Department of Environmental Protection

Jeb Bush
Governor

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2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

PERMITTEE:

Lee County
Lee County Resource Recovery Facility
P.O. Box 398
Fort Myers, Florida 33902

ID No.	0710119
Permit No.	0710119-002-AC
PSD No.	PSD-FL-151C
SIC No.	4953
Expires:	December 31, 2006

Authorized Representative:
Mr. Lindsey Sampson
Director, Solid Waste Division

PROJECT AND LOCATION:

This permit allows the applicant to construct a third municipal waste combustor (MWC), along with a lime storage silo and associated appurtenances. The new MWC will be constructed at the existing municipal waste combustion facility. The municipal waste combustion unit will not exceed a nominal tonnage capacity of 660 TPD and maximum heat input of 291.5 million Btu per hour (MMBtu/hr).

The facility is located at 10500 Buckingham Rd., Fort Myers, Lee County. The UTM coordinates of this facility are Zone 17; 424.21 km E; 2945.7 km N.

STATEMENT OF BASIS:

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 and Subpart Eb of the NSPS of 40CFR60. The above named permittee is authorized to modify the facility in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

Attached appendix is part of this permit:

Appendix GC Construction Permit General Conditions
Appendix BD BACT Determination

Michael G. Cooke, Director
Division of Air Resources
Management

SECTION I. FACILITY INFORMATION

SUBSECTION A. FACILITY DESCRIPTION

The existing facility consists of a municipal waste combustion facility with two mass burn municipal waste combustion (MWC) units. The facility currently has a capacity of 660 tons/day per unit for a total of 1,320 tons per day of solid waste fuel with a nominal HHV of 5,000 Btu/lb. This is equal to a maximum heat input of 275 MMBtu/hour per unit, for a total heat input not to exceed 550 MMBtu/hr. The facility converts solid waste into saleable energy. It produces up to 40 MW of electricity. The facility is self-sufficient and operates on a small portion of the power it generates. The remaining electricity is sold to an electric utility market. The facility is owned by Lee County, and was designed, built and is currently operated by Ogden-Martin Systems of Lee, Inc. (although the corporate name changed to Covanta Energy Corporation, effective March 14, 2001). The Lee County Resource Recovery Facility began operation in August 1994.

The facility's existing mass burn combustion system incorporates the technology of German-based Martin GmbH. The waterwall furnaces are equipped with Martin® reverse-reciprocating grates and ash handling systems. Waste is combusted and reduced to an inert ash residue. Each existing unit is equipped with a slaked lime scrubber followed by a baghouse, an SNCR system for reduction of NO_X emissions, and a carbon injection system for control of mercury emissions.

This permit allows the applicant to construct a third MWC unit, which is substantially similar to the existing two units, albeit with additional controls as required in order to comply with the more stringent NSPS and BACT limits. The new municipal waste combustion unit will not exceed a nominal tonnage capacity of 660 TPD and maximum heat input of 291.5 MMBtu/hr. Accordingly, as a large MWC, this unit is subject to the requirements of 40 CFR 60, Subpart Eb. Dry flue gas scrubbers, baghouse, SNCR, and carbon injection will be utilized to control emissions from the combustor. Flue Gas Recirculation (FGR) is authorized but not required. The existing facility also contains existing lime silo and ash handling systems, which will be impacted via increased throughput of the new unit. An additional lime silo will be constructed, which stores pebble lime, used to make lime slurry.

SUBSECTION B. REGULATORY CLASSIFICATION

This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NO_X), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY).

This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD).

SECTION I. FACILITY INFORMATION

Based on the initial Title V permit application received June 17, 1996, this facility is a major source of hazardous air pollutants (HAPs).

SUBSECTION C. PERMIT SCHEDULE:

- June 13, 2003 notice of intent published in Ft. Myers News-Press
- June 12, 2003 issued revised notice of intent to issue permit
- April 14, 2003 notice of intent published in Ft. Myers News-Press
- April 4, 2003 issued notice of intent to issue permit
- February 28, 2003 application deemed complete

SUBSECTION D. RELEVANT DOCUMENTS:

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

- Application received (Bureau of Air Regulation) on November 12, 2002
- Department's Request For Additional Information dated December 11, 2002
- Applicant's response to Department's Request and related information submitted by Lee County and its consultants (various dates)

SECTION II. EMISSION UNIT(S) GENERAL REQUIREMENTS

SUBSECTION A. ADMINISTRATIVE

A.1 Regulating Agencies: All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP) at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and phone number 850/488-0114. All documents related to reports, tests, and notifications should be submitted to the Department's South District Office (DEPSD), 2295 Victoria Avenue, Suite 364, Fort Myers, Florida 33902 and phone number 239/332-6975.

A.2 General Conditions: The owner and operator are subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. **[Rule 62-4.160, F.A.C.]**

A.3 Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.

A.4 Forms and Application Procedures: The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. **[Rule 62-210.900, F.A.C.]**

A.5 Application for Title V Permit: An application for a modification of the Title V operating permit, pursuant to Chapter 62-213, F.A.C., must be submitted to the DEP's Bureau of Air Regulation and a copy to DEPSD.
[Chapter 62-213, F.A.C.]

A.6 New or Additional Conditions: Pursuant to Rule 62-4.080, F.A.C., for good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time.

SECTION II. EMISSION UNIT(S) GENERAL REQUIREMENTS

SUBSECTION B. CONSTRUCTION REQUIREMENTS

B.1 Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit (s) shall be in accordance with the capacities and specifications stated in the application. The unit is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-204, 62-212, 62-213, 62-296, 62-297 and the Code of Federal Regulations Section 40, Part 60, adopted by reference in the Florida Administrative Code (F.A.C.) regulations [Rule 62-204.800, F.A.C.]. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations **[Rule 62-210.300, F.A.C.]**

SUBSECTION C. OPERATIONAL REQUIREMENTS

C.1 Changes/Modifications: The owner or operator shall submit to the Department's Bureau of Air Regulation, for review any changes in, or modifications to: the method of operation; process or pollution control equipment; increase in hours of operation; equipment capacities; or any change which would result in an increase in potential/actual short term or long term emissions. Depending on the size and scope of the modification, it may be necessary to submit an application for, and obtain, an air construction permit prior to making the desired change. **[Rule 62-4.030, 62-210.300 and 62-4.070(3), F.A.C.]**

C.2 Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the DEPSD as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future 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 the conditions of this permit and the regulations. **[Rule 62-4.130, F.A.C.]**

C.3 Operating Procedures shall include good combustion practices and proper training and certification of all operators. The good combustion practices shall meet the guidelines established in 40 CFR 60, Subpart Eb and procedures as established by recognized industry standards. All operators (including supervisors) of air pollution control device shall be properly trained and certified in plant specific equipment. A list of all such certified personnel shall be submitted to the DEPSD. Department's staff shall be given notice of any formal training sessions related to operation and maintenance of air pollution control devices. **[Rule 62-204.800(8), F.A.C. and 62-4.070 (3), F.A.C.]**

C.4 Exceptions and Approval of Alternate Procedures and Requirements: An Alternate Sampling Procedure (ASP) may be requested from the Bureau of Air Monitoring and Mobile Sources of the Florida Department of Environmental Protection in accordance with the procedures specified in **Rule 62-297.620, F.A.C.**

SUBSECTION D. MONITORING OF OPERATIONS

Determination of Process Variables

D.1 The permittee shall operate and maintain equipment and/or instruments necessary to determine process variables, such as heat input, when such data is needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

D.2 Equipment and/or instruments used to directly or indirectly determine such process variables, including devices such as belt scales, weigh hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value. **[Rule 62-297.310(5), F.A.C.]**

SUBSECTION E. OTHER REQUIREMENTS

E.1 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 relieve the permittee from securing any other types of required permits, licenses, or certifications.

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION A. 40 CFR 60, NSPS, GENERAL PROVISIONS

The following emission limitations shall apply to the affected emissions unit after compliance testing is completed. As used in this permit, initial operations shall mean after the initial compliance testing is complete. This section addresses the following emissions unit:

EMISSIONS UNIT NO.	EMISSIONS UNITS DESCRIPTION	SYSTEM
-006	660 Tons per day nominal MSW Incinerator	MSW Unit 3

The affected emissions units shall comply with all applicable requirements of 40 CFR 60, General Provisions, Subpart A.

A.1 [40 CFR 60.7, Notification and record keeping]
A.2 [40 CFR 60.8, Performance tests]
A.3 [40 CFR 60.11, Compliance with standards and maintenance requirements]
A.4 [40 CFR 60.12, Circumvention]
A.5 [40 CFR 60.13, Monitoring requirements]
A.6 [40 CFR 60.19, General notification and reporting requirements]

The affected emissions units shall comply with all applicable provisions of the 40 CFR 60, Subpart Eb-Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996. In addition the emissions unit shall also comply with all the conditions listed in Section II (Emissions Unit General Requirements) of this permit.
[Rule 62-4.070(3), 62-204.800(8) and 62-296.416, F.A.C.]

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION B. SPECIFIC CONDITIONS:

The following specific conditions apply to the following emissions unit.

EMISSIONS UNIT NO.	EMISSIONS UNITS DESCRIPTION
-006	660 Tons per day nominal MSW Incinerator

OPERATIONAL REQUIREMENTS

B.1 The combustor (boiler) shall have a metal name plate affixed in a conspicuous place on the shell showing manufacturer, model number, type waste, and rated capacity. **[Rule 62-4.070(3), F.A.C.]**

B.2 Process Operating Rates: The municipal waste combustor unit (MWC) shall have a nominal rated capacity of 660 tons of waste per day. Maximum heat input shall be 291.5 MMBtu/hr. **[Rules 62-4.070(3) and 62-204.800(8), F.A.C., 40 CFR 60.51b and 60.58b(j)]**

B.3 Load Level : *Unit load* means the steam load of the municipal waste combustor (MWC) measured as specified in 40 CFR 60.58b(i)(6). Compliance with load level requirements shall be determined by a steam meter using ASME Power Test Code for Steam Generating Units, Power Test Code 4.1, section 4 (see 40 CFR 60.58b(i)(6)(ii) & (iii)). The MWC unit shall not operate at a load level greater than 110 percent of the unit's *maximum demonstrated unit load* based on 4-hour block averaged measurements of steam flow. The maximum demonstrated unit load is the highest arithmetic averaged measurement of steam flow recorded for four consecutive hours during the most recent dioxin/furan performance stack test in which compliance with the dioxin/furan emission limit was achieved. Higher loads are allowed for testing purposes as specified at 40 CFR 60.53b(b) and condition D.7 of this permit. **[Rule 62-204.800(8), F.A.C., 40 CFR 60.51b; 60.53b(b); and 60.58b(i)(6)&(8)]**

B.4 Emission Control Equipment

Particulate Matter
The unit shall be equipped with a particulate control baghouse designed, constructed and operated so as not to exceed a maximum emission rate of 20.6 mg/dscm corrected to 7 percent O_2. The baghouse shall be equipped with pressure drop monitoring equipment.

Spray Dryer Scrubber
The unit shall be equipped with a spray dryer scrubber designed, constructed and operated so as to remove SO_2 at an efficiency of 80 percent, or not to exceed a maximum emission rate of 26 ppmvd corrected to 7 percent O_2 based upon a 24-hour block geometric mean, whichever is less stringent.

Carbon Injection
The unit shall be equipped with 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).

Selective Non-Catalytic Reduction System
The unit shall be equipped with a selective non-catalytic reduction system designed, constructed and operated so as not to exceed a maximum NO_X emission rate of 150 ppmvd corrected to 7 percent O_2 on a 24-hour block arithmetic mean (midnight to midnight) as well as 110 ppmvd corrected to 7 percent O_2 on a 12-month rolling average and designed to meet 15 ppmvd @ 7% O_2 ammonia slip on a 24 hour average. Notwithstanding these requirements, the unit shall be granted a period of 12 calendar months from the initial compliance test of the MWC, in order to meet the 110 ppmvd NO_X and the 30 ppm ammonia slip limits identified within this permit. During this initial calendar year of operation, the 12-month rolling average limit for NO_X shall be 140 ppmvd @ 7% O_2 based upon the actual number of calendar months since initial operation. For each month after the initial calendar year of operation, the 12-month rolling average limitation shall be reduced by 2.5 ppmvd @ 7% O_2 until reaching the BACT limit of 110 ppmvd @ 7% O_2 on a 12-month rolling average. The ammonia slip limit shall be 50 ppmvd @ 7% O_2 for the first 12 calendar months from initial operation and shall be adjusted as set forth in paragraph B.10 (5), below. Note: Nothing in this permit shall be construed as an authorization to exceed the opacity standard specified herein.

Within 30 days after it becomes available, but before commencement of construction of the air pollution control equipment, the Permittee shall submit to the DEPSD copies of technical data pertaining to the selected emission control systems. This data should include, but not be limited to the manufacturer's guarantees, design inlet and outlet emission rates, and major design parameters. **[Rule 62-4.070(3), F.A.C.]**

B.5 Stack Height: The height of the boiler exhaust stack shall not be less than 276 feet above grade (271 feet for structural stack plus 5 feet for flue).

B.6 Fuels: The primary fuel for the unit is municipal solid waste (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 (1995). **[Rule 62-4.070(3), F.A.C., and request of applicant]**

B.6.1 Subject to the limitations contained in this permit, the authorized fuels for the unit also include the other solid wastes that are not MSW which are described below. However, the unit 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) sewage sludge;
(h) explosives;
(i) beryllium-containing waste, as defined in 40 CFR 61, Subpart C.

Further, the facility shall not knowingly burn:

(j) nickel-cadmium batteries pursuant to Section 403.7192 (3);
(k) mercury containing devices and lamps pursuant to Sections 403.7186(2) & (3);
(l) untreated biomedical waste from biomedical waste generators regulated pursuant to Chapter 64E-16, F.A.C., and from similar generators (or sources); and
(m) segregated loads of biological waste.

B.6.2 The fuel may be received either as a mixture or as a single-item stream (segregated load) of discarded materials. If the unit intends to use an authorized fuel that is segregated non-MSW material, the fuel shall be either:

(a) well mixed with MSW in the refuse pit; or
(b) alternately charged with MSW in the hopper.

B.6.3 The unit 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 unit, and subject to a percentage weight limitation, below (B.6.6. and B.6.7). 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.

B.6.4 To ensure that the unit's fuel does not adversely affect the unit's combustion process or emissions, the unit 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 or propane 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.

B.6.5 Subject to the conditions and limitations contained in this permit, the following other solid waste may be used as fuel at the unit:

(a) Confidential, proprietary or special documents (including but not limited to business records, lottery tickets, event tickets, coupons and microfilm);
(b) 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 unit. For the purposes of this section, contraband includes but is not limited to drugs, narcotics, fruits, vegetables, plants, counterfeit money, and counterfeit consumer goods;
(c) Wood pallets, clean wood, and land clearing debris;
(d) Packaging materials and containers;
(e) Clothing, natural and synthetic fibers, fabric remnants, and similar debris, including but not limited to aprons and gloves;
(f) Rugs, carpets, and floor coverings, but not asbestos-containing materials or polyethylene or polyurethane vinyl floor coverings; and
(g) The predominantly combustible fraction of sorted construction and demolition debris. Sorting of mixed construction and demolition debris at the unit shall occur on the tipping floor or at another location approved by the Department.

B.6.6 Subject to the conditions and limitations contained in this permit, waste tires may be used as fuel at the unit. The total quantity of waste tires received as segregated loads and burned at the unit shall not exceed 3%, by weight, of the unit's total fuel. Compliance with this limitation shall be determined by using a calendar monthly average in accordance with specific condition B.24 below.

B.6.7 Subject to the conditions and limitations contained in this permit, the following other solid waste materials may be used as fuel at the unit (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 unit shall not exceed 5% by weight of the unit's total fuel. Compliance with this limitation shall be determined by using a calendar monthly average in accordance with specific condition B.24 below.

(a) Unsorted mixtures of construction and demolition debris, or that fraction of sorted construction and demolition debris that is predominantly non-combustible. Non-combustible construction and demolition debris shall include concrete, metals, gypsum products, plaster, rock, brick, and masonry.
(b) Oil spill debris from aquatic, coastal, estuarine or river environments. Such items or materials include but are not limited to rags, wipes, and absorbents.
(c) 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.
(d) 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.
(e) Waste materials that:
  (i) are generated in the manufacture of items in categories (c) or (d), above and are functionally or commercially useless (expired, rejected or spent); or
  (ii) 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.
(f) Waste materials that contain oil from:
  (i) the routine cleanup of industrial or commercial establishments and machinery; or
  (ii) spills of virgin or used petroleum products. Such items or materials include but are not limited to rags, wipes, and absorbents.
(g) Used oil and used oil filters. Used oil containing a PCB concentration equal or greater than 50 ppm shall not be burned, pursuant to the limitations of 40 CFR 761.20(e).
(h) 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 prior approval of the Department.

B.7 Startup/Shutdown/Malfunctions

(a) 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. See also NSPS requirements set forth in paragraphs b, c and d below. **[Rule 62-210.700, F.A.C.]**

(b) The emission limitations for this unit shall apply at all times, except during periods of warm-up, startup, shutdown, or malfunctions (SSM), provided that the duration of startup, shutdown, or malfunction periods do not exceed 3 hours per occurrence. The duration of warm-up periods is not limited. The startup period commences when the affected unit begins the continuous burning of waste and does not include any warm-up period when the affected unit is combusting only natural gas or propane and waste is not being introduced to the combustor. The use of waste solely to provide thermal protection to the grate during the warm-up periods when waste is not being fed to the combustor is not considered to be continuous burning. During all startups, shutdowns, and malfunctions, the owner/operator shall use best operational practices to minimize air pollutant emissions. **[Rule 62-204.800(8), F.A.C. and 40 CFR 60.58]**

(c) A malfunction means any unavoidable failure of air pollution control equipment or process equipment to operate in a normal or usual manner. Excess emissions 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. Excess emissions resulting from startup, shutdown or malfunction of any source 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 3 hours per occurrence, except as noted in Condition B.7(d). **[Rule 62-204.800(8), F.A.C. and 40 CFR 60.58]**

(d) Due to safety and equipment concerns, the SSM exemption period is allowed to be extended to a maximum of 15 hours in certain circumstances. The extended exemption applies only to CO emission limits in 40 CFR 60.53b(a) i.e., combustor operating practices during the following two situations:

- A loss of boiler water control (e.g., boiler waterwall tube failure); or
- A loss of combustion air control (loss of a combustion air fan, loss of an induced draft fan, or combustion grate bar failure).

Normal operating practices for controlling CO emissions involves the use of auxiliary fuel burners. However, use of these burners when operators cannot control boiler water or combustion air could result in the possibility of an explosion or severe damage to the MWC. **Rule 62-210.700, and 62-204.800(8), F.A.C. and 40 CFR 60.58b(a)(1)]**

EMISSION LIMITATIONS & STANDARDS

B.8 Emissions from the MWC unit shall not exceed the limits listed in the following table. **[BACT]**

Pollutant Name	Standard(s)	Lbs/hour	TPY
Particulate Matter (PM_{10})	20.6 mg/dscm, corrected to 7% O_2	5.12	22.3
MWC Metals (PM)	20.6 mg/dscm, corrected to 7% O_2	5.12	22.3
Sulfur Dioxide (SO_2)	26 ppm, or 80% reduction, at 7% O_2 (1)	56.9	249.4
Sulfuric Acid Mist (SAM)	15 ppmvd @ 7 % O_2	15.1	66.1
Nitrogen Oxides (NO_X)	110 ppm@ 7% O_2 – 12-month rolling avg. 140 ppm @ 7% O_2 - 12-month rolling avg. * 150 ppm @ 7% O_2 – 24 hour average	70.8	289.4
Carbon Monoxide (CO)	80 ppm @ 7% O_2 – 12-mo rolling avg. 100 ppm @ 7% O_2 – 4 hr average	23.0 28.73	100.6
Mercury (Hg)	0.028 mg/dscm @ 7% O_2 or 85% reduction (1)	0.0168	0.0736
Visible Emissions (VE)	10 %, 6 minute average		
Lead (Pb)	0.2 mg/dscm, corrected to 7% O_2	0.05	0.22
MWC Acid Gas (HCl)	25 ppm or 95% reduction @ 7% O_2 (1)	46.76	204.8
Hydrogen Fluoride (HF)	3.5 ppmvd @ 7% O_2	0.718	3.145
Cadmium (Cd)	0.02 mg/dscm @ 7% O_2	.005	0.022
Dioxin/Furan (PCDD/F)	13 ng/dscm, corrected to 7% O_2	3.2×10^{-6}	1.4 x 10-5
Ammonia	15 (2) / 30 ppmvd @ 7% O_2 50 ppmvd @ 7% O_2 *		

Notes to table:

***** - For the 12-month calendar period following initial operation only.

Abbreviations
ug/dscm: Micrograms per dry standard cubic meter
mg/dscm: Milligrams per dry standard cubic meter
ng/dscm: Nanograms per dry standard cubic meter
ppm: Part per million dry volume
Dioxins/ furans: Total tetra through octa-chlorinated dibenzo-p-dioxins and dibenzofurans
Note (1) Whichever standard is less stringent.
Note (2) Design Standard.

[40 CFR 60.58b, Rules 62-210.200, 62-212.400 (BACT), 62-204.800(8) and 62-4.070(3), F.A.C., and request of applicant]

B.9 Auxiliary Burners: Auxiliary burners shall be fired only with natural gas or propane. **[Rule 62-4.070(3), F.A.C.]**

COMPLIANCE AND PERFORMANCE TESTING

B.10 Stack Testing

Compliance with the emission limits for visible emissions (opacity), carbon monoxide (CO), nitrogen oxides (NO_X), and sulfur dioxide (SO_2) in specific condition B.8 of this permit shall be demonstrated by continuous emission monitoring systems (CEMS) as required by specific condition B.13.

Compliance tests for the other pollutants listed in specific condition B.8 shall be performed annually (unless indicated otherwise) by using the following reference methods as described in 40 CFR 60, Appendix A and/or 40 CFR 61 Appendix B adopted by reference in Chapter 62-204, F.A.C. or any other method as approved by FDEP, in accordance with Chapter 62-297, F.A.C. Stack tests may also require Method 1, 2, 3/3A/3B and 4 tests as appropriate. Testing shall be conducted in accordance with the requirements of 40 CFR 60.58b Compliance and Performance Testing. With the exception of mercury testing, emission determinations based on stack tests shall be the average of three valid test runs pursuant to Rule 62-297.310(1), F.A.C. A test protocol shall be submitted for approval to the DEPSD at least 45 days prior to the initial testing. **[Rule 62-204.800(8), F.A.C. and Chapter 62-297, F.A.C.]**

Method 5 (1)	Determination of Particulate Matter Emissions from Stationary Sources.
Method 9	Visual Determination of the Opacity of Emissions from Stationary Sources.
Method 13A/B (4)	Determination of Total Fluoride Emission from Stationary Sources.
Method 23 (2)	Determination of Dioxin/Furan Conc. from Stationary Sources.
Method 26 (3) **or 26A**	Determination of HCl emissions.
Method 29 (3) (4)	Determination of Metals Emissions from Stationary Sources.
Method CTM-027(5)	Conditional Test Method for Collection and Analysis of Ammonia.

(1) Pursuant to 40 CFR 60.58b(c)(3) EPA Reference Method 5 shall be used for determining compliance with the particulate matter emission limit. The minimum sample volume shall be 1.7 cubic meters. The probe and filter holder heating systems in the sample train shall be set to provide a gas temperature no greater than 160 ± 14 °C. An oxygen or carbon dioxide measurement shall be obtained simultaneously with each Method 5 run. Since the limit for MWC Metals (as PM) is identical to the limit for PM_{10}, one annual test may suffice in determining compliance with both limits.

(2) Dioxin/Furan emission limit expressed as the total mass of tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans. The unit may perform less frequent testing for dioxin/furan emissions, as allowed by 40 CFR 60.38b(b) and 60.58b(g)(5)(iii) and (6) with prior notice to the Department, if the unit's dioxin/furan emissions do not exceed 7 ng/dscm corrected to 7% O_2 and if the existing two MWC units' dioxin/furan emissions do not exceed 15 ng/dscm each, corrected to 7% O_2.

(3) SO_2, Mercury and HCl stack tests upstream and downstream of the control device(s) shall be conducted to calculate percent control. Demonstration of the SO_2 emission limit shall be used as a surrogate for determining compliance with the SAM emission limit.

(4) The mercury emission rate shall be limited to no more than 0.028 mg/dscm at 7% O_2 or an 85% reduction (whichever is less stringent) based upon three valid test runs (annually) pursuant to Rule 62-297.310(1), F.A.C. However, the applicant may eliminate one test run per year in the event that the single run yields an inlet Hg concentration above 0.450 mg/dscm at 7% O_2, and the carbon injection system can be shown to have been operating properly. In the alternative, the applicant may retest within 30 days after receiving test results showing that the inlet Hg concentration was above 0.450 mg/dscm at 7% O_2 in two or more test runs, provided the applicant demonstrates that the carbon injection system was working properly during the test runs.

(5) The ammonia slip rate shall be initially established for a 12-month period at 50 ppmvd @ 7% O_2 and based upon quarterly stack test results. Thereafter, the ammonia slip rate shall be established at 30 ppmvd @ 7% O_2 based upon quarterly stack test results. However, if the ammonia CEMS demonstrates that the quarterly ammonia slip average for the calendar quarter preceding the scheduled quarterly test is 15 ppmvd @ 7% O_2 or less, then CEMS data shall substitute for the required quarterly stack test.

B.11. Test Procedures: Compliance tests shall meet all applicable requirements (i.e., testing frequency, minimum compliance duration, etc.) of Chapter 62-297, F.A.C. The Method 9 test shall be conducted during one run of the particulate matter test. The particulate matter test shall be conducted under conditions representative of normal operations and at least one test run shall be conducted during a normal (soot blowing) cycle. Initial performance tests for SO_2, CO and NO_X shall be conducted using CEMS in accordance with the methods and requirements of 40 CFR 60.58b(e)(4), (h)(3) and (i)(3) respectively. Simultaneous CEMS data for NO_X shall be submitted with the quarterly ammonia stack test data and results. All test reports shall include the information required by 40 CFR 60.59b(f). **[Rules 62-4.070(3), 62-297.310 and 62-204.800(8), F.A.C.; 40 CFR 60.58b and 40 CFR 60.59b]**

B.12 Stack Testing Facilities: The owner or operator shall install stack testing facilities in accordance with Rule 62-297.310(6), F.A.C. The owner or operator shall provide ports in the air pollution control equipment outlet duct or stack and shall provide access to the sampling ports. **[Rule 62-297.310(6)(c), F.A.C.]**

MONITORING OF OPERATIONS

B.13 Continuous Monitoring: Compliance with the emission limits for carbon monoxide (CO), nitrogen oxides (NO_X) and sulfur dioxide (SO_2) in specific condition B.8 of this permit shall be demonstrated by continuous emission monitoring systems (CEMS) operated in accordance with the requirements of 40 CFR 60.58b. Oxygen (O_2), and opacity shall be monitored by continuous monitoring systems. Monitors for sulfur dioxide and oxygen shall be located both upstream of the dry scrubber and downstream of the baghouse in order to calculate percentage removal efficiency. A CEMS shall be installed for the purpose of measuring ammonia slip from this emissions unit (with a range of 100ppm), and used for informational purposes rather than continuous compliance (other than as allowed for in specific condition B.10). For purposes of the RATA, this CEMS shall be compared to CTM-027. All continuous monitoring systems shall be installed, calibrated, maintained and operated as required by 40 CFR 60.13 and shall conform to all applicable Performance Specifications in 40 CFR 60, Appendix B. Quality assurance procedures shall conform to all applicable sections of 40 CFR 60, Appendix F. Initial performance evaluations shall be completed within 180 days after initial startup of the unit. Data on continuous monitor equipment specifications, manufacturer, type, calibration and maintenance needs, and proposed locations shall be provided to the DEPSD for review at least 90 days prior to installation. **[Rules 62-4.070(3) and 62-204.800(8), F.A.C.; 40 CFR 60.58b]**

B.14 Continuous Load Monitoring: The owner or operator shall install, calibrate, maintain, and operate a steam flow meter, measure steam flow in kilograms (or pounds) per hour on a continuous basis, and record the output of the monitor (in accordance with the ASME method described in 40 CFR 60.58b(i)(6)). Steam flow shall be calculated in 4-hour block arithmetic averages. Higher loads are allowed for testing purposes pursuant to 40 CFR 60.53b(b). **[Rule 62-204.800(8), F.A.C., 40 CFR 60.51b; 60.53b(b); and 60.58b(i)(6)]**

B.15 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. **[Rules 62-204.800(8) and 62-4.070(3), F.A.C.]**

B.16 Compliance with the PM Control Device Temperature: The MWC unit is required to continuously monitor and record the flue gas temperature at the inlet to the PM control device in accordance with the requirements at 40 CFR 60.58b(i)(7). The PM control device temperature shall be calculated in 4-hour block arithmetic averages. The MWC unit shall be allowed to operate up to 17°C (30° F) above the unit's maximum demonstrated PM control device temperature. The maximum demonstrated PM control device temperature is the highest 4-hour arithmetic measurement of temperature at the inlet to the PM control device recorded for 4 consecutive hours during the most recent dioxin/furan performance test which complied with the limits given above. The PM control device inlet temperature and the steam flow for the unit during the stack test shall be continuously monitored and recorded in accordance with 40 CFR 60, Subpart Eb. Higher temperatures are allowed for testing purposes, as specified at 40 CFR 60.53b(c). **[Rule 62-204.800(8), F.A.C., 40 CFR 60.53b(c) and 60.58b(i)(7) and (9)]**

B.17 Carbon Injection Rate: The optimal carbon injection rate in pounds-per hour shall be determined preceding and during the initial compliance test. Optimization should be based upon the maximum expected mercury inlet concentrations as well as necessary operating parameters such as the screw feeder speed, hopper volume, hopper refill frequency, or other parameters appropriate to the feed system being employed. During operation of the MWC unit, the carbon injection system shall be provided with a continuous indication of the injection rate and the carbon mass feed rate must equal or exceed the level which was determined as optimal. The owner or operator shall estimate the total carbon usage for the unit for each calendar quarter by utilizing the measured carbon mass feed rate (lb/hr) for each hour of operation of the MWC unit based on the continuous indicator for carbon mass feed rate, and the total number of operating hours of operation during the calendar quarter. **[Rule 62-204.800(8), F.A.C. and 40 CFR 60.58b(m)]**

B.18 Continuous Monitors: Continuous monitors with recorders shall be installed, calibrated, maintained and operated for the unit subject to review by the DEPSD for the following operational parameters:

Total steam production (mass/hr, pressure and temperature)
Carbon injection system feed rate (kg/hr or lb/hr)
Particulate matter control device inlet temperature
[Rule 62-204.800(8), F.A.C. and 40 CFR 60.58b]

RECORD KEEPING AND REPORTING REQUIREMENTS

B.19 Reports and Records:

All measurements, records and other data (test reports, etc.) required to be maintained by this facility shall be retained for at least five (5) years following the date on which such measurements, records and other data are recorded. Such records shall be maintained at the facility and shall include but not be limited to the items listed below. These records shall be made available upon request to the DEPSD for inspection at the facility. **[Rules 62-4.070(3) and 62-4.160(14)(b), F.A.C., 40 CFR 60.59b]**

(a) Data collected from all monitoring instruments, including continuous monitoring systems, steam flow measurements and PM control device temperatures;
(b) Continuous steam flow records on a 4-hour block average basis;
(c) Records of 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 condition B.3 of this permit.
(e) Amounts of activated carbon used for emissions 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 specific condition B.24 of this permit.

B.20 Excess Emission Reports:

B.20.1 Quarterly Reports:

The owner or operator shall submit excess emission reports for any calendar quarter during which there are excess emissions from the unit pursuant to 40 CFR 60.7(c). 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 during the quarterly reporting period. The report shall include the following:

(a) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors used, and the date and time of commencement and completion of each period of excess emissions. **[40 CFR 60.7(c)(1)]**

(b) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the furnace boiler system. The nature and cause of any malfunction (if known) and the corrective action taken or preventive measures adopted. **[40 CFR 60.7(c)(2)]**

(c) The date and time identifying each period during which the continuous monitoring system (CEM/COM) was inoperative except for zero and span checks, and the nature of the system repairs or adjustments. **[40 CFR 60.7(d)(2) as applicable]**

(d) When no excess emissions have occurred or the continuous monitoring system (CEM/COM) has not been inoperative, repaired, or adjusted, such information shall be stated in the report. **[40 CFR 60.7(c)(4)]**

B.20.2 Other Excess Emission Reports:

In case of excess emissions resulting from malfunctions*, the owner or operator shall notify the DEPSD in accordance with Section 62-4.130, F.A.C. The DEPSD shall be notified within one working day excluding weekends and holidays of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the DEPSD may request a written summary report of the incident. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the DEPSD.

* Malfunction is defined at Rule 62-210.200, F.A.C. to mean any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.
[Rules 62-4.130 and 62-210.700(6), F.A.C.]

B.21 Continuous Emission Monitoring System Reports: For CEM and other monitoring systems required by this permit, data on monitoring equipment specifications, manufacturer, type, calibration and maintenance needs, and proposed sampling location shall be provided to the DEPSD for review at least 90 days prior to installation.
[Rule 62-4.070(3), F.A.C.]

B.22 Operating Reports: Before March 1st of each year, the owner or operator shall submit to the DEPSD the Annual Operating Report [DEP Form No. 62-210.900(5)], which summarizes operations for the previous calendar year.

No later than February 1st of each year, the owner or operator shall submit an annual report for the previous calendar year including the information required by 40 CFR 60.59b(g)(1) through (4), as applicable.

In addition, if applicable, the owner or operator shall submit to the DEPSD the information required in 40 CFR 60.59b(h) on a semiannual basis.
[Rule 62-210.370(3), F.A.C. and 40 CFR 60.59b(g) and, if applicable, 40 CFR 60.59b(h)]

B.23 Sampling Reports: Drawings of testing facilities including sampling port locations as required by Section 62-297.310(8)(c) shall be submitted to the DEPSD for review at least 60 days prior to construction of the sampling ports.

B.24 Segregated Solid Waste Record Keeping: The following records shall be made and kept to demonstrate compliance with the segregated non-MSW percentage limitations of specific condition B.6.6 and B.6.7:

Each segregated load of non-MSW materials, that is subject to the percentage weight limitations of specific condition B.6.6 and B.6.7, which is received for processing shall be documented as to waste description and weight. The weight of all waste materials received for processing shall be measured using the facility truck scale and recorded.

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 current month. The resultant weight of tires at the end of each calendar month (excluding tires stored at the waste tire processing facility) shall be divided by the total weight of all waste materials received during each calendar month, and the resultant number shall be multiplied by 100 to express the ratio as a percent. The percentage computed shall be compared to the 3% limitation.

Each day the total weight of segregated non-MSW materials received that are subject to the 5% restriction (restricted materials) shall be computed, and the daily total shall be added to the sum of the daily totals of the current month. The resultant total weight of restricted materials at the end of each calendar month shall be divided by the total weight of all waste materials received during each calendar month, and the resultant number shall be multiplied by 100 to express the ratio as a percent. The percentage computed shall be compared to the 5% limitation.

Subsequent to an initial test burn scheduled to allow Department representatives to observe, while firing 5% (by weight) tires at the combustion unit while operating the unit at capacity that demonstrates via the CEMS that the unit can comply with the emission limits for pollutants monitored by the CEMS while firing 5% (by weight) tires, this

quantity limitation shall rise from 3% to 5%. Compliance with this limitation shall be determined on a calendar monthly basis.

B.25 Heat Input Reporting Requirements. The owner or operator shall submit to the DEPSD notification of the date of initial startup as provided by 40 CFR 60.7. Such notification shall include the design heat input capacity of the affected unit, and the annual capacity factor at which the owner or operator anticipates operating the unit based on the fuels fired.
[40 CFR 60.59b(b)]

B.26 Report of Vendor and Equipment Selection. Within 60 days of selection of a primary vendor for this project, a report detailing the design features of the MWC equipment to be installed shall be submitted to the DEPSD. Such report shall include the nominal and maximum design capacities of the furnace, grates and boiler, and shall detail operating rates such as heat input, steam production, mass throughput and turndown capability.
[Rule 62-4.070(3), F.A.C.]

OPERATOR TRAINING AND CERTIFICATION

B.27 Requirements

(a) One of the following persons must be on duty at the facility at any time during which the MWC unit is operating: a fully certified chief facility operator or shift supervisor; or a provisionally certified chief facility operator or shift supervisor who is scheduled to take the full certification exam according to the schedule specified in Specific Condition III.B.27(b). This requirement shall take effect 6 months after the date of startup of the unit. If this person must leave the facility during his or her operating shift, a provisionally certified control room operator who is on site may fulfill this requirement. A qualified, provisionally certified control room operator may temporarily replace the fully certified shift supervisor during specific periods when the certified shift supervisor is excused from work due to vacation or illness and after notification to the Department's South District Office. **[40 CFR 60.54b(c)]**

(b) No later than the date 6 months after the date of startup of the unit, each chief facility operator and shift supervisor shall obtain and maintain a current provisional operator certification and be scheduled for a full certification exam, or receive a full certification, from either the ASME or an equivalent State-approved certification program. **[40 CFR 60.54b(a) and (b)]**

(c) Each chief facility operator, shift supervisor, and control room operator must complete the EPA or State approved MWC operator training course no later than 6 months after the date of startup of the unit. **[40 CFR 60.54b(d)]**

(d) A site-specific operating manual shall be developed and updated on an annual basis which meets the requirements of 40 CFR 60.54b(e). A training program shall be established to review the operating manual with each person who has responsibilities affecting the operation of the MWC including but not limited to chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers. Each person must undergo initial training no later than the date 6 months after the date of startup of the unit or the date prior to the day that person assumes responsibilities affecting operation of the facility, whichever is later, and annually thereafter pursuant to 40 CFR 60.54b(f). The operating manual must be kept in a readily accessible location for all persons required to undergo training. **[40 CFR 60.54b(e), (f) and (g)]**

SUBSECTION C. SPECIFIC CONDITIONS:

The following specific conditions apply to the indicated emissions unit.

EMISSIONS UNIT NO.	EMISSIONS UNITS DESCRIPTION
-007	Lime Silo
(existing)	Ash and Carbon Handling

EMISSION LIMITATIONS

C.1 Lime & Carbon Silos and Ash Handling System:

Particulate emissions from these emissions units shall be limited as follows:

(a) PM emissions from the lime storage silo shall be controlled by a baghouse. Visible emissions shall not exceed 5% opacity in accordance with specific condition C.3.

(b) PM emissions from the activated carbon storage silo exhaust shall be controlled by a baghouse. Visible emissions shall not exceed 5% opacity in accordance with specific condition C.3.

(c) Visible emissions from the ash conveyor systems, transfer points, buildings, or enclosures of ash conveying systems shall not occur more than 5 percent of the time during the observation period, except during times of maintenance or repair of these systems.

(d) 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. 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.

[Rule 62-4.070(3), F.A.C., and 40 CFR 60.55b]

COMPLIANCE AND PERFORMANCE TESTING

C.2 Fugitive Emissions Compliance: The compliance method for the ash handling facilities shall be EPA Method 22, Visual Determination of Fugitives Emissions From Material Sources.

(a) The minimum observation time will be three hours, and will include periods when ash is being transferred from the MWC unit to the storage area, and when ash is being loaded for disposal.

(b) Compliance testing shall be conducted within 180 days of completion of construction and initial operation and annually thereafter.
[Rule 62-4.070(3), F.A.C., and 40 CFR 60.55b]

C.3. Carbon and Lime Storage Silos PM Compliance Requirements: Compliance testing for the lime and carbon silos shall be conducted within 180 days of completion of construction and initial operation and annually thereafter. The visible emission tests shall be performed for each silo during filling operations using EPA Method 9. Permanent stack testing facilities are not required for the lime and carbon silos. The owner or operator may install temporary stack sampling facilities to conduct such a test, if required.
[Rule 62-297.620(4), F.A.C.]

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION D. COMMON CONDITIONS:

The following specific conditions apply to the following emissions units.

EMISSIONS UNIT NO.	EMISSIONS UNITS DESCRIPTION
-006	660 Tons per Day nominal MSW Incinerator
-007	Lime Silo
(existing)	Ash and Carbon Handling

OPERATIONAL REQUIREMENTS

D.1 These emissions units are allowed to operate continuously (8760 hours/year). **[Rule 62-210.200, F.A.C. Definitions-Potential to emit (PTE)]**

D.2. Odor Control: No objectionable odors are allowed from this facility. The truck access doors to the unit shall remain closed except during normal working shifts when MSW is being received at the storage pit area. To minimize odors at the unit, a negative pressure shall be maintained on the tipping floor and air from within the building will be used as combustion air. **[Rule 62-296.320(2), F.A.C.]**

D.3 Startup/Shutdown/Malfunctions

(a) In order to minimize excess emissions during startup/shutdown/malfunction these emissions units shall adhere to best operational practices to minimize emissions.

The duration of excess emissions from the lime silo or the carbon silo shall be minimized but in no case exceed 2 hours per 24 hour period. **[Rule 62-210.700, F.A.C.**]

(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. **[Rule 62-210.700(4), F.A.C.]**

(c) Within 90 days prior to completion of construction of the unit, the owner or operator shall submit to the DEPSD an operational procedures manual that identifies and describes best operational practices that will be used during startup, shutdown, and malfunctions.

EMISSION LIMITATIONS

D.4 Facility Fugitive (Unconfined) Emissions: Fugitive emissions at this facility shall be adequately controlled at all times. All roads shall be adequately paved, and vacuum swept if appropriate, to minimize accumulations of ash and dust. Speed limit signs shall be posted. Unprocessed refuse storage areas which must be open for operational purposes (e.g., tipping floor or the refuse bunker while trucks are entering and leaving) shall be under negative air pressure. **[Rule 62-296.320(4)(c), F.A.C.]**

COMPLIANCE AND PERFORMANCE TESTING

D.5 Test Notification: The owner or operator shall notify the DEPSD in writing at least *30 days* (for the initial test) and *15 days* (for the annual tests) prior to each scheduled compliance test to allow witnessing. The notification shall include the compliance test date, place of such test, the expected test time, the facility contact person for the test, and the person or company conducting the test. The 30 or 15 day notification requirement may be waived at the discretion of the DEPSD. Likewise, if circumstances prevent testing during the test window specified for the emissions unit, the owner or operator may request an alternate test date before the expiration of this window. **[Rule 62-297.310, F.A.C. and 40 CFR 60.8]**

D.6 Special Compliance Tests: When the Department, after investigation, has good reason (such as substantiated complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in Rule 62-204, 62-210, 62 -212, 62-296 and 62-297, F.A.C. or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the DEPSD. **[Rule 62-297.310(7)(b), F.A.C.]**

D.7 Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit in operation at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. See also specific conditions B.2 and B.3 of this permit for limitations related to unit load for the MWC unit. Higher loads are allowed for testing purposes as specified at 40 CFR 60.53b(b) and condition B.3 of this permit. **[Rule 62-297.310(2) and (2)(b), F.A.C., and 40 CFR 60.53b(b)]**

RECORD KEEPING AND REPORTING REQUIREMENTS

D.8 Emission Compliance Stack Test Reports:
[Rule 62-297.310(8), F.A.C., and 40 CFR 60.59b(f)]

(a) A *test report* indicating the results of the required compliance tests shall be filed with the DEPSD as soon as practical, but no later than 60 days after the last sampling run is completed.

(b) The *test report* shall provide sufficient detail on the tested emissions unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8), F.A.C.

DEPARTMENT BACT REVIEW

In evaluating BACT, Department Rules (62-212, F.A.C.) require that the Department must give consideration to:

a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169 of the Clean Air Act, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).
b) All scientific, engineering, and technical material and other information available to the Department.
c) The emission limiting standards or BACT determinations of any other state.
d) The social and economic impact of the application of such technology.

During the pre-application process, Lee County (through its consultant, RTP Environmental Associates, Inc.) provided a statistical analysis of emission data from the existing Lee County MSW units. This data was intended to indicate appropriate limits for establishing BACT, suggesting the setting of BACT emission limits at a Six Sigma Upper Prediction Limit (UPL) or other statistical basis, unless the NSPS is lower. According to the submittal, the Six Sigma UPL should correspond to a predicted failure (exceedance) rate of once every 125 years. The Department takes no issue with the mathematical accuracy of the analysis, but finds it to be an unacceptable means of establishing BACT emission limits, for multiple reasons. The legislative history is clear, that Congress intended BACT to perform a technology-forcing function. With this in mind, the Department will attempt to utilize the relevant portions of the analysis in the establishment of BACT emission limits.

Additionally, Eastern Research Group conducted a study entitled Compliance Test Data Analysis For Lee County Solid Waste Resource Recovery Facility in September of 2002 for the EPA. EPA Region IV provided this study to the Department for use as appropriate. As indicated above, the Department will utilize relevant portions of this study, as it sees fit in the establishment of BACT.

NO_X Summary

The applicant supplied cost analyses for SCR to the Department, concluding that the cost of that NO_X control technology may be greater than $13,000 per ton of NO_X removed. These analyses were reviewed by the Department and rejected for multiple reasons, although many questions remain as to an accurate cost effectiveness calculation. Cost effectiveness values exceeding $10,000 per ton are not considered within the range of cost effectiveness by EPA or FDEP.

The Department has reached no definitive conclusion as to the appropriate cost effectiveness of SCR and will continue to investigate it prior to evaluating the application of additional MWC's in Florida. However, FDEP does not accept the applicant's proposal of a conventional SNCR (meeting the NSPS) as BACT. However, the Department notes that:

a) No large-scale refuse burning WTE facilities have been permitted in Florida for over a decade. During this time, a number of landfills have been permitted in the US and Florida.

b) Consideration is given to the social impacts of landfilling versus combusting waste. In the EU waste disposal hierarchy, WTE is regarded as a form of recycling of energy and is considered preferable to landfill disposal, though less preferable than primary recycling of waste products. As a growing state, it is important for the State of Florida to ensure that a balance is achieved between the alternatives of landfilling and burning of waste. During the past 10 years, that balance has not been achieved.

Given the above factors, this facility's past excellent environmental performance (with respect to air pollution) along with the apparent capabilities of advanced SNCR systems, justification *is* warranted to authorize the use of such an advanced SNCR for NO_X control. The advanced SNCR will use furnace pyrometry and additional process enhancements, such that high NO_X reductions can be achieved without excessive amounts of ammonia slip or other unwanted byproduct gases. According to EPA's document EPA/600/SR-94/208, such a system requires less reagent than that required for conventional SNCR and should achieve 60% NO_X reductions (an approximate Lee County emission equivalent of 104 ppmvd @ 7% O_2).

An additional factor considered by the Department is that on September 9, 1999 the State of Illinois issued a permit to West Suburban Recycling and Energy Center, L.P. for the construction of two 900 TPD MWC's, with NO_X emission limits of 100 ppmvd on a 24 hour average. Lastly, based upon the touted guarantees of the Martin GmbH SNCR (http://www.martingmbh.de/englisch/technologie/e_sncr.htm) NO_X emissions are achievable at levels approaching 60 ppm, and three European facilities (Brescia, London SELCHP and Limmattal) have guarantees averaging 106 ppm. Similar to Martin, Von Roll (a Swiss company) is a major builder of plants in Europe, with Wheelabrator as the domestic licensee. In discussions with Von Roll, NO_X emissions at or below 100 ppmvd are also guaranteeable.

In consideration of all of the above items, a BACT emission limit of 110 ppmvd @ 7% O_2 shall be established on a 30-day rolling average. As an additional means of achieving this limit, the Department encourages the applicant to consider the application of flue gas recirculation (http://www.martingmbh.de/englisch/technologie/e_abgasrezirk.htm) as well as water-cooled grates (http://www.martingmbh.de/englisch/technologie/e_gek_rost.htm), both of which have been developed by Martin GmbH. The application of water-cooled grates allows for a higher percentage of overfire air, in turn enabling lower combustion temperatures and therefore better control of NO_X. Lastly, the Department notes that the latest advances to the Martin GmbH combustion control system (e.g. SYNCOM - http://www.martingmbh.de/englisch/technologie/e_syncom.htm) may be designed to incorporate many of the features identified herein, such as FGR and the use of furnace temperature optimize oxygen distribution in the combustion zone. Although not yet fully commercialized, such a system is likely applicable for this installation.

CO Summary

State-of-the-art mass burn waterwall MWC's have inherently stable combustion characteristics and low CO levels. A 100-ppm CO emission limit with a 4-hour averaging time has been established as the NSPS for these types of units. In an EPA sponsored test at a mass burn combustor in Marion County, Oregon in 1987, the combustor was subjected to a number of different operating conditions including changes to the under-to-overfire air ratio and the overfire air distribution. CO concentrations at the inlet to the unit's spray dryer never exceeded 37 ppm and emissions under normal operating conditions were typically less than 20 ppm. While the unit was not attempting to control CO, the computerized distributed combustion control system maintained high combustion

efficiency and low concentrations of CO. Evaluation of long term emission data from other state-of-the-art mass burn waterwall facilities indicate that these types of facilities can achieve a 100 ppm CO emission limit on a 4-hour basis. In most cases these mass burn combustors will operate at long term averages of less than 50 ppm to comply with the 100 ppm (4 hour) emission limit. Experience indicates that operation at CO concentrations between 50 and 100 ppm may be required due to problems associated with the burning of wet waste. The Department will establish two CO limits as BACT, the NSPS as well as a 30-day rolling average of 80 ppmvd @ 7% O_2.

SO_2, SAM and PM Summary

The NSPS limit for SO_2 is 30 ppmvd at 7% O_2 on a 24-hour average, or an 80% reduction in SO_2 on a 24-hour average. Since the 24-hour CEMS data as well as the 3-run stack test averages for SO_2 at the existing Lee County units was 25 ppm or less, the Department will set the SO_2 emission limit at 26 ppmvd @ 7% O_2 on a 24-hour average, or an 80% reduction. The SAM limit will be reduced from the applicant's proposal by an amount equivalent to the SO_2 reduction which the Department has established (a ratio of 26/30) for an equivalent limit of 15 ppmvd @ 7% O_2.

The NSPS for PM is 24 mg/dscm. The Department agrees with the applicant's proposed BACT for PM of 20.6 mg/dscm, which is 90% of the equivalent PM limit (22.88 mg/dscm) on the existing emission units.

Mercury Summary

The applicant proposed the NSPS of 70 mg/dscm at 7% O_2 as the appropriate BACT limit. However, the Department is aware that many states in the northeast U.S. have established 28 mg/dscm at 7% O_2 as the standard for large MWC's. In fact, the Department review revealed that at least 15 N.E. facilities with large MWC's (of varying vintage, size and design) are required to meet such a limit, and six of these facilities are Covanta-operated. Three of these facilities (Bristol/Connecticut, Union/New Jersey and Haverhill/Massachusetts) are of the Martin design and use a combination of a mercury separation plan plus carbon injection to meet the subject limit. The Department will establish 28 mg/dscm as BACT and allow a 12-month period during which quarterly testing and carbon injection optimization shall be completed while meeting only the NSPS. Permit conditions will describe a means of allowing for occasional sample spikes.

Dioxins and Furans Summary

A review of past data suggests that 13 ng/dscm at 7% O_2 for dioxins and furans (MWC organics) represents an appropriate level of BACT for this unit. These are the emission limits proposed by the applicant and are lower than those of any other existing waste incinerator within Florida.

HCl, Pb, Cd and HFl

The Department accepts the applicant's analysis for these 4 pollutant emissions. Specifically, emission limits of 25 ppmvd (or 95% removal), 0.2 mg/dscm, 0.02 mg/dscm and 3.5 ppmvd for HCl, Pb, Cd and HFl (respectively), all corrected to 7% O_2. However, the limit for Cadmium is not established via this BACT review.

APPENDIX BD

SUMMARY OF BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

The following table represents a summary of the BACT Determination for this project:

Pollutant Name	Standard(s)	Lbs/hour	TPY
Particulate Matter (PM_{10})	20.6 mg/dscm, corrected to 7% O_2	5.12	22.3
MWC Metals (PM)	20.6 mg/dscm, corrected to 7% O_2	5.12	22.3
Sulfur Dioxide (SO_2)	26 ppm, or 80% reduction, at 7% O_2	56.9	249.4
Sulfuric Acid Mist	15 ppmvd @ 7% O_2	15.1	66.1
Nitrogen Oxides (NO_X)	110 ppm@ 7% O_2 – 12-month rolling avg. 140 ppm @ 7% O_2 - 12-month rolling avg. * 150 ppm @ 7% O_2 – 24 hour average	70.8	289.4
Carbon Monoxide (CO)	80 ppm @ 7% O_2 – 30-day rolling average 100 ppm @ 7% O_2 – 4 hr average	23.0 28.73	100.6
Mercury (Hg)	0.028 mg/dscm @ 7% O_2 or 85% reduction (1)	0.0168	0.0736
Visible Emissions (VE)	10 %, 6 minute average		
Lead (Pb)	0.2 mg/dscm, corrected to 7% O_2	0.05	0.22
MWC Acid Gas (HCl)	25 ppm or 95% reduction @ 7% O_2 (1)	46.76	204.8
Hydrogen Fluoride (HFl)	3.5 ppmvd @ 7% O_2	0.718	3.145
Dioxin/Furan (PCDD/F)	13 ng/dscm, corrected to 7% O_2	3.2×10^{-6}	1.4 x 10-5
Ammonia	15 (2) / 30 ppmvd @ 7% O_2 50 ppmvd @ 7% O_2 *		

Notes to table:

* - For the 12-month calendar period following initial operation only.

Abbreviations

ug/dscm: Micrograms per dry standard cubic meter
mg/dscm: Milligrams per dry standard cubic meter
ng/dscm: Nanograms per dry standard cubic meter
ppm: Part per million dry volume
Dioxins/ furans: Total tetra through octa-chlorinated dibenzo-p-dioxins and dibenzofurans
Note (1) Whichever standard is less stringent.
Note (2) Design Standard.

DETAILS OF THE ANALYSIS MAY BE OBTAINED BY CONTACTING:

A. A. Linero, P.E. Administrator, New Source Review Section
Deborah Nelson, Meteorologist, New Source Review Section

Michael P. Halpin, P.E. Review Engineer
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a) Have access to and copy and records that must be kept under the conditions of the permit;
b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a) A description of and cause of non-compliance; and
b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages, which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit also constitutes:

a) Determination of Best Available Control Technology (X)
b) Determination of Prevention of Significant Deterioration (X); and
c) Compliance with New Source Performance Standards (X).

G.14 The permittee shall comply with the following:

a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law, which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.