



Department of Environmental Protection

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

PERMITTEE:

Hillsborough County
Resource Recovery Facility
601 E. Kennedy
Tampa, Florida 33602

FID No.	0570261
PSD No.	PSD-FL-121 (B)
SIC No.	4953
PPS No.	PA 83-19
Expires:	March 30, 2003

Authorized Representative:

Daniel A. Kleman
County Administrator

PROJECT AND LOCATION:

Permit to replace air pollution control system on a nominal 1200 (1380 peak) ton per day waste combustion and energy recovery facility in order to comply with the requirements of 40CFR60, Subpart Cb - Emission Guideline and Compliance Times for Municipal Waste Combustors That Are Constructed on or Before December 19, 1995. Electrostatic precipitators will be replaced with selective non-catalytic reduction systems, spray dryer absorbers, activated carbon injection units, and fabric filters. Permit defines wastes which can be combusted and expands peak waste input to 115 percent of nominal capacity. The facility is located at 350 Falkenburg Road, Tampa, Hillsborough County. UTM coordinates are Zone 17; 368.20 km E ; 3092.70 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. 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

Howard L. Rhodes, Director
Division of Air Resources
Management

AIR CONSTRUCTION PERMIT PSD-FL-121(B) AND PA 83-19

SECTION I. FACILITY INFORMATION

SUBSECTION A. FACILITY DESCRIPTION

This existing facility consists of three mass-burn combustion units, with a nameplate (nominal) capacity to combust 400 tons per day (tpd) when burning solid waste with a heat content of 4,500 British thermal units (BTU) per pound (lb). Therefore, the facility has a nameplate (nominal) waste processing rate of 1,200 tpd (4,500 Btu/lb). The Facility generates electricity, and has an electrical generator with a nameplating rating of 29 megawatts for the entire Facility. Each upgraded air pollution system will consist of a spray dryer absorber (SDA), fabric filter baghouse (FF), activated carbon injection (ACI) unit, and a selective non-catalytic reduction (SNCR) system.

SUBSECTION B. REGULATORY CLASSIFICATION

This facility is listed in Table 62-212.400 of Chapter 62-212, F.A.C., "Major Facilities Categories". Stack and fugitives emissions of over 100 tons per year of particulate matter, carbon monoxide, volatile organic compounds, sulfur dioxide, and nitrogen oxides, characterize the installation as a major facility. The installation of the new air pollution control system will not subject this facility to PSD review under the requirement of Rule 62-212.400, F.A.C., since there is not an increase in actual emissions. As a Resource Recovery Facility (waste-to-energy facility), the affected emissions units are subject to applicable requirements of Rule 62-296.416, F.A.C. Waste to Energy and Rule 62-204.800, F.A.C., which incorporates 40 CFR 60 Subpart Db, Subpart Cb, Subpart E, and Subpart Eb.

SUBSECTION C. PERMIT SCHEDULE:

- 02/06/98 Notice of Intent published in The Tampa Tribune
- 01/28/98 Issued Notice of Intent to Issue Permit
- 11/17/97 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 September 16, 1997.

Department's letters dated October 14, 1997

Company letters dated November 11, 1997, January 9, 13, 14, and February 20, 1998

Project: Upgrading of the Air Pollution Control System
Facility ID No. 0570261
June 26, 1998

Hillsborough County
Resource Recovery Facility
Tampa, Florida

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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) and the Power Plant Siting office, Florida Department of Environmental Protection (FDEP) at 2600 Blainstone Road, Tallahassee, Florida 32399-2400 and phone number (850)488-1344. All documents related to reports, tests, and notifications should be submitted to the DEP Southwest District office (DEPSW), 3804 Coconut Palm Drive, Tampa, Florida 33619 and phone number 813/744-6100 and the Environmental Protection Commission of Hillsborough County (HCEPC), 1900 Ninth Avenue, Tampa, Florida 33605 and phone number 813/272-5960.
- A.2 General Conditions: The owner and operator is 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 Expiration: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [**40CFR 52.21(r)(2)**].
- A.6 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 Department Southwest District office (DEPSW) and the Hillsborough County Environmental Protection Commission (HCEPC). [**Chapter 62-213, F.A.C.**]
- A.7 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.

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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 facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-103, 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 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. *Routine maintenance of equipment will not constitute a modification of this permit.* [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 Department Southwest District office (DEPSW) and the Hillsborough County Environmental Protection Commission (HCEPC) as soon as possible, but at least within (1) 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 Cb 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 DEP Southwest District office. Department staff

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SECTION II. EMISSION UNIT(S) GENERAL REQUIREMENTS

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 process weight input or 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 preclude the permittee from securing any other types of required permits, licenses, or certifications.

SUBSECTION F. ELECTRIC UTILITY STEAM GENERATING UNIT ACTUAL EMISSIONS

- F.1 Requirement: The permittee shall provide the Department within the period not longer than 10 years following the change, information demonstrating that the physical or operational change did not result in a "representative actual annual emissions" increase in accordance with Rule 62-210.200 (12)(d), F.A.C., and Rule 62-212.400, F.A.C. [40 CFR 52.21(b)(33), Rule 62-4.070 (3), Rule 62-212.400, and Rule 62-210.200, F.A.C.]

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SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION A. 40 CFR 60, NSPS, GENERAL PROVISIONS

The following emission limitations shall apply to each affected emissions unit after the proposed improvements to comply with 40 CFR 60 Subpart Cb are made and compliance testing is completed. This section addresses the following emissions units:

EMISSIONS UNIT NO.	EMISSIONS UNITS DESCRIPTION
001	150 MMBtu/hr (nominal) Municipal Waste Combustor & Auxiliary Burners - Unit No.1
002	150 MMBtu/hr (nominal) Municipal Waste Combustor & Auxiliary Burners - Unit No.2
003	150 MMBtu/hr (nominal) Municipal Waste Combustor & Auxiliary Burners - Unit No.3
xxx	Ash Building and Handling System

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 E and Subpart Cb, New Source Performance Standards for Incinerators and Emissions Guidelines for Existing Municipal Waste Combustors along with applicable requirements of Subpart Db, New Source Performance Standards for Steam Generating Units, 40 CFR 61.30, Subpart C, NESHAP for Beryllium and Rule 62-296.416, F.A.C., Waste-to-Energy Facilities. In addition these emissions units 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.; and PSD-FL-104, 121 and 121(A)].

{Note: This project is subject to the requirements of 40 CFR 60, Subpart Cb. This permit may refer to the requirements of 40 CFR 60, Subpart Eb where these requirements are referenced by Subpart Cb}

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SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION B. SPECIFIC CONDITIONS:

The following Specific Conditions apply to the following emissions units after improvements to comply with 40 CFR Subpart Cb are completed.

EMISSIONS UNIT No.	EMISSIONS UNITS DESCRIPTION
001	150 MMBtu/hr (nominal) Municipal Waste Combustor & Auxiliary Burners - Unit No.1
002	150 MMBtu/hr (nominal) Municipal Waste Combustor & Auxiliary Burners - Unit No.2
003	150 MMBtu/hr (nominal) Municipal Waste Combustor & Auxiliary Burners - Unit No.3

{Permitting Note: Each of the three municipal waste combustor (MWCs) shall have a nominal design rate capacity of 400 tons MSW per day, 150 MMBtu per hour (excluding 9.9 MMBtu/hr from the combustion air preheaters) and 94,270 pounds steam per hour with MSW having a heating value of 4,500 Btu per pound. The "operating window" of 115 percent (%) over the nominal design rate of 150MMBtu heat input corresponds to 172.5 MMBtu/hr heat input and 102,000 lb steam/ hour per each boiler. By letter dated March 17,1998, D.B Riley, Inc. (boilers' manufacturer) indicated that it performed an evaluation of each boiler's ability to operate at the proposed increase steam flow of 102,000 lb steam /hr and concluded that each boiler can safely operate at an increased continuous steam generation rate of 103,700 lb steam/hr. Short-term capacity is limited by limiting steam production (102,000 lb/hr), which effectively limits heat input. The net steam energy of 1378.86 Btu/lb of steam shall not be exceeded}.

OPERATIONAL REQUIREMENTS

B.1 The combustor boilers shall have a metal name plate affixed in a conspicuous place on the shell showing manufacturer, model number, type waste, and rated capacity.

B.2 Process Operating Rates

(a) The maximum individual MWC throughput shall not exceed 460 tons MSW per day (1380 tons per day entire facility), 172.5 MMBtu per hour and 102,000 pounds steam per hour (on a 4-hour block arithmetic average). The incinerators/boilers shall not be loaded in excess of their maximum operating capacity, equivalent to 1380 tons MSW per day total, but no more than 1200 tons MSW per day on an annual (52 week rolling average) average basis for the entire facility. (Compliance per Specific Conditions B.13 and B.14) [Rule 62-204.800(8), F.A.C., 40 CFR 60.31b; 60.38b; 60.51b, and 60.58b(j)] [PSD-FL-121(A)/PA 83-19 and Rule 62-4.030(3), F.A.C.]

(b) Combustion efficiency shall be calculated by: $\%CE = [1 / (1 + (CO / CO_2))] \times 100$, and shall be at least 99.5% for an 8-hour average.

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). Each MWC unit shall not operate at a load

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level greater than 110 percent of the unit's "maximum demonstrated unit load." The maximum demonstrated unit load is the highest 4-hour arithmetic averaged MWC unit load achieved during 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). [Rule 62-204.800(8), F.A.C., 40 CFR 60.31b; 60.38b; 60.51b; 60.53b(b); and 60.58b(i)(8)]

B.4 Emission Control Equipment

Particulate Matter

The combustor's particulate control baghouse shall be designed, constructed and operated to not exceed a maximum emission rate of 27 mg/dscm corrected to 7 percent O₂. These baghouses/collectors shall be equipped with pressure drop monitoring equipment.

Spray Dry Scrubber

The facility shall be equipped with dry scrubbers which are designed, constructed and operated to remove SO₂ at an efficiency of 75 percent, or to not exceed a maximum emission rate of 29 ppm_{dv} corrected to 7 percent O₂, 24-hour block geometric mean, whichever is less stringent.

Carbon Injection

The carbon injection rate must be estimated and maintained in compliance with the requirements set forth in 40 CFR 60.58b(m).

Selective Non Catalytic Reduction System

The facility shall be equipped with SNCRs which are designed, constructed and operated to not exceed a maximum NO_x emission rate of 205 ppm_{dv} corrected to 7 percent O₂, 24-hour block arithmetic mean (midnight to midnight).

Within 30 days after it becomes available, but before commencement of construction, the Permittee shall submit to the Department's Southwest District office copies of technical data pertaining to the selected emission control systems. This data should include, but not be limited to guaranteed efficiency and emission rates, and major design parameters.

B.5 Stack Height: The height of the boiler exhaust stack shall not be less than 220 feet above grade.

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

B.6 Fuels

The primary fuel for the facility 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).

B.6.1 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 below. However, the facility 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.

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 facility 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 facility owner/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, 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 homogenous composition of waste material, as determined by visual inspection.

B.6.4 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.

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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.

- 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 facility:
- (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 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;
 - (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; or
 - (f) Rugs, carpets, and floor coverings, but not asbestos-containing materials or polyethylene or polyurethane vinyl floor coverings.
- B.6.6 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. Compliance with this limitation shall be determined by using a rolling 30 day average in accordance with specific condition No. B.25 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 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 by using a rolling 30 day average in accordance with specific condition No. B.25 below.
- (a) Construction and demolition debris.
 - (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

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- 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) The emission limitations for this facility shall apply at all times, except during periods of warmup, startup, shutdown, or malfunctions, provided that the duration of startup, shutdown, or malfunction periods do not exceed 3 hours per occurrence. The duration of warmup periods is not limited. The startup period commences when the affected facility begins the continuous burning of MSW and does not include any warmup period when the affected facility is combusting only natural gas and MSW is not being introduced to the combustor. The use of MSW solely to provide thermal protection to the grate during the warmup periods when MSW 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.
- (b) A malfunction means any sudden and 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. [Rule 62-210.700, and 62-204.800(8), F.A.C., and 40 CFR 60.58b(a)(1)]

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EMISSION LIMITATIONS

B.8 The following maximum emissions limits shall not be exceeded:

POLLUTANT	EMISSION STANDARDS	LB/MMBtu	LB/HR	TON/YR
PM ⁽¹⁾ Particulate Matter	27 mg/dscm or 0.012 gr/dscf corrected to 7% O ₂	0.024	4.1	17.96
VE Visible Emissions	10% (6 min. block avg.)			
Cd Cadmium	0.040 mg/dscm corrected to 7% O ₂	3.47E-05	6.00E-03	0.026
F Fluorides	6.74 mg/dscm corrected to 7% O ₂	0.0059	1.00	4.43
Bc ⁽³⁾ Beryllium	1.48 ug/dscm corrected to 7% O ₂	1.27E-06	2.18E-04	9.6E-04
Pb Lead	0.44 mg/dscm corrected to 7% O ₂	3.81E-04	0.065	0.288
Hg ⁽⁵⁾ Mercury	70 ug/dscm or 85% reduction by weight corrected to 7% O ₂ (whichever is less stringent)	1.17E-04 or 85% reduction @ 7% O ₂	0.020 or 85% reduction @ 7% O ₂	0.087
SAM Sulfuric Acid Mist	To be demonstrated initially. Not to exceed 0.072 gr/dscf corrected to 12% CO ₂			
SO₂ ⁽²⁾ Sulfur Dioxide	29 ppmdv or 75% reduction by weight or volume corrected to 7% O ₂ (whichever is less stringent)	0.190 or 75% reduction @ 7% O ₂	32.86 or 75% reduction @ 7% O ₂	143.9
HCl ⁽²⁾ Hydrochloric Acid	29 ppmdv or 95% reduction corrected to 7% O ₂ (whichever is less stringent)	0.099 or 95% reduction @ 7% O ₂	17.00 or 95% reduction @ 7% O ₂	74.43
Dioxins/Furans	30 ng/dscm corrected to 7% O ₂	2.60 E-08	4.5E-06	1.96E-05
CO Carbon Monoxide	100 ppmdv corrected to 7% O ₂	0.101	17.4	76.26
NO_x ⁽²⁾ Nitrogen Oxides	205 ppmdv corrected to 7% O ₂	0.34	58.63	256
VOC ⁽⁴⁾ Volatile Organic Compounds	To be demonstrated initially. Not to exceed 0.01 gr/dscf corrected to 12% CO ₂			

These maximum allowable emission rates are applicable to each MWC combustor unit. [Rules 62-4.070, and 62-296.416, F.A.C., 40 CFR 60.33b and 40 CFR 60.34b]

Notes:

- (1) This limit for PM is more restrictive than the emission limit for PM in 40 CFR 60.43b
- (2) The NO_x standard of 40 CFR 60.44b do not apply to these emissions units because this permit subjects this facility to a federally enforceable requirement that limits the facility to an annual capacity factor of 10 percent or less for natural gas
- (3) Beryllium: NESHAP. 40 CFR 61.32 (a)(Subpart C). This limit is adjusted downward to produce no net increase in the annual maximum potential emission rate. Refer to Table 1.1 of the application submitted on September 16, 1997.
- (4) VOC emission limit: 0.01 gr/dscf corrected to 12% CO₂ or 0.2 lb/ton, whichever is more restrictive (PSD-FL-104).
- (5) Emission limits in terms of lbs/ MMBtu or lb/hr for those pollutants which have an emission standard expressed, in part by a percent removal efficiency, shall also be dictated by the percent removal provision.

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Basis: Emissions calculations (lb/hr and ton/yr) are based on the maximum heat input rate of 172.5 MMBtu/hr (102,000 lb steam/hr) per unit and 8760 hours of operation.

Averaging Times

SO₂: 24-hour daily block geometric mean (midnight to midnight)
NO_x: 24-hour daily block arithmetic mean (midnight to midnight)
CO: 4-hour block arithmetic mean beginning at midnight
Opacity: 6 minutes block arithmetic mean

Abbreviations

ug/dscm: Micrograms per dry standard cubic meter
mg/dscm: Milligrams per dry standard cubic meter
ppmdv: Part per million dry volume
ng/dscm: Nanograms per dry standard cubic meter
Dioxins/ furans: Total tetra through octa-chlorinated dibenzo-p dioxins and dibenzofurans
F: Fluorides as hydrogen fluoride

Temperature: 17° C above maximum demonstrated PM control device inlet

Auxiliary Burners: Nitrogen oxides emission from the auxiliary burners are expected to approximately be 3.45 lb/hr and 15.1 ton/yr per unit. These emissions are part of, and not in addition to, combustor emissions. Allowable emissions for MSW combustors include auxiliary burners. This facility is limited to a 10 percent (0.10) or less total annual gross heat input for natural gas consumption. Auxiliary burners for each MWC unit shall be fired only by natural gas, and consumption of natural gas shall not exceed 104,937,500 cubic feet per MWC unit in any calendar year (i.e., annual capacity factor for natural gas of 10% or less as determined by 40 CFR 60.44b(d). [40 CFR 60.44b, Rule 62-210.200, 62-204.800 (8) and 62-4.070(3), F.A.C.]

COMPLIANCE AND PERFORMANCE TESTING

Testing shall be conducted in accordance with the requirements of 40 CFR 60.58b Compliance and Performance Testing and 40 CFR 60.8. Performance Tests.

B.9 Stack Testing

Compliance tests [initial (I) and annual (A) as indicated in Specific Condition No. B.8] for PM, HCl, Dioxin/furans, F, Be, Pb, Cd, Hg, H₂SO₄ mist (SAM), VOC and VE shall be performed 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.

A test protocol shall be submitted for approval to the Department's Southwest District office (DEPSWD) and the Hillborough County Environmental Protection Commission (HCEPC) at least 45 days prior to initial testing. [Rule 62-204.800(8), F.A.C. and Chapter 62-297, F.A.C.]

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- Method 5⁽¹⁾** Determination of Particulate Matter Emissions (front half catch only) from Stationary Sources (I) and (A).
- Method 8** Determination of Sulfuric Acid Mist from Stationary Sources (I).
- Method 9** Visual Determination of the Opacity of Emissions from Stationary Sources (I) and (A).
- Method 13A or 13 B** Determination of Total Fluoride Emissions from Stationary Sources (I) and (A).
- Method 18, 25 or 25a** Determination of Volatile Organic Concentrations (I).
- Method 23⁽²⁾** Determination of Dioxin/furan concentration from Stationary Sources (I) and (A).
- Method 26⁽³⁾ or 26A** Determination of HCl emissions (I) and (A).
- Method 29⁽³⁾** Determination of Metals Emissions from Stationary Sources (I) and (A).

- (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.
- (2) Dioxin/Furan emission limit expressed as the total mass of tetra- through octa chlorinated dibenzo-p-dioxins and dibenzofurans. The facility may perform less frequent testing for dioxin/furan emissions, as allowed by 40 CFR 60.38b(b) and with prior notice to the Department, if the facility's dioxin/furan emissions do not exceed 15 ug/dscm corrected to 7% O₂ or less for all MWC units.
- (3) HCl and mercury stack tests upstream and downstream of the control device (s) shall be conducted to calculate percent control.

Initial compliance tests for each combustion unit shall be conducted within 60 days after achieving maximum operating capacity, but not later than 180 days after startup. Annual tests shall be conducted within one year after the initial tests, unless otherwise allowed by the Department.

- B.10. Test Procedures: Compliance tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration etc.) of the Florida Administrative Code Chapter 62-297. 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

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operations and shall be scheduled to coincide with as much of the normal cleaning (soot blowing) cycle as practicable. Initial performance tests for SO₂ and NO_x shall be conducted using CEMS in accordance with the methods and requirements of 40 CFR 60.58b(e)(4) and (h)(3), respectively. [Rule 62-204.800(8), F.A.C., and Rule 62-297.310, F.A.C.; and 40 CFR 60.38b (40 CFR 60.58b)]

B.11 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.]

B.12 Monitoring Compliance:

Continuous Compliance with Emission Limits: Continuous compliance with the emission limits for opacity, carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO₂) listed in B.8 and the operational parameters (steam production, etc.) listed in Specific Condition No. B.3 shall be demonstrated by continuous emission monitoring systems (CEMS) operated in accordance with 40 CFR 60.58b and 60.59b(f). [Rule 62-204.800(8), F.A.C. and 40 CFR 60.38 (40 CFR 60.58b)]

B.13 Compliance With Load Level Requirements: The owner or operator of an affected facility with steam generation capability shall install, calibrate, maintain, and operate a steam flow meter or a feedwater flow meter; measure steam (or feedwater) flow in kilograms per hour (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 (or feedwater) flow shall be calculated in 4-hour block arithmetic averages. Higher loads are allowed for testing purposes as specified at 40 CFR 60.53b(b). [Rule 62-204.800(8), F.A.C., 40 CFR 60.31b; 60.38b; 60.51b; 60.53b(b); and 60.58b(i)(6)]

B.14 Compliance with the Continuous Charging Rate: The daily solid waste charging rate and hours of operation shall be determined and recorded for each MWC unit. The daily charging rate shall be determined each month on an average daily basis for each MWC unit using the Facility's truck scale weight data, refuse pit inventory, and MWC operating data for the preceding calendar month. Monthly truck scale weight records on the weight of solid waste received and processed at the Facility and refuse pit inventory 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 per MWC unit for each day during the preceding calendar month. [Rule 62-204.800(8), F.A.C., and 40 CFR 60.53(a)]

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- B.15 Compliance with the PM Control Device Temperature: Each 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. Each 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 block-averaged 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 (or feedwater) flow for each unit during the stack test shall be continuously monitored and recorded in accordance with 40 CFR 60, Subpart Cb. Higher temperatures are allowed for testing purposes, as specified at 40 CFR 60.53b(c). [Rule 62-204.800(8), F.A.C. and 40 CFR 60.38b, 40 CFR 60.53b(c) and 60.58b(i)(7) and (9)]
- B.16 Compliance with the Carbon Injection Rate: The carbon injection rate for each MWC unit (kilograms per hour [kg/hr] or pounds per hour [lb/hr]) shall be estimated during each mercury and dioxin/furan compliance stack test based on carbon injection system 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 each MWC unit, the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate must equal or exceed the level(s) documented during the most recent mercury and dioxin/furan stack tests in which compliance with the emission limits were achieved. The owner or operator shall estimate the total carbon usage for the facility for each calendar quarter according to the weight of carbon delivered to the facility and the average carbon mass feed rate (kg/hr or lb/hr) for each MWC unit based on the primary indicator(s) for carbon mass feed rate, summing the results for all MWC units and accounting for the total number of operating hours during the calendar quarter. [Rule 62-204.800(8), F.A.C. and 40 CFR 60.58b(m)]
- B.17 Auxiliary Burners Compliance:
- (a) Auxiliary burners for each unit shall be fired only by natural gas. The annual capacity factor for natural gas shall be 10 percent or less. Monthly records shall be maintained of the amount of natural gas used by the auxiliary burners in each unit and the equivalent gross heat input. On an annual basis (no later than 30 days after the end of the calendar year), a demonstration must be performed based on the monthly records showing that the capacity factor for natural gas in each unit was 10 percent or less. The

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annual capacity factor for natural gas is the ratio between the heat input to the unit from natural gas and the potential heat input to the unit had it been operated for 8760 hours during a calendar year at the maximum steady state design heat input capacity. [Rule 62-4.070(3), F.A.C., and 40 CFR 60.44b(d)]

- (b) During boiler start up, the auxiliary gas burners shall be operating at their maximum capacity prior to the introduction of MSW to the boilers, and shall remain in operation until the lime spray dryer and particulate control device are fully operational. [Rule 62-4.070(3), F.A.C.]

MONITORING OF OPERATIONS

- B.18 Continuous Emission Monitoring System(CEMS): CEMS with recorders shall be installed, calibrated, maintained and operated for each unit subject to review by FDEP for the following pollutants and operational parameters:

Carbon Monoxide

Nitrogen Oxides

Opacity

Sulfur Dioxide

(SO₂ monitors shall be located both upstream of the scrubber and downstream of the baghouse, in order to calculate percent removal efficiency).

Oxygen

Total steam production (lbs/hr, pressure, and temperature) or feedwater flow rate (lbs/hr)

Device to measure temperature of flue gases at the fabric filter inlet

Carbon injection system operating parameters

Power generation (MW)

[Rule 62-204.800(8), F.A.C. and 40 CFR 60.58b]

- B.19 The monitoring devices shall meet the applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.45, and 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5). Quality assurance procedures must conform to all applicable sections of 40 CFR, Appendix F. Data on CEM/COM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location after the economizer or in the air pollution control equipment outlet duct shall be provided to the Department's Southwest District Office (DEPSWD) and the Hillsborough County Environmental Protection Commission (HCEPC)

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for review at least 90 days prior to installation. Initial performance evaluations must be completed within 180 days after initial startup of each retrofitted unit. [Rule 62-204.800(8) and 62-4.070(3), F.A.C.), 40 CFR60.38 and 40 CFR 60.58b]

RECORD KEEPING AND REPORTING REQUIREMENTS

B.20 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 data on which such measurements, records, or data are recorded. These data shall be made available to the Department of Environmental Protection, Southwest District office and the Hillsborough County Environmental Protection Commission upon request. [Rule 62-4.070(3), F.A.C.; Rule 62-4.160(14)(b), F.A.C. and 40 CFR 60.59b]

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 CEM/COM systems, steam or feedwater flow measurements and PM control device temperatures;
- (b) Continuous steam flow or feedwater 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) Amount of natural gas burned for each unit each month; the equivalent heat input from natural gas for each unit each month, calculated using the heat value for natural gas provided by the natural gas supplier; and the annual records of the natural gas capacity factor for each unit;
- (e) Results of all source tests or performance tests; and records of the maximum demonstrated unit load specified by condition B.3 of this permit.
- (f) Amounts of activated carbon used for mercury control;
- (g) Calibration logs for all instruments subject to this permit;

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- (h) Maintenance/repair logs for any work performed which is subject to this permit;
- (i) 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.
- (j) Records demonstrating compliance with the percentage limitations on segregated solid wastes required by specific condition B.25 of this permit.

B.21. Excess Emission Reports

B.21.1 Quarterly Reports

The owner or operator shall submit excess emission reports for any calendar quarter during which there are excess emissions from the facility 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 measure 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)]. In case of excess emissions resulting from

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malfunctions, the owner or operator shall notify FDEP and the HCEPC in accordance with Section 62-4.130, F.A.C.

B.21.2 Other Excess Emission Reports

In case of excess emissions resulting from malfunctions*, the owner or operator shall notify Department's Southwest District office (DEPSWD) and the Hillsborough County Environmental Protection Commission (HCEPC) in accordance with Section 62-4.130, F.A.C. The DEPSWD and the HCEPC shall be notified within one working day 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 DEPSWD or the HCEPC 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 DEPSWD or HCEPC.

* Malfunction is defined at Rule 62-210.200(179) 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.22 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 location shall be provided to the Department's Southwest District office and the Hillsborough County Environmental Protection Commission for review at least 90 days prior to installation.

B.23 Operating Reports: Before March 1st of each year, the owner or operator shall submit to the Department Southwest District office (DEPSW) and the Hillsborough County Environmental Protection Commission (HCEPC) 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 FDEP and the HCEPC offices 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.24 Sampling Reports: Drawings of testing facilities including sampling port locations as required by Section 62-297.310(8)(c) shall be submitted to the Southwest District Office at least 60 days prior to construction of the sampling ports.

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

- B.25 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:

Each segregated load of non-MSW materials, that is subject to the percentage weight limitation of specific conditions 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 previous 29 days. The resultant 30 day total weight of tires shall be divided by the total weight of all waste materials received in the same 30 day period, 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.

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 29 days. The resultant 30 day total weight of segregated non-MSW materials shall be divided by the total weight of all waste materials received in the same 30 day period, 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.

OPERATOR TRAINING AND CERTIFICATION

B.26 Requirements

- (a) One of the following persons must be on duty at the facility at any time during which one or more of the MWC units 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. 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. [40 CFR 60.39b(c)(4) (ii) and 40 CFR 60.54b(c)].
- (b) Each chief facility operator and shift supervisor must obtain and maintain a current provisional operator certification and be scheduled for a full certification exam, or receive full certification, with either the ASME or an equivalent state-approved

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certification program before the date that person assumes responsibility for operation of the facility. [40 CFR 60.39b(c)(4)(ii) and 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 before the date that person assumes responsibility for operation of the facility. The operator training course requirements of 40 CFR 60.54b(d) do not apply to chief facility operators, shift supervisors and control room operators who have obtained full ASME certification on or before the date of State plan approval of November 13, 1997 [40 CFR 60.39b(4)(iii)(c)(A)]. The owner or operator may request that the Department waive the requirements specified in 40 CFR 60.54b(d) for chief facility operators, shift supervisors and control room operators who have obtained provisional ASME certification on or before the date of State plan approval of November 13, 1997 [40 CFR 60.39b(4)(iii)(c)(B)].
[40 CFR 60.39b(c)(4) and 40 CFR 60.54b(d)]
- (d) A site-specific operating manual must be developed and updated on an annual basis [40 CFR 60.54b(e)]. A training program must be established to review the operating manual with each person who has responsibilities affecting the operation of the MWC including chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers. Each person must undergo initial training before the day that person assumes responsibilities affecting operation of the facility and annually thereafter [40 CFR 60.54(f)]. The operating manual must be kept in a readily accessible location for all persons required to undergo training.
[40 CFR 60.54b(e) and 40 CFR 60.54b(f)]

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SUBSECTION C. SPECIFIC CONDITIONS:

The following Specific Conditions apply to the following emissions units:

EMISSIONS UNIT NO.	EMISSIONS UNITS DESCRIPTION
xxx	Ash Building and Handling System
xxx	Lime Silo
xxx	Carbon Silo

EMISSION LIMITATIONS

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

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

- (a) In no case shall PM emissions from the lime storage silos exhaust exceed 0.015 gr/dscf (front-half catch) during filling operations of the lime storage silo. Visible emissions shall not exceed 5% opacity in accordance with specific condition C.3.
- (b) In no case shall particulate matter emissions from the activated carbon storage silo exhaust exceed 0.015 gr/dscf (front-half catch) during filling operations of the activated carbon storage silo. 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. 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 to minimize visible dust. The ash/residue in the Ash Handling Building shall remain sufficiently moist to prevent dust during storage and handling operations.

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

- (e) PM emissions from the ash handling facility baghouse shall not exceed 1.63 pounds per hour. Visible emissions shall not exceed 5 percent opacity in accordance with specific condition C.3.

[Rule 62-04.070(3), F.A.C., 40 CFR 60.36b and 40 CFR 60.55b]

{Note: The fugitive particulate matter control requirements for the ash handling activities specified in 40 CFR 60.55b and in this permit represent RACT for this facility pursuant to the Department's authority of Rule 62-296.711(2)(c), F.A.C.}

COMPLIANCE AND PERFORMANCE TESTING

C.2 Fugitives Emissions Compliance:

The compliance method for fugitive emissions from ash handling facilities shall be:

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 for the ash handling and ash conveyor systems shall be conducted within 180 days of completion of construction and initial operation and annually thereafter. All notification requirements of 40 CFR Part 60 shall be satisfied.

Permanent stack facilities are not required for the ash handling building vent.

[Rule 62-04.070(3), F.A.C., 40 CFR 60.36b and 40 CFR 60.55b]

C.3 Carbon and Lime Storage Silos and Ash Building Baghouse PM Compliance

Requirements: Pursuant to Section 62-297.620(4), F.A.C., the PM compliance test requirements are waived for the lime and carbon storage silos and ash building baghouse and an alternate standard of 5 percent opacity shall apply. Visible emission tests shall be performed for each silo during filling operations and the ash handling baghouse using Method 9. A visible emission reading greater than 5 percent opacity does not create a presumption that the emission limit (in gr/dscf) is being violated, but may require the permittee to perform a particulate stack test using EPA Method 5. Compliance testing for the lime and carbon silos and ash handling building baghouse shall be conducted within 180 days of completion of construction and initial operation and annually thereafter. All notification requirement of 40 CFR 60 shall be satisfied.

[Rule 62-297.620(4), F.A.C.]

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SUBSECTION D. COMMON CONDITIONS:

The following Specific Conditions apply to the following emissions units:

EMISSIONS UNIT NO.	EMISSIONS UNITS DESCRIPTION
001	150 MMBtu/hr (nominal) Municipal Waste Combustor & Auxiliary Burners - Unit No.1
002	150 MMBtu/hr (nominal) Municipal Waste Combustor & Auxiliary Burners - Unit No.2
003	150 MMBtu/hr (nominal) Municipal Waste Combustor & Auxiliary Burners - Unit No.3
xxx	Ash Building and Handling System
xxx	Lime Silo
xxx	Carbon Silo

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 facility shall remain closed except during normal working shifts when MSW is being received at the storage pit area. To minimize odors at the facility, 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, carbon silo or ash building baghouse shall be minimized but in no case exceed 2 hours per occurrence
[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 the construction authorized in this permit, the permittee shall submit to the DEP Southwest District office an operational procedures

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manual that identifies and describes best operational practices that will be used during startup, shutdown, and malfunctions of this facility.

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 Department Southwest District office (DEPSW) and the Hillsborough County Environmental Protection Commission (HCEPC) in writing at least *30 days* (initial) and *15 days* (annual) 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 Department. 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 and 40 CFR 60.8, F.A.C.]
- 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 Department Southwest District office (DEPSW) and the Hillsborough County Environmental Protection Commission (HCEPC).
[Rule 62-297.310(7)(b), F.A.C.]

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- D.7 Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit 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. Higher loads are also allowed for testing purposes as specified at 40 CFR 60.53b(b). See also specific conditions B.2, B.3, and B.13 of this permit. [Rule 62-297.310(2) and (3), F.A.C.]

RECORD KEEPING AND REPORTING REQUIREMENTS

- D.8 Emission Compliance Stack Test Reports:
- (a) A *test report* indicating the results of the required compliance tests shall be filed with the Department Southwest District office (DEPSW) and the Hillsborough County Environmental Protection Commission (HCEPC) as soon as practical, but no later than 45 days after the last sampling run is completed. [Rule 62-297.310(8), F.A.C., and 40 CFR 60.59(b)(f)]
 - (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.

SCHEDULE OF COMPLIANCE

- D.9. The compliance schedule for each unit is provided below.

Increment 1: Submittal of a final control plan for the designated facility to the appropriate air pollution control agency. December 31, 1996 - applicable to units 1, 2 and 3.

Increment 2: Awarding of contracts for emission control systems or for process modifications, or issuance of orders for the purchase of component parts to accomplish emission control or process modification. December 31, 1997- applicable to units 1, 2 and 3.

Increment 3: Initiation of on site construction or installation of emission control equipment or process change. February 28, 1999 - applicable to the first unit. July 30, 1999 - applicable to the second unit. April 30, 2000 - applicable to the third unit.

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

The order of the construction schedule (i.e., which unit is first, second and third) will be identified in the final control plan.

Increment 4: Completion of on-site construction or installation of emission control equipment or process change. September 30, 2000 - applicable to units 1, 2 and 3.

Increment 5: Final compliance. December 10, 2000 - applicable to units 1, 2 and 3.

Closure Agreement: Not later than November 13, 2000, the County will cease operation of any unit that has not completed on-site construction or installation of emission control equipment and is not involved in performance testing. After closure, said units may commence startup, shakedown and performance/compliance testing per the closure agreement. Performance/compliance tests must be completed within 180 days of startup.

[Rule 62-204.800(8)9.b.,F.A.C.]

APPENDIX GC
GENERAL PERMIT CONDITIONS [F.A.C. 62-4.160]

- 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.

APPENDIX GC
GENERAL PERMIT CONDITIONS [F.A.C. 62-4.160]

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 ()
 - (b) Determination of Prevention of Significant Deterioration ();
 - (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.

Florida Department of
Environmental Protection

Memorandum

TO: Howard Rhodes

THRU: *J.P.* Jim Pennington *J.P.*
A.L. Al Linero

FROM: Teresa Heron *T.H.*

DATE: June 26, 1998

SUBJECT: Hillsborough County Resource Recovery Facility
Air Pollution Control Equipment Retrofit 7

BAR

Attached is the final modification to the PSD permit for this facility. This permit modification addresses the installation of the new air pollution control system to comply with the Emission Guideline for existing municipal solid waste combustors, 40 CFR 60, Subpart Cb.

The upgraded pollution control systems will consist of: spray dryer absorbers and fabric filters to control acid gases, particulate matter, and heavy metals; an activated carbon injection system for mercury control; selective non-catalytic reduction to control nitrogen oxides; and combustion controls for volatile organic compounds, carbon monoxide, and dioxins and furans.

The slate of authorized fuels is being expanded and defined from "refuse such as garbage and trash" to: non-hazardous solid waste including municipal solid waste (MSW) as defined at 40 CFR 60.51b; records and documents; non-hazardous contraband, clean wood and land clearing debris; oil spill debris; waste tires; expired or off-spec packaged or unpackaged consumable goods (e.g. pharmaceuticals); consumer products; packaging materials; certain floor covering; used oil and filters; and certain other wastes similar to MSW. We included limits (acceptable to the County) on these segregated wastes to insure the overall composition continues to comport to the typical characteristics of MSW.

We agreed to re-define their operating window to 115 percent of nominal throughput upon receiving reasonable assurance that the boilers are designed to operate within this range. Because of the short-term production increase, we compared past actual with future potential emissions and discovered increases. Because the facility has a single steam turbine and electrical generator producing over 25 MW we treated it as an electrical steam generating unit and compared future representative actual annual emissions with past actual emissions. Under this comparison, we found that there will be decreases of PSD-regulated pollutants.

The alternatives were to require Hillsborough County to accept lower emission limits than required by the EG, or accept annual steam or waste throughput limits equal to those of recent years, or to abide by their present 110% operating window. We decided, with the County concurrence, to require annual steam production limits.

~~We recommend your approval and signature.~~

AAL/th

Attachments