not exceed 0.066 lb/hour as determined by EPA Method 5. No initial or subsequent PM stack tests are required as long compliance is demonstrated with the opacity standard and the wet scrubber is properly maintained.

*{Permitting note: The 5% opacity limitation is consistent with the design specifications and provides reasonable assurance that annual emissions of PM/PM<sub>10</sub> for E.U. ID Nos. 108, 110 & 112 combined will be less than 0.40 TPY.}*

[Rules 62-4.070(1)&(3) and 62-297.310(7)(b), F.A.C.; and, Permit No. 0570261-010-AC/PSD-FL-369B.]

**C.7. Ash Handling Activities.** The potential for dust generation by ash handling activities will be mitigated by quenching the ash prior to loading in ash transport trucks. The ash handling facilities shall be enclosed. Unprocessed refuse storage areas which must be open for operational purposes (e.g., tipping floor of the refuse bunker while trucks are entering and leaving) will be under negative air pressure. Residue from the grates, grate siftings, and ash from the combustor/boiler and fabric filter hoppers during normal operations shall be discharged into the ash quenching system, or otherwise handled in a manner to minimize visible dust. The ash/residue in the ash handling building shall remain sufficiently moist to prevent dust during storage and handling operations. [Permit No. 0570261-002-AC/PSD-FL-121C; Rule 62-4.070(1)&(3), F.A.C.; and, 40 CFR 60.36b & 40 CFR 60.55b.]

**C.8. (This condition only applies to the ash conveying systems of E.U. ID Nos. 100 & 112.) Fugitive Ash Emissions.**

- a. No owner or operator of an affected facility shall 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 percent of the observation period (i.e., 9 minutes per 3-hour period), as determined by EPA Reference Method 22 observations as specified in 40 CFR 60.58b(k), except as provided in paragraphs b. and c.
- b. The emission limit specified in paragraph a. does not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however, the emission limit specified in paragraph a. does cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.
- c. The provisions of paragraph a. do not apply during maintenance and repair of ash conveying systems.

[40 CFR 60.36b and 40 CFR 60.55b.]

##### Excess Emissions

Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any requirement of an EG, NSPS or NESHAP provision.

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection C. Emissions Units 100 & 112

##### Ash Building and Handling System.

- C.9. Excess Emissions Allowed.** Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]
- C.10. Excess Emissions Prohibited.** Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

#### **Monitoring Requirements**

- C.11. Wet Scrubber O&M Plan.** For the wet scrubber, the permittee shall prepare an operation and maintenance (O&M) plan to address proper operation, parametric monitoring, and a schedule for conducting periodic inspections and preventive maintenance. Wet scrubber inspections and maintenance activities shall be recorded in a written log. [Rule 62-4.070(1)&(3), F.A.C.; and, Permit No. 0570261-010-AC/PSD-FL-369B.]
- C.12. Wet Scrubber Monitoring.** The wet scrubber shall be operated in accordance with the manufacturer's recommendations for the given operating conditions. The permittee shall take corrective actions as necessary when the water level alarm activates. [Rule 62-4.070(1)&(3), F.A.C.; and, Permit No. 0570261-010-AC/PSD-FL-369B.]

#### **Test Methods and Procedures**

*{Permitting note: Table 2, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}*

- C.13. Test Methods.** Required tests shall be performed in accordance with the following reference method(s):

Method(s)	Description of Method(s) and Comment(s)
EPA Methods 1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
EPA Method 5	Methods for Determining Particulate Matter Emissions
EPA Method 9	Visual Determination of the Opacity of Emissions
EPA Method 22	Visual Determination of Fugitive Emissions from Material Sources

The above methods are described in Chapter 62-297, F.A.C. and/or 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Chapter 62-297, F.A.C.]

- C.14. Annual Compliance Test.** Except as specified in Specific Condition **C.15.**, during each federal fiscal year (October 1<sup>st</sup> to September 30<sup>th</sup>), the baghouse & wet scrubber exhausts and the ash handling system shall be tested to demonstrate compliance with the visible emissions (VE) limitation. [Rule 62-297.310(7), F.A.C.; and, Permit Nos. 0570261-002-AC/PSD-FL-121C & 0570261-010-AC/PSD-FL-369B.]
- C.15. Visible Emissions Test in Lieu of PM Stack Test.** The owner or operator is permitted to comply with the VE limit and the VE testing requirement in lieu of regularly demonstrating compliance with each PM limitation. If the Department has reason to believe that any particulate matter limitation is not being met, it shall require compliance be demonstrated by conducting a particulate matter test in accordance with EPA Method 5 specified at 40 CFR 60 Appendix A. [Rules 62-4.070(1)&(3), 62-4.160(2), 62-210.200 (PTE), 62-297.620(1)-(3) & 62-297.620(4), F.A.C.; Permit Nos. 0570261-002-AC/PSD-FL-121C & 0570261-010-AC/PSD-FL-369B; and, Applicant Request.] Common Testing Requirements. Unless otherwise specified,

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### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection C. Emissions Units 100 & 112 Ash Building and Handling System.

tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

#### **Recordkeeping and Reporting Requirements**

**C.17. Reporting Schedule.** The following report shall be submitted to the Compliance Authority:

Report	Reporting Deadline(s)	Related Condition(s)
Excess Emissions from Malfunctions, if requested by the Compliance Authority	Every 3 months (quarter)	<b>C.18.</b>

[Rule 62-210.700(6), F.A.C.]

**C.18. Excess Emissions from Malfunctions.** In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Compliance Authority. [Rule 62-210.700(6), F.A.C.]

**C.19. Other Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440, F.A.C.]

*{Permitting note: Specific conditions C.20. - C.23. only apply to the ash conveying systems of E.U. ID Nos. 100 & 112.}*

#### **EG 40 CFR 60 Requirements**

**C.20. EG Requirements - General Applicability and Definitions.** These emissions units shall comply with all applicable requirements of 40 CFR 60, Emission Guidelines and Compliance Times which have been adopted by reference in Rule 62-204.800(9), F.A.C., except that the term “Administrator,” when used in any provision of 40 CFR 60 that is delegated to the Department by the U.S. Environmental Protection Agency, shall mean the Secretary or the Secretary’s designee. [Rule 62-204.800(9)(a), F.A.C.]

*{Permitting note: Pursuant to Rule 62-204.800(9)(a)1., F.A.C., the Emission Guidelines for Existing Sources shall be controlling over other standards in the air pollution rules of the Department except that any emissions limiting standard contained in or determined pursuant to the air pollution rules of the Department which is more stringent than one contained in an Emission Guideline, or which regulates emissions of pollutants or emissions units not regulated by an applicable Emission Guideline, shall apply.}*

**C.21. EG Requirements - Subpart Cb.** These emissions units shall comply with all applicable requirements of 40 CFR 60, Subpart Cb, Emissions Guidelines (EG) and Compliance Times for Large Municipal Waste Combustors, which have been adopted and incorporated by reference in Rule 62-204.800(9), F.A.C. These emissions units shall comply with **Appendix 40 CFR 60 Subpart Cb** included with this permit. [Rule 62-204.800(9)(b), F.A.C.]

#### **NSPS 40 CFR 60 Requirements**

*{Permitting note(s): The EG 40 CFR 60, Subpart Cb, cross references conditions (applicable requirements) that are contained in the NSPS 40 CFR 60, Subparts A and Eb.}*

**C.22. NSPS Requirements - Subpart Eb.** Except as otherwise provided in this permit, these emissions units shall comply with all applicable provisions of 40 CFR 60, Subpart Eb, Large Municipal Waste Combustors, adopted and incorporated by reference in Rule 62-204.800(8)(b), F.A.C.; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 CFR 60.50b(n). These emissions units shall comply



### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection C. Emissions Units 100 & 112

##### Ash Building and Handling System.

with all applicable provisions of **Appendix 40 CFR 60 Subpart Eb** included with this permit. [Rule 62-204.800(8)(b)7., F.A.C.]

**C.23. NSPS Requirements - Subpart A.** This emissions unit shall comply with all applicable requirements of 40 CFR 60, Subpart A, General Provisions, including:  
40 CFR 60.7, Notification and Recordkeeping  
40 CFR 60.8, Performance Tests  
40 CFR 60.11, Compliance with Standards and Maintenance Requirements  
40 CFR 60.12, Circumvention  
40 CFR 60.13, Monitoring Requirements  
40 CFR 60.19, General Notification and Reporting Requirements, which have been adopted by reference in Rule 62-204.800(8)(d), F.A.C.; except that the Secretary is not the Administrator for purposes of 40 CFR 60.4, 40 CFR 60.8(b)(2) and (3), 40 CFR 60.11(e)(7) and (8), 40 CFR 60.13(g), (i) and (j)(2), and 40 CFR 60.16. This emissions unit shall comply with all applicable provisions of **Appendix 40 CFR 60 Subpart A** included with this permit. [Rule 62-204.800(8)(d), F.A.C.]

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**SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.**

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**Subsection D. Emissions Units 101, 102, 108 & 110  
Lime & Activated Carbon Storage Silos.**

**The specific conditions in this section apply to the following emissions units:**

<b>E.U. ID No.</b>	<b>Brief Description</b>
<b>101</b>	Pebble Lime Storage Silo - MWC Units 1, 2 & 3
<b>102</b>	Activated Carbon Storage Silo - MWC Units 1, 2 & 3
<b>108</b>	Pebble Lime Storage Silo - MWC Unit 4
<b>110</b>	Activated Carbon Storage Silo - MWC Unit 4

This emissions unit subsection addresses two pebble lime storage silos and two activated carbon storage silos.

The E.U. ID No. 101 pebble lime storage silo serves MWC Units 1, 2 & 3. E.U. ID No. 101 is a 60 ton capacity silo for the storage of pebble lime. It is part of the spray dry absorber (SDA) system used for control of acid gases and sulfur dioxide emissions from the municipal waste combustion units. A supply truck pneumatically transfers pebble lime to the silo through a fill line. A baghouse is utilized to filter dust (particulate matter) laden air from the lime silo during filling operations. The baghouse filters the air at approximately 5,700 acfm and vents directly to a 0.66 feet diameter outlet approximately 40 feet above grade. Material captured by the baghouse is returned to the silo as usable product. The initial startup date of the silo was October 1, 2000.

The E.U. ID No. 102 activated carbon storage silo serves MWC Units 1, 2 & 3. E.U. ID No. 102 is a 20 ton filling capacity silo for the storage of activated carbon powder. It is part of the activated carbon injection (ACI) system for the control of mercury emissions from the municipal waste combustion units. A supply truck pneumatically transfers the activated carbon powder to the silo through a fill line. A baghouse is utilized to filter dust (particulate matter) laden air from the carbon silo during filling operations. The baghouse filters the air at approximately 5,700 acfm and vents directly to a 0.66 feet diameter outlet approximately 40 feet above grade. Material captured by the baghouse is returned to the silo as usable product. The initial startup date of the silo was October 1, 2000.

The E.U. ID No. 108 pebble lime storage silo is dedicated to MWC Unit 4. E.U. ID No. 101 is a 60 ton capacity silo for the storage of pebble lime. This silo has a volume of approximately 2,900 cubic feet. It is part of the spray dry absorber (SDA) system used for control of acid gases and sulfur dioxide emissions from the municipal waste combustion unit. A supply truck pneumatically transfers pebble lime to the silo through a fill line. A baghouse is utilized to filter dust (particulate matter) laden air from the lime silo during filling operations. The baghouse filters the air at approximately 5,700 acfm and vents directly to a 0.416 feet diameter outlet approximately 57.5 feet above grade. Material captured by the baghouse is returned to the silo as usable product. The initial startup date of the silo was July 9, 2009.

The E.U. ID No. 110 activated carbon storage silo is dedicated to MWC Unit 4. E.U. ID No. 110 is a 20 ton filling capacity silo for the storage of activated carbon powder. This silo has a volume of approximately 1,500 cubic feet. It is part of the activated carbon injection (ACI) system for the control of mercury emissions from the municipal waste combustion unit. A supply truck pneumatically transfers the activated carbon powder to the silo through a fill line. A baghouse is utilized to filter dust (particulate matter) laden air from the carbon silo during filling operations. The baghouse filters the air at approximately 5,700 acfm and vents directly to a 0.416 feet diameter outlet approximately 52.5 feet above grade. Material captured by the baghouse is returned to the silo as usable product. The initial startup date of the silo was July 10, 2009.

*{Permitting note(s): These emissions units are regulated under Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) [PSD-FL-121 & PSD-FL-369, as amended]; and, Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT).}*

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### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection D. Emissions Units 101, 102, 108 & 110

#### Lime & Activated Carbon Storage Silos.

##### Essential Potential to Emit (PTE) Parameters

- D.1. Hours of Operation.** These emissions units may operate continuously (8,760 hours/year). [Rule 62-210.200 (Definitions - Potential to Emit (PTE), F.A.C.; and, Permit Nos. 0570261-002-AC/PSD-FL-121C & 0570261-007-AC/PSD-FL-369.]
- D.2. Emissions Unit Operating Rate Limitation After Testing.** See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

##### Emission Limitations and Standards

*{Permitting note: Table 1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}*

Unless otherwise specified, the averaging times for Specific Conditions **D.3. - D.5.** are based on the specified averaging time of the applicable test method.

**D.3. Particulate Matter Emissions.**

- E.U. ID No. 101, Pebble Lime Storage Silo.* Particulate matter emissions shall not exceed 0.015 gr/dscf (front-half catch) from the baghouse outlet at the pebble lime storage silo.
  - E.U. ID No. 102, Activated Carbon Storage Silo.* Particulate matter emissions shall not exceed 0.015 gr/dscf (front-half catch) from the baghouse outlet at the activated carbon storage silo.
  - E.U. ID No. 108, Pebble Lime Storage Silo.* Particulate matter emissions shall not exceed 0.015 gr/dscf from the baghouse outlet at the pebble lime storage silo.
  - E.U. ID No. 110, Activated Carbon Storage Silo.* Particulate matter emissions shall not exceed 0.015 gr/dscf from the baghouse outlet at the activated carbon storage silo.
- [Rules 62-4.160(2), 62-210.200 (PTE), 62-297.620(1)-(3) & 62-297.620(4), F.A.C.; Permit Nos. 0570261-002-AC/PSD-FL-121C & 0570261-007-AC/PSD-FL-369; and, Applicant Request.]

**D.4. Visible Emissions.** Visible emissions from each silo baghouse exhaust shall not exceed 5% opacity.

*{Permitting note: The 5% opacity limitation is consistent with the design specifications and provides reasonable assurance that annual emissions of PM/PM<sub>10</sub> for Emissions Unit ID Nos. 108, 110 & 112 combined will be less than 0.40 TPY.}* [Rules 62-4.160(2), 62-210.200 (PTE), 62-297.620(1)-(3) & 62-297.620(4), F.A.C.; Permit Nos. 0570261-002-AC/PSD-FL-121C & 0570261-007-AC/PSD-FL-369; and, Applicant Request.]

**D.5. Fugitive Visible Emissions.** Fugitive emissions from E.U. ID Nos. 108 & 110 are limited to 10% opacity from any emissions point not controlled by a baghouse. [Permit Nos. 0570261-002-AC/PSD-FL-121C & 0570261-007-AC/PSD-FL-369.]

##### Excess Emissions

Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any requirement of an NSPS or NESHAP provision.

- D.6. Excess Emissions Allowed.** Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]
- D.7. Excess Emissions Prohibited.** Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection D. Emissions Units 101, 102, 108 & 110 Lime & Activated Carbon Storage Silos.

##### Monitoring of Operations

**D.8. Baghouse O&M Plan.** For the E.U. ID Nos. 108 & 110 baghouses, the permittee shall prepare an operation and maintenance (O&M) plan to address proper operation, parametric monitoring, and a schedule for conducting periodic inspections and preventive maintenance. Baghouse inspections and maintenance activities shall be recorded in a written log. [Permit No. 0570261-007-AC/PSD-FL-369.]

##### Test Methods and Procedures

*{Permitting note: Table 2, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}*

**D.9. Test Methods.** Required tests shall be performed in accordance with the following reference methods:

Method(s)	Description of Method(s) and Comment(s)
EPA Methods 1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
EPA Method 5	Methods for Determining Particulate Matter Emissions
EPA Method 9	Visual Determination of the Opacity of Emissions

The above methods are described in Chapter 62-297, F.A.C. and/or 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Chapter 62-297, F.A.C.]

**D.10. Annual Compliance Test.** Except as specified in Specific Condition **D.12.**, during each federal fiscal year (October 1<sup>st</sup> to September 30<sup>th</sup>), each baghouse exhaust shall be tested to demonstrate compliance with the visible emissions (VE) limitation. [Rule 62-297.310(7), F.A.C.]

**D.11. Compliance Test Prior To Renewal.** Prior to permit renewal, each baghouse exhaust shall be tested to demonstrate compliance with the VE limitation. [Rule 62-297.310(7)(a)3., F.A.C.]

**D.12. Visible Emissions Test in Lieu of PM Stack Test.** The owner or operator is permitted to comply with the VE limit and the VE testing requirement in lieu of regularly demonstrating compliance with each PM limitation. If the Department has reason to believe that any particulate matter limitation is not being met, it shall require compliance be demonstrated by conducting a particulate matter test in accordance with EPA Method 5 specified at 40 CFR 60 Appendix A. [Rules 62-4.070(3), 62-4.160(2), 62-210.200 (PTE), 62-297.620(1)-(3) & 62-297.620(4), F.A.C.; Permit Nos. 0570261-002-AC/PSD-FL-121C & 0570261-007-AC/PSD-FL-369; and, Applicant Request.]

**D.13. Visible Emissions Test.** The duration of each EPA Method 9 test shall be 30 minutes. [Rule 62-297.310(4)(a)2., F.A.C.]

**D.14. Common Testing Requirements.** Unless otherwise specified above, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

##### Recordkeeping and Reporting Requirements

**D.15. Reporting Schedule.** The following report shall be submitted to the Compliance Authority:

Report	Reporting Deadline	Related Condition
Excess Emissions from Malfunctions, if requested by the Compliance Authority	Every 3 months (quarter)	<b>D.16.</b>

[Rule 62-210.700(6), F.A.C.]

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection D. Emissions Units 101, 102, 108 & 110

##### Lime & Activated Carbon Storage Silos.

- D.16.** Excess Emissions from Malfunctions. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Compliance Authority. [Rule 62-210.700(6), F.A.C.]
- D.17.** Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440, F.A.C.]

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**SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.**

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**Subsection E. Emissions Units 113, 114, 115, 116 & 117  
Engine(s).**

Engines in this subsection are grouped by similar engine type as regulated by EPA. Each group number is followed by a very brief explanation of the engine type as described in the EPA regulations/tables.

<b>Group 1: “Existing” stationary CI RICE less than or equal to 500 HP</b>		See Specific Conditions
<b>E.U. ID No.</b>	<b>Brief Description</b>	<b>E.1. - E.11. &amp; E.28. - E.31.</b>
<b>113</b>	Fire Pump (Diesel) - 235 HP	
<b>Group 2: “Existing” stationary CI RICE greater than 500 HP [EPA STEP 2(a)(ii) Emergency CI]</b>		See Specific Conditions
<b>E.U. ID No.</b>	<b>Brief Description</b>	<b>E.12. - E.13. &amp; E.28. - E.31.</b>
<b>114</b>	Emergency Generator - No. 1 at Falkenburg Advanced WWTP	
<b>Group 3: “New” stationary CI RICE greater than 500 HP</b>		See Specific Conditions
<b>E.U. ID No.</b>	<b>Brief Description</b>	<b>E.14. - E.27. &amp; E.28. - E.31.</b>
<b>115</b>	Emergency Generator - No. 2 at Falkenburg Advanced WWTP	
<b>116</b>	Emergency Generator - No. 3 at Falkenburg Advanced WWTP	
<b>117</b>	Emergency Generator - No. 4 at Falkenburg Advanced WWTP	

This subsection of the permit is comprised of 5 compression ignition (CI) type engines, 4 of which are emergency generators. Air pollutant emissions from these engines are uncontrolled.

*{Permitting notes: These emissions units, engines, are regulated under 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE) adopted in Rule 62-204.800(11)(b), F.A.C. The permittee identified numerous other non-road engines (portable) located at the facility; these engines are not regulated under 40 CFR 63, Subpart ZZZZ. The “new” engines must meet 40 CFR 60, Subpart IIII, NSPS for Compression Ignition Internal Combustion Engines (CI ICE).}*

Each part of this subsection includes unit-specific applicable requirements for each group of engines which were customized from the entire 40 CFR 63, Subpart ZZZZ and/or 40 CFR 60, Subpart IIII.

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**SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.**

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**Subsection E. Emissions Units 113, 114, 115, 116 & 117  
Engine(s).**

The specific conditions in this part of the subsection apply to the following group of emissions units:

Group 1: “Existing” stationary CI RICE less than or equal to 500 HP	
E.U. ID No.	Brief Description
113	Fire Pump (Diesel) - 235 HP

{Permitting note: This part of the subsection addresses “existing” stationary CI RICE less than or equal to 500 horsepower (HP) that are located at a major source of HAP and that have not been modified or reconstructed after 6/12/2006. Unless the RICE is modified or reconstructed after 7/11/2005, NSPS 40 CFR 60, Subpart IIII, will not apply.}

The following table provides important details for this emissions unit:

E.U. ID No.	Engine Brake HP	Date of Construction	Model Year	Primary Fuel	Type of Engine	Displacement liters/cylinder (l/c)	Manufacturer
113	235	-	1986	Diesel	Emergency	1.30	N/A

**Compliance Deadline**

**E.1. Compliance Deadline.** The permittee shall comply with the following emissions and operating limitations no later than **May 3, 2013**. [40 CFR 63.6595(a)(1)]

**Essential Potential to Emit (PTE) Parameters****E.2. Hours of Operation.**

- Emergency Situations.** There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 63.6640(f)(1)]
- Maintenance and Testing.** Each RICE is authorized to operate for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. [40 CFR 63.6640(f)(1)]
- Non-emergency Situations.** Each RICE is authorized to operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. [40 CFR 63.6640(f)(1)]
- Other Situations.** Each RICE cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph, as long as the power provided by the financial arrangement is limited to emergency power. [40 CFR 63.6640(f)(1)]

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## SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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### Subsection E. Emissions Units 113, 114, 115, 116 & 117 Engine(s).

- e. *Engine Startup.* During periods of startup the owner or operator must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for the appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63.6625(h)]

#### **Emission Limitations and Operating Requirements**

*{Permitting note: This "existing" stationary CI engine with  $\leq 500$  HP does not have specific numerical emission limitations and standards.}*

#### **E.3. Work or Management Practice Standards.**

- a. *Oil.* Change oil and filter every 500 hours of operation or annually, whichever comes first. [40 CFR 63 Table 2c(1)(a)]
- b. *Air Cleaner.* Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first. [40 CFR 63 Table 2c(1)(b)]
- c. *Hoses and Belts.* Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63 Table 2c(1)(c)]
- d. *Operation and Maintenance.* Operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions or develop and follow your own maintenance plan which must provide, to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution, control practice for minimizing emissions. [40 CFR 63.6625(e)]
- e. *Oil Analysis.* The owner or operator has the option of using oil analysis to extend the change requirement. The oil analysis must be performed at the same frequency specified for changing the oil. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent of water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent of water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63.6625(i)]

#### **Monitoring of Operations**

- E.4. *Hour Meter.* The owner or operator must install a non-resettable hour meter if one is not already installed. [40 CFR 63.6625(f)]

#### **Compliance Requirements**

- E.5. *Continuous Compliance.* Each unit shall be in compliance with the emission limitations and operating standards in this section at all times. [40 CFR 63.6605(a)]
- E.6. *Operation and Maintenance of Equipment.* At all times the owner or operator must operate and maintain, any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the compliance authority which may include, but is not limited to, monitoring results,



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### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection E. Emissions Units 113, 114, 115, 116 & 117 Engine(s).

review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6605(b)]

#### **Recordkeeping Requirements**

##### **E.7. Notification, Performance and Compliance Records.**

- a. A copy of each notification and report that the owner or operator submitted to comply with this section, including all documentation supporting any Initial Notification or Notification of Compliance Status that the owner or operator submitted.
- b. The owner or operator must keep the records required in 40 CFR 63.6625(e) of this section to show continuous compliance with each emission limitation or operating requirement.
- c. The owner or operator must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

[40 CFR 63.6655]

##### **E.8. Malfunction Records.**

- a. Records of the occurrence and duration of each malfunction of operation (i.e. process equipment) or the air pollution control and monitoring equipment.
- b. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b) of this section including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[40 CFR 63.6655]

##### **E.9. Maintenance Records.**

- a. Records of all required maintenance performed on the air pollution control and monitoring equipment.
- b. (The owner or operator must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the stationary RICE and after-treatment control device (if any) are operated and maintained according to its own maintenance plan.

[40 CFR 63.6655]

##### **E.10. Record Retention.**

- a. The owner or operator must keep records in a suitable and readily available form for expeditious reviews.
- b. The owner or operator must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record.

[40 CFR 63.6660 and 40 CFR 63.10(b)(1)]

#### **Reporting Requirements**

- E.11. Emergency Situation.** If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required of this section, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable. [40 CFR 63.6602 Table 2c, footnote 1]

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**SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.**

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**Subsection E. Emissions Units 113, 114, 115, 116 & 117  
Engine(s).**

The specific conditions in this part of the subsection apply to the following group of emissions units:

<b>Group 2: “Existing” stationary CI RICE greater than 500 HP</b>	
<b>E.U. ID No.</b>	<b>Brief Description</b>
<b>114</b>	Emergency Generator - No. 1 at Falkenburg Advanced WWTP

*{Permitting note: This part of the subsection addresses “existing” stationary CI RICE greater than 500 HP that are located at a major source of HAP and that have not been modified or reconstructed after 12/19/2002. Unless the RICE is modified or reconstructed after 7/11/2005, NSPS 40 CFR 60, Subpart IIII, will not apply. This RICE is not used as a fire pump.}*

The following table provides important details for this emissions unit:

<b>E.U. ID No.</b>	<b>Engine Brake HP</b>	<b>Date of Construction</b>	<b>Model Year</b>	<b>Primary Fuel</b>	<b>Type of Engine</b>	<b>Displacement liters/cylinder (l/c)</b>	<b>Manufacturer</b>
<b>114</b>	1,000	6/30/2002	2000	Diesel	Emergency	4.30	N/A

**Essential Potential to Emit (PTE) Parameters****E.12. Hours of Operation.**

- Emergency Situations.* There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 63.6640(f)(2)]
- Maintenance and Testing.* Each RICE is authorized to operate for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit for routine testing and maintenance. [40 CFR 63.6640(f)(2)]
- Non-emergency situations.* Each RICE is authorized to operate for an additional 50 hours per year in non-emergency situations. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 63.6640(f)(2)]
- Engine Startup.* During periods of startup the owner or operator must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for the appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63.6625(h)]

**Emission Limitations and Operating Requirements**

*{Permitting note: This “existing” stationary CI engine with > 500 HP does not have a specific numerical emission limitations and standards.}*

**Recordkeeping Requirements****E.13. Record Retention.**

- The owner or operator must keep records in a suitable and readily available form for expeditious reviews. The owner or operator must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.6660 and 40 CFR 63.10(b)(1)]

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**SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.**

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**Subsection E. Emissions Units 113, 114, 115, 116 & 117  
Engine(s).**

The specific conditions in this part of the subsection apply to the following group of emissions units:

Group 3: "New" stationary CI RICE greater than 500 HP	
E.U. ID No.	Brief Description
115	Emergency Generator - No. 2 at Falkenburg Advanced WWTP
116	Emergency Generator - No. 3 at Falkenburg Advanced WWTP
117	Emergency Generator - No. 4 at Falkenburg Advanced WWTP

*{Permitting note: This part of the subsection addresses "new" stationary CI RICE greater than 500 HP, with a displacement less than 10 liters per cylinder, that are located at a major source of HAP and that have been modified, reconstructed or commenced construction on or after 12/19/2002 and have a pre-2007 or 2007 & later model year. These RICE are not used as fire pumps.}*

The following table provides important details for these emissions units:

E.U. ID No.	Engine Brake HP	Date of Construction	Model Year	Primary Fuel	Type of Engine	Displacement liters/cylinder (l/c)	Manufacturer
115	800	6/30/2009	2007	Diesel	Emergency	3.80	N/A
116	800	6/30/2009	2007	Diesel	Emergency	3.80	N/A
117	800	6/30/2009	2007	Diesel	Emergency	3.80	N/A

**Applicability**

**E.14. Applicability.** Pursuant to 40 CFR 63.6590(c), these engines must comply with 40 CFR 63, Subpart ZZZZ by meeting the requirements of NSPS 40 CFR 60, Subpart IIII. Pursuant to 40 CFR 63.6590(c), no further requirements apply to the engine under 40 CFR 63, Subpart ZZZZ. [Rules 62-204.800(11) & (8), F.A.C.; and, 40 CFR 63.6590(c)]

**Essential Potential to Emit (PTE) Parameters**

**E.15. Allowable Fuel.** The stationary RICE must use diesel fuel that meets the following requirements for non-road diesel fuel:

- Sulfur Content.*** The sulfur content shall not exceed 15 ppm (0.0015% by weight) for non-road diesel fuel.
- Cetane and Aromatic.*** The fuel must have a minimum cetane index of 40 or must have a maximum aromatic content of 35 volume percent.  
[40 CFR 60.4207(b) and 40 CFR 80.510(b)]

**E.16. Hours of Operation.**

- Emergency Situations.*** There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 60.4211(e)]
- Maintenance and Testing.*** Each RICE is authorized to operate for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. [40 CFR 60.4211(e)]

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### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection E. Emissions Units 113, 114, 115, 116 & 117 Engine(s).

- c. *Other Situations.* Each RICE cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 60.4219]

#### **Emission Standards and Limitations**

- E.17.** The following emission standards and limitations apply individually to E.U. ID Nos. 115, 116 & 117, Emergency Generator - Nos. 2, 3 & 4 at the Falkenburg Advanced WWTP:
- a. NMHC + NO<sub>x</sub> Emissions. Non-methane hydrocarbons and nitrogen oxide emissions shall not exceed 6.4 g/KW-hr {equivalent to: 8.21 lbs/hour}. [40 CFR 60.4205(b)]
  - b. CO Emissions. Carbon monoxide emissions shall not exceed 3.5 g/KW-hr {equivalent to: 4.49 lbs/hour}. [40 CFR 60.4205(b)]
  - c. PM emissions. Particulate matter emissions shall not exceed 0.2 g/KW-hr {equivalent to: 0.26 lbs/hour}. [40 CFR 60.4205(b)]
- E.18.** Operation and Maintenance. The owner or operator must operate and maintain the stationary CI internal combustion engine according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. The owner or operator must meet the requirements of 40 CFR 89, 94 and/or 1068, as they apply. [40 CFR 60.4211(a)]

#### **Monitoring of Operations**

- E.19.** Hour Meter. The owner or operator must install a non-resettable hour meter if one is not already installed. [40 CFR 60.4209(a)]

#### **Compliance Requirements**

- E.20.** Compliance Requirements. Owner or operator must demonstrate compliance according to one of the methods below:
- a. *Certification.* Have purchased an engine certified according to 40 CFR 89 or 94, as applicable, for the same model year and maximum engine power.
  - b. *Manufacturer Data.* Keep records of engine manufacturer data indicating compliance with the standards.
  - c. *Vendor Data.* Keep records of control device vendor data indicating compliance with the standards.
  - d. *Performance Test.* Conduct an initial performance test to demonstrate compliance with the emission standards according to the testing requirements in this section.
  - e. *Similar Engine Tests.* Keep records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.
- [40 CFR 60.4211(b)]

#### **Testing Requirements**

- E.21.** Performance Test. Performance test must be conducted according to the in-use testing procedures in 40 CFR 1039, Subpart F. [40 CFR 60.4212]
- E.22.** Engine Manufacturer's Recommendations and Instructions. If the owner/operator does not install, configure, operate, and maintain the engine according to the manufacturer's recommendations and instructions, any required testing shall be completed in accordance with 40 CFR 60, Subpart IIII. [40 CFR 60.4212.]
- E.23.** Not to exceed (NTE) Standards. Exhaust emissions from stationary CI ICE that are complying with the emission standards must not exceed the not to exceed (NTE) numerical requirements, rounded to the same

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### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection E. Emissions Units 113, 114, 115, 116 & 117 Engine(s).

number of decimal places as the applicable standard, determined from the following equation:  $NTE = (1.25) \times$  (Standard). [40 CFR 60.4212]

#### **Recordkeeping Requirements**

**E.24. Required Records.** Owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner or operator must record the time of operation of the engine and the reason the engine was in operation during that time. [40 CFR 60.4214]

**E.25. Record Retention.**

- a. The owner or operator must keep records in a suitable and readily available form for expeditious reviews.
- b. The owner or operator must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record.

[40 CFR 63.6660 and 40 CFR 63.10(b)(1)]

#### **NSPS 40 CFR 60, Subpart A & IIII Requirements**

**E.26. NSPS Requirements - Subpart A.** These emissions units shall comply with all applicable requirements of 40 CFR 60, Subpart A, General Provisions, including:  
40 CFR 60.7, Notification and Recordkeeping  
40 CFR 60.8, Performance Tests  
40 CFR 60.11, Compliance with Standards and Maintenance Requirements  
40 CFR 60.12, Circumvention  
40 CFR 60.13, Monitoring Requirements  
40 CFR 60.19, General Notification and Reporting Requirements, which have been adopted by reference in Rule 62-204.800(8)(d), F.A.C.; except that the Secretary is not the Administrator for purposes of 40 CFR 60.4, 40 CFR 60.8(b)(2) and (3), 40 CFR 60.11(e)(7) and (8), 40 CFR 60.13(g), (i) and (j)(2), and 40 CFR 60.16. The applicable 40 CFR 60, Subpart A, General Provisions to which these emissions are subject to are found at 40 CFR 63.4218 and are included in **Appendix 40 CFR 60 Subpart A**. [Rule 62-204.800(8)(d), F.A.C.]

**E.27. 40 CFR 60 Requirements - Subpart IIII [Generally Applicable Requirements].** These emissions units shall comply with all applicable requirements of 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, which have been adopted by reference in Rule 62-204.800(8), F.A.C. These emissions units shall comply with **Appendix 40 CFR 60 Subpart IIII “Generally Applicable Requirements,”** included with this permit, which includes applicable requirements that apply in general to all engines regulated under 40 CFR 60, Subpart IIII. This appendix also contains useful information like definitions (see 40 CFR 60.4219) that are specific to engines regulated under 40 CFR 60 Subpart IIII. [Rule 62-204.800(8), F.A.C.]

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### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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#### Subsection E. Emissions Units 113, 114, 115, 116 & 117 Engine(s).

THE FOLLOWING SPECIFIC CONDITIONS APPLY TO ALL GROUPS OF EMISSIONS UNITS.

##### **Operation and Maintenance Requirements**

*{Permitting note: TABLE E-1. SUMMARY OF MAINTENANCE REQUIREMENTS FOR ENGINES, summarizes maintenance requirements under 40 CFR 63, Subpart ZZZZ for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}*

##### **Test Methods and Procedures**

**E.28. Common Testing Requirements.** Any tests, if required, shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

##### **Recordkeeping and Reporting Requirements**

**E.29. Other Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440, F.A.C.]

##### **NESHAP 40 CFR 63, Subpart A & ZZZZ Requirements**

- E.30. 40 CFR 63 Requirements - Subpart A.** These emissions units shall comply with all applicable requirements of 40 CFR 63, Subpart A, General Provisions, which have been adopted by reference in Rule 62-204.800(11)(d)1., F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 63.5(e), 40 CFR 63.5(f), 40 CFR 63.6(g), 40 CFR 63.6(h)(9), 40 CFR 63.6(j), 40 CFR 63.13, and 40 CFR 63.14. The applicable 40 CFR 63, Subpart A, General Provisions to which these emissions are subject to are found at 40 CFR 63.6665 and are included in **Appendix 40 CFR 63 Subpart A**. [Rule 62-204.800(11)(d)1., F.A.C.]
- E.31. 40 CFR 63 Requirements - Subpart ZZZZ [Generally Applicable Requirements].** These emissions units shall comply with all applicable requirements of 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE), which have been adopted by reference in Rule 62-204.800(11)(b), F.A.C. These emissions units shall comply with **Appendix 40 CFR 63 Subpart ZZZZ “Generally Applicable Requirements,”** included with this permit, which includes applicable requirements that apply in general to all engines regulated under 40 CFR 63 Subpart ZZZZ. This appendix also contains useful information like provisions that are not delegated to state or local agencies (see 40 CFR 63.6670) and contains definitions (see 40 CFR 63.6675) that are specific to engines regulated under 40 CFR 63 Subpart ZZZZ. [Rule 62-204.800(11)(b), F.A.C.]

## **SECTION VI. APPENDICES.**

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### **The Following Appendices Are Enforceable Parts of This Permit:**

Appendix 40 CFR 60 Subpart A, NSPS General Provisions (version dated 2/5/2010).  
Appendix 40 CFR 60 Subpart Cb, Emissions Guidelines (EG) and Compliance Times for Large Municipal Waste Combustors (version dated 03/24/2010).  
Appendix 40 CFR 60 Subpart Eb, NSPS for Large Municipal Waste Combustors (version dated 04/21/2008).  
Appendix 40 CFR 60 Subpart IIII “Generally Applicable Requirements,” Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (version dated 07/11/2006).  
Appendix 40 CFR 63 Subpart A, NESHAP General Provisions (version dated 01/29/2008).  
Appendix 40 CFR 63 Subpart ZZZZ “Generally Applicable Requirements,” National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (version dated 06/30/2010)  
Appendix 40 CFR 61 Subpart A, NESHAP General Provisions.  
Appendix 40 CFR 61 Subpart E, NESHAP for Mercury.  
Appendix A, Glossary.  
Appendix ATP, U.S. EPA Alternative Test Procedure Approval dated June 3, 2004.  
Appendix BW, Biomedical Waste Definitions.  
Appendix I, List of Insignificant Emissions Units and/or Activities.  
Appendix RR, Facility-wide Reporting Requirements.  
Appendix TR, Facility-wide Testing Requirements.  
Appendix TV, Title V General Conditions.  
Appendix U, List of Unregulated Emissions Units and/or Activities.