Appendix I

PSD Air Construction Permits:

PSD-FL-104
PSD-FL-121
PSD-FL-121B
0570261-002-AC (PSD-FL-121C)
0570261-004-AC
0570261-007-AC (PSD-FL-369)
0570261-008-AC
0570261-009-AC (PSD-FL-369A)
0570261-010-AC

Appendix - I

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

May 30, 1986

Mr. Bruce P. Miller
Acting Chief
Air Programs Branch
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Dear Mr. Miller:

RE: Final Determination - Hillsborough County Resource Recovery Facility, PSD-FL-104

Enclosed please find the department's response to your comments on the Final Determination for the subject project. We recommend that the applicant be granted Authority to Construct, subject to the conditions in the Final Determination as amended.

Sincerely,

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CHF/pa

Enclosure

cc: David S. Dee
Bill Thomas
Iwan Choronenko

Final Determination

Hillsborough County Energy Recovery Facility's Prevention of Significant Deterioration permit application has been reviewed by the Florida Bureau of Air Quality Management. Public notice of the Intent to Issue the permit was published in the Tampa Tribune on April 6, 1986.

Copies of the preliminary determination have been available for public inspection at the Florida Department of Environmental Regulation's Southwest District office in Tampa and the Bureau of Air Quality Management office in Tallahassee.

These comments on the preliminary determination and draft permit were received from the Unites States Environmental Protection Agency, Region IV:

1. Does the state NSPS (17-2.660) apply? Yes, it does apply. However, this section was adopted by reference and because this is a federal PSD permit, we do not feel that this cite is necessary.

2. The 3-hour SO_2 limit is not necessarily BACT. The mention of this limit as BACT has been stricken.

3. In Condition (11), the (2) should be (3). Condition (11) has been changed to reflect this.

4. Wording change on page 28: "During each" has been substituted for "with the" in paragraph b.(1).

5. Mercury emission rate in Table II-1: This is the rate proposed by the county at the time of the application. BACT for mercury was determined to be less than the county's proposal. No change is needed to Table II-1.

6. Scrubber condition: Condition 12 has been added to the permit. This condition requires that space for a scrubber be provided should the future installation of a scrubber be necessary.

7. Lead limit: The county proposed a lead limit of 0.048 lb/ton when they applied for the permit. After negotiating with the EPA, the county accepted a limit of 0.020 lb/ton. The statement on page 7 of the preliminary determination identifies the limits as "the applicant has proposed". For this reason, this lead limit will not be changed.

The Bureau of Air Quality recommends that the PSD permit be issued with the changes discussed above.

Final Determination

and Permit

Hillsborough County Energy Recovery Facility

Hillsborough County, Florida

PSD-FL-104

Prevention of Significant Deterioration

40 CFR 52.21

Review performed by Florida Department of Environmental Regulation

May 21, 1986

I. INTRODUCTION

Pursuant to Section 403.505, Florida Statutes, Hillsborough County applied to the Florida Department of Environmental Regulation (DER) in August 1984 for certification of a steam electric generating, solid waste energy recovery facility at a site about two miles east of the town of Tampa on the county's Faulkenburg Road site. After a thorough review by DER, includ-ing public hearings, the Florida Power Plant Siting Board issued a site certification to the County. At that time, DER believed that such a site certification constituted a legal prevention of significant deterioration (PSD) permit under Chapter 17-2.500 of the Florida air pollution regulations which had been approved by the U.S. Environmental Protection Agency (EPA) on December 22, 1983. In the summer of 1985, EPA became aware that the Florida Electrical Power Plant Siting Act (PPSA) under which the site certification was issued, restricts the authority of the State of Florida to implement any regulation pertaining to power plants other than those set out in the Act. Consequently, EPA determined that the Florida PSD regulations are superceded by the PPSA, and could not legally be approved by EPA as part of the State Implementation Plan (SIP) since the PPSA does not comply in part (as to PPSA covered sources) with EPA PSD regulations both procedurally and substantively. Thus, EPA concluded that the Hillsborough County energy recovery facility (ERF), which was under construction, did not possess a valid PSD permit. EPA's remedy for this situation was to issue an Order under Section 167 of the Clean Air Act for Hillsborough County to either cease construction or apply for a federal PSD permit under 40 CFR 52.21. EPA plans to issue in the near future a Federal Register notice clarifying its retention of PSD permitting authority as to sources subject to the PPSA. <u>See also</u> 51 Fed. Reg. 58 (Jan. 2, 1986).

On December 13, 1985, Hillsborough County applied to DER for a PSD permit. (By that time, DER had been given authority by EPA to conduct the technical and administrative steps of the federal PSD permitting process.) In conducting the PSD review, EPA decided that, due to the unique circumstances of this permit application, the best available control technology (BACT) analysis would be conducted taking into account the factors affecting BACT at the time the County submitted a complete application for a site certification. That date was August 16, 1984.

Hillsborough County did not agree that it lacks a valid PSD permit and sought judical review of the EPA order requiring a federal permit. Hillsborough County submitted to the federal PSD permitting process under protest. EPA and Hillsborough County entered into a settlement whereby EPA agreed to propose this draft permit and Hillsborough agreed to dismiss its petition for review.

The proposed project will be an energy recovery facility boiler which could use up to 1200 tons per day (TPD) of refuse as fuel. A proposed boiler expansion could increase the total solid waste processing capacity of the plant to 1600 TPD. The steam from the new boiler will be sent to a turbine generator with a capacity of 29 megawatts (MW) (gross). Hillsborough County has contracted with a full service vendor to design, construct, and operate the plant for 20 years. Generated electricity will be transmitted to the Tampa Electric Company (TECO) for distribution over the TECO transmission system. The generating capacity of the expanded plant should be approximately 39 MW. The primary purpose of the facility is to dispose of solid waste. In addition to electricity, steam, ferrous metals, and aluminum could be recovered resources. Non-processible waste (including non-combustibles and demolition debris) and unusable residue will be buried at a licensed, off-site sanitary landfill. The sale of electricity, and eventually other processed and recovered resources, will help offset the overall cost of owning and operating the facility.

The Energy Recovery Facility (ERF) will be located on approximately 50.4 acres within the County's existing Faulkenburg Road tract. The site is located approximately 0.6 miles north of State Road 60. It is bordered by Faulkenburg Road on the east and a TECO 230 KV transmission line corridor on the west, and the Seaboard System Railroad on the south. The plant site is mostly level grassy land with scattered trees in the northwest portion. The site has been recently used as improved pasture for cattle grazing. The topography is fairly level, with elevation ranging from 27 to 45 feet above sea level across the tract. Geology of the site shows an overburden of sand and clay lying over limestone and dolomite which forms the Floridan aquifer. The overburden forms a subsurface reservoir called the shallow aquifer. The proposed facilities will consist of a 29 MW steam electric generating turbine; three 400 tons per day mass-burn solid waste fired boilers; a mechanical draft cooling tower utilizing treated sewage effluent; a 220 foot flue gas stack and electrostatic precipitators. Provisions are made to allow the addition of another 400 tons per day boiler.

Tampa Electric Company's existing 230 KV transmission line corridor will be used to transmit the electricity from the Energy Recovery Facility (ERF).

II. Rule Applicability

The proposed site of the Hillsborough County ERF is in an area designated as nonattainment for ozone and particulate matter under 40 CFR 81.310, and attainment for all other criteria pollutants.

New major sources which emit attainment pollutants regulated under the Clean Air Act in amounts greater than certain significance levels, are subject to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The significance levels are specified by the PSD regulations.

New major sources in Hillsborough County which are subject to the PPSA and which are major for a nonattainment pollutant will be subject to 40 CFR 52.24 Statutory restriction on new stationary sources (construction ban). New municipal incinerators capable of charging greater than 50 TPD are also subject to 40 CFR 60, Subpart E, New Source Performance Standards (NSPS).

New municipal incinerators with a charging rate equal to greater than 50 TPD are also subject to Florida Rule 17-2.600(1)(c).

The applicant is proposing the construction of three 400 TPD mass burn technology incinerators for the processing of up to 1200 TPD of municipal solid waste. A fourth unit of similar size may be constructed in the future but will not be addressed in this review.

The maximum annual emissions from all three units for all regulated pollutants have been estimated by the applicant. These emission rates, and the PSD significant emission rates, are listed in Table II.1.

The proposed source has the potential to emit more than 100 tons per year of one or more regulated pollutants and is, therefore, subject to review for Prevention of Significant Deterioration (PSD) under 40 CFR 52.21. PSD review includes, among other requirements, a determination of Best Available Control Technology (BACT) and an air quality impact analysis for each attainment and noncriteria pollutant that would be emitted in a significant amount as listed in Table II-1. For the proposed source, the applicant has addressed PSD review for the eight pollutants which will be emitted in significant amounts: SO_2, CO, NO_x, Pb, Be, Hg, fluorides, and sulfuric acid mist.

The proposed source will emit less than 100 TPY of both particulate matter and VOC (precursor of ozone), and is thus not subject to the construction ban of 40 CFR 52.24. The proposed incinerators will each have a charging rate of 400 tons per day, and thus are subject to NSPS and 17-2.600(1)(c). NSPS requires that the source meet a particulate emission rate of 0.08 grains per dry standard cubic foot (gr/dscf), corrected to 12% CO_2. Regulation 17-2.600(1)(c) requires each incinerator to emit no more than .08 gr/dscf particulate corrected to 50% excess air.

III. Preliminary Determination

As noted in Section I, Table II-1, the proposed source will result in significant emissions of the criteria pollutants SO_2, CO, NO_x, and lead, and of the non-criteria pollutants mercury, beryllium, fluorides, and sulfuric acid mist.

The review required under the prevention of significant deterioration (PSD) regulations for these pollutants includes:

> Compliance with all applicable SIP, NSPS, and National Emission Standards for Hazardous Pollutants (NESHAP) regulations
>
> BACT
>
> An analysis of existing air quality;
>
> A PSD increment analysis (for SO_2 only);
>
> An Ambient Air Quality Standards (AAQS) analysis;
>
> An analysis of impacts on soils, vegetation, visibility, and growth-related air quality impacts, and;
>
> A "Good Engineering Practice" (GEP) stack height determination.

The analysis of existing air quality generally relies on preconstruction monitoring data collected in accordance with EPA-approved methods. The PSD increment and AAQS analyses depend on air quality dispersion modeling carried out in accordance with EPA guidelines. BACT is specified on a case-by-case basis considering environmental, economic, and energy impacts.

Based on these required analyses, the Department has reasonable assurance that the proposed units at the Hillsborough County ERF, as described in this report and subject to the conditions of approval proposed herein, will employ BACT, will not cause or contribute to a violation of any PSD increment or ambient air quality standard, and will comply with all appplicable air pollution regulations. A discussion of all review components follows.

Appendix - I

Table II-1

Hillsborough County Resource Project
Proposed Annual Emmision Rates

Pollutant	Proposed Maximum Emission Rate (Ton/Yr)(1)	Significant Emission Rate for PSD Applicability
Particulate Matter (PM) (2)	90	N/A
Volatile Organic Compounds (2)	44	N/A
Sulfur Dioxide (SO2)	701	40
Carbon Monoxide (CO)	395	100
Nitrogen Oxides (NOx)	657	40
Lead (Pb)	4.4	0.6
Mercury (Hs)	1.1	0.1
Beryllium (Be)	0.003	0.0004
Fluorides	13	3
Sulfuric Acid Mist	17	7

(1) Based on processing 1200 tons per day MSW for 365 days per year

(2) Nonattainment Pollutant

IV. Control Technology Review

a. BACT Determination

40 CFR 52.21 (j) requires that each pollutant subject to PSD review must be controlled by BACT. For the proposed three unit plant, eight pollutants are subject to BACT. The BACT emission limits proposed by the Department are summarized as follows:

Pollutant	BACT
Sulfur Dioxide	3.20 lb/ton
Nitrogen Oxides	3.0 lb/ton
Carbon Monoxide	1.80 lb/ton
Lead	.020 lb/ton
Mercury	2200 grams/day
Beryllium	1.3×10^{-5} lb/ton
Sulfuric acid mist	.077 lb/ton
Fluorides	.060 lb/ton

Also included as proposed permit conditions are limits on particulate emissions, opacity, and VOC. These limits are required to insure the emissions of particulate and VOC do not exceed the threshold level for applicability of the construction ban.

The applicant ultimately plans to construct a 1600 ton per day municipal solid waste (MSW) incinerator facility to be located on Faulkenburg Road in Tampa, Florida. The heat energy from combustion of the MSW will be used to produce steam to operate a 39 megawatt output turbine generator. Some of the electric energy produced will be used at the facility with the surplus power to be sold to the Tampa Electric Company.

The present plans are to install three 400 tons per day (TPD) incinerator-boiler units to process a total of 1200 TPD of MSW and generate 29 megawatts of electrical power. The fourth unit will be added at some future time. This BACT determination is for the three units only. Before the fourth unit is installed, the applicant must apply for a new permit for that unit.

Each incinerator will have an approximate heat input of 150 million Btu per hour, or 49 megawatts, based upon a MSW calorific content of 4500 Btu per pound. Each incinerator will be scheduled to operate 8760 hours per year and on this basis the tons per year of the various air pollutants emitted was calculated.

Based upon air pollutant emission factors provided by the applicant, the calculated total annual tonnage of regulated air pollutants emitted from the three units to the atmosphere is listed in Table II-1.

The applicant has proposed the following air pollutant emission limits, on a pound per ton basis: Particulate-0.41, CO-1.8, SO_2-3.2, NO_x-3.0, Pb-0.048, Hg-0.0052, Be-13.1 $\times 10^{-6}$, sulfuric acid mist-0.077, fluorides-0.06, and VOC-0.2 lb/ton. An electrostatic precipitator (ESP) will be used to control the particulate, Pb, Hg, and Be emissions. Design and operating procedures will control the emission of VOC, CO and NO_x. The firing of only MSW, a low sulfur content fuel, will limit SO_2 and sulfuric acid mist emissions.

The applicant has requested emission limits for SO_2 to be a 24-hour limit of 3.2 pounds per ton of MSW charged into the incinerator and a 3-hour limit of 8.5 pounds per ton of MSW charged into the incinerator. Emission test data from Westchester County, New York and Gallatin, Tennessee solid waste combustion sources indicate a range for SO_2 emissions from 2.6 to 3.5 pounds per ton of feed.

The 3.2 figure is judged to be BACT. The amount of SO_2 emitted would be comparable to the burning of distillate oil having a 0.35 percent sulfur content. Burning low sulfur fuel is one acceptable method of controlling SO_2 emissions. The installation of a flue gas desulfurization system to control SO_2 emissions is not warranted when burning MSW.

The mercury emission limit determined as BACT is equal to 69% of the National Emission Standard for Hazardous Air Pollutants (NESHAP), 40 CFR 61.50, Subpart E, for municipal waste water sludge incineration plants. The provisions of this subpart, however, do not apply because no grease, scum, grit screenings or sewage sludge will be incinerated in the proposed incinerators. According to the report "Air Pollution Control at Resource Recovery Facilities" issued by the California Air Resources Board, the average mercury emission factor when firing MSW is 4×10^{-4} pounds per million Btu. This amounts to 30 grams per hour per unit and is not considered to have a major impact on the environment. The applicant has proposed a mercury emission rate of 0.0052 lb/ton which is 0.0013 lb/ton higher than the referenced factor. The BACT is determined to be 2200 grams/day.

The uncontrolled emission of beryllium, according to the California report, when firing MSW is estimated to be 6.2×10^{-6} pounds per million Btu. Uncontrolled beryllium emissions would be approximately 11 grams per 24 hours or 0.01 TPY. The operating temperature of the particulate matter emission control device will be below 500 F. Operation below this temperature is necessary to force absorption/condensation of beryllium oxides, present in the flue gas stream, onto available fly ash particles subsequently removed by the control device. Assuming 95% efficiency of the control device the annual beryllium emissions are estimated at 0.0007 tons per year. This amount of beryllium emitted is considered to have a negligible impact on the environment. The emission factor of 13.1×10^{-6} lb/ton MSW proposed by the applicant is judged to be BACT. If beryllium containing waste as defined in the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart C, Subsection 61.31(g), were charged into the incinerator, emissions of beryllium to the atmosphere could not exceed 10 grams per 24 hours or an ambient concentration of 0.01 ug/m3, 30 day average. Compliance with this beryllium emission limit would be in accordance with NESHAP, Subpart C. However, the applicant has not applied to burn beryllium-containing waste, and the permit prohibits this activity.

The temperature of the incinerator combustion gases at the inlet to the particulate control device is estimated to be 425-475 °F. At these temperatures any lead would be in a nonvaporous state and would be removed by the particulate control device. The lead emission limit will initially be set at 0.020 pounds per ton of MSW charged into the incinerator. If the initial compliance tests show that the lead emissions are greater than or equal to 0.0080 pounds per ton, the lead emission limit of 0.020 pounds per ton will remain in effect. If the initial compliance tests show that the lead emissions are less than 0.0080 pounds per ton, the lead emission limit will be reduced to 0.010 pounds per ton. This level of control is judged to be BACT.

Since there are several secondary lead reclamation plants in the Tampa area, there is an economic incentive to recycle lead containing materials. The majority of lead emissions from an incinerator are expected to originate from solder joints in discarded electronic devices. The amount of lead emitted is not considered to have a significant impact upon the environment.

During combustion of municipal solid waste, NO_x is formed in high temperature zones in and around the furnace flame by the oxidation of atmospheric nitrogen and nitrogen in the waste. The two primary variables that affect the formation of NO_x are the temperature and the concentration of oxygen. Techniques such as the method of fuel firing to provide correct distribution of combustion air between overfire and underfire air, exhaust gas recirculation, and decreased heat release rates have been used to reduce NO_x emissions. A few add-on control techniques such as catalytic reduction with ammonia and thermal de-NO_x are still experimental, and are not considered to be demonstrated technology for the proposed project.

The proposed units will use proprietary grate and combustion controls to limit NO_x emissions at 3.0 pounds per ton of MSW charged. This level of control is judged to represent BACT.

Carbon monoxide is a product of incomplete combustion where there is insufficient air. Incomplete combustion will also result in the emissions of solid carbon particulates in the form of smoke or soot and unburned and/or partially oxidized hydrocarbons. Incomplete combustion results in the loss of heat energy to the boiler. The department agrees with the applicant that BACT is the grate and combustion control system to insure sufficient mixing of the MSW and air so that the emission of products of incomplete combustion is minimized. The proposed CO emission rate is 1.8 pounds per ton. This level of control is judged to represent BACT.

Furthermore, CO has a calorific value of 4347 Btu/lb and when discharged to the atmosphere represents lost heat energy. Since heat energy is used to produce the steam which drives the generator to produce electric power, there is a strong economic incentive to minimize CO emissions.

Particulate matter emissions will be controlled by an electrostatic precipitator (ESP). Each of the three proposed boilers will be equipped with its own ESP which will be efficient to 0.021 grains per dry standard cubic foot corrected to 12% CO_2 at the outlet. At this emission rate, particulate matter emissions for the facility will be approximately 96 tons per year.

VOC emissions, like carbon monoxide emissions, result from incomplete oxidation of carbon compounds. Control of CO and VOC emissions can be mutually supportive events.

The applicant indicates that sulfuric acid mist and fluorides will be emitted by the proposed facility. The applicant estimates that sulfuric acid mist will be emitted at a rate of 0.0768 pounds per ton of fuel combusted. This equates to a rate of 3.8 pounds per hour or 16.8 tons per year. The significant emission rate for sulfuric acid mist is 7.0 tons per year. Emissions of fluoride are estimated at 0.06 pounds per ton of fuel combusted. At this emission rate, fluorides would be emitted at a rate of 3.0 pounds per hour or 13.1 tons per year. The significant emission rate for fluoride is 3.0 tons per year. Control of these acid gas emissions would be obtained by a scrubber. However, at the level of these acid gas emissions, the addition of a scrubber for acid gas control would be uneconomical. No control is judged to represent BACT. In addition, BACT for the control of acid gas emissions is that the initial design of the proposed facility include provisions for the possible future installation of a wet or dry flue gas scrubber system, if deemed necessary.

b. NSPS and Florida SIP Limit Analysis

These two regulations dictate similar emission limits using slightly different units. The proposed particulate emission limit of 0.021 gr/dscf is far below either of these limits.

V. <u>Air Quality Analyses</u>

The air quality impact of the proposed emissions has been analyzed. Atmospheric dispersion modeling has been completed and used in conjunction with an analysis of existing air quality data to determine maximum ground-level ambient concentrations of the pollutants subject to BACT. Based on these analyses, the department has reasonable assurance that the proposed solid waste recovery facility in Hillsborough County, subject to these BACT emission limitations, will not cause or contribute to a violation of any PSD increment or ambient air quality standard.

a. Modeling Methodology

The EPA-approved Industrial Source Complex Short-term (ISCST) dispersion model was used in the air quality impact analysis. This model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, area and volume sources. The ISCST model allows for the separation of sources and several other features, such as the inclusion of building wake downwash. This model was used in both screening and refined analyses.

All modeling was completed assuming the operation of four incinerators. Since the current plans are for the construction of only three incinerators, the modeling results represent a slightly conservative estimate of ambient concentrations.

Screening analyses were initially run using 26 prescribed meteorological conditions with the stack and emission data of the proposed ERF. These runs determined the worst-case boiler operating condition, identified those pollutants emitted from the ERF with a potential for significant impact, and established receptor locations for the more refined modeling. The results of these analyses indicated that a 110 percent boiler load condition (440 tons per day throughput) yielded the greatest air quality impact with the maximum ground-level concentrations occurring approximately 400 meters from the stack.

The refined modeling analysis consisted of running ISCST using five years of sequential hourly meteorological data. The surface and upper air meteorological data used were National Weather Service data collected at Tampa, Florida during the period 1970-1974. Since five years of data were used, the highest, second-high short-term predicted concentrations are compared with the appropriate ambient standard or PSD increment.

An initial set of refined runs was made with emissions only from the proposed ERF. The significant impact area for SO_2 was then determined. This area is defined as the area enclosed by a circle whose radius is equal to the farthest distance from the facility in which a significant impact occurs. A significant impact is defined as 25 ug/m^3 for a 3-hour average, 5 ug/m^3 for a 24-hour average, and 1 ug/m^3 for an annual average. For this project the significant impact area extends to a distance of approximately one kilometer. Beyond this distance the ERF is assumed to have an insignificant SO_2 impact.

Modelled emission rates for some pollutants were higher than the BACT limits, which produced conservative estimates of ambient impacts. For a comparison of these rates, Table V-2 should be compared to the BACT emission rates in Section IV.a.

Other major SO_2 sources within about 30 kilometers of the proposed facility were modeled for impact within the significant impact area. The impacts of the other emitted pollutants were evaluated using emissions from the ERF only. Total ambient air quality impacts were based on the modeled impacts plus the monitored "background" concentrations.

The stack parameters and emission rates used in evaluating the ambient impacts are contained in Table V-1 and Table V-2, respectively. Copies of some of the critical model outputs and a description of the refined modeling analysis are attached to this determination in Appendix 1. Complete modeling printouts are available at the DER offices in Tallahassee, Florida.

b. Analysis of Existing Air Quality

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review. In general, one year of quality assured data using an EPA-reference, or the equivalent, monitor must be submitted. Sometimes less than one year of data, but no less than four months, may be accepted when department approval is given.

Appendix - I

Table V-1
Hillsborough County Resource Recovery Project
Source Parameters

Source	UTM-E (km)	UTM-N (km)	SO_2 (g/s)	Stack Height (m)	Temp. (K)	Exit Vel. (m/s)	Stack Dia. (m)
PSD Sources							
Hillsborough Co. RRF	368.2	3092.7	29.6	67.0	494	16.9	3.50
Pinellas RRF 1-3	335.2	3084.1	31.5	49.1	505	26.8	2.37
McKay Bay RRF	360.0	3091.9	21.4	45.7	500	21.3	1.91
TECO Big Bend	361.9	3075.0	8598	149.4	426	15.6	7.00
NAAQS Sources							
FPC Bartow	342.4	3082.7	722.2	91.4	408	44.0	3.35
FPC Higgins	336.5	3098.5	286.7	53.0	422	10.4	3.81
FPC Anclote #1	324.9	3119.0	1631.9	152.1	416	50.0	3.66
FPC Anclote #2	324.9	3119.0	816.0	152.1	416	28.3	3.66
TECO Hooker Pt. #1)	358.0	3091.0	41.30	85.4	402	18.2	3.40
TECO Hooker Pt. #2)	358.0	3091.0	41.30	85.4	402	18.2	3.40
TECO Hooker Pt. #3)	358.0	3091.0	37.00	85.4	397	11.5	3.70
TECO Hooker Pt. #4)	358.0	3091.0	57.00	85.4	397	11.5	3.70
TECO Hooker Pt. #5)	358.0	3091.0	84.00	85.4	402	18.2	3.40
TECO Hooker Pt. #6)	358.0	3091.0	107.00	85.4	436	17.9	2.90
TECO Gannon #1	360.0	3087.5	282.5	93.3	438	22.5	3.70
TECO Gannon #2	360.0	3087.5	282.5	93.3	438	32.4	3.10
TECO Gannon #3	360.0	3087.5	321.4	93.3	427	35.4	3.20
TECO Gannon #4	360.0	3087.5	421.6	93.3	443	24.6	2.90
TECO Gannon #5	360.0	3087.5	513.4	93.3	415	20.6	4.50
TECO Gannon #6			853.6	93.3	415	23.7	5.40
General Portland	358.0	3090.6	349	44.3	473	6.6	4.72
Gardinier	363.4	3082.4	473.3	29.4	333	9.1	2.10
Gardinier	363.4	3082.4	-210.26	36.5	344	11.8	2.00

Table V-1 (cont.)

Source	UTM-E (km)	UTM-E (km)	SO_2 (g/s)	Stack Height (m)	Temp. (K)	Exit Vel. (m/s)	Stack Dia. (m)
AMAX (Pt. No.)	393.8	3096.3					
01			12.0	30.5	335.1	12.0	1.37
02			3.3	24.4	315.8	8.9	1.67
03			17.6	46.3	308.6	11.0	1.76
05			29.0	45.7	315.6	15.9	1.76
19			2.8	6.1	550.2	15.3	0.40
20			1.4	3.4	605.2	20.2	0.37
26 - 28			27.1	46.3	298.0	13.1	1.76
29			2.1	10.6	605.2	15.3	0.36
CF Industries (Pt. No.)	380.0	3115.7					
01			6.1	7.5	560.0	19.7	1.07
10			6.2	28.7	316.3	7.2	3.05
11			9.2	54.9	321.9	12.6	2.79
12			13.7	54.9	315.2	9.8	2.79
13			13.7	54.9	324.7	10.5	2.79
Chloride Metals (Pt. No.)	361.8	3008.3					
01			10.1	32.2	346.7	27.8	0.58
04			10.1	29.9	363.0	14.4	0.61
Columbia Paving	366.7	3077.8	3.7	12.2	339.7	22.3	1.37

Table V-1 (cont.)

Source	UTM-E (km)	UTM-E (km)	SO_2 (g/s)	Stack Height (m)	Temp. (K)	Exit Vel. (m/s)	Stack Dia. (m)
Columbus Company	361.9	3077.8	4.8	12.6	449.7	20.0	1.24
Couch Construction	364.3	3098.1	3.3	10.4	390.8	17.2	1.41
Delta Asphalt	372.1	3105.4	4.8	8.4	381.3	20.6	1.17
Gulf Coast Lead co.	363.9	3093.8	47.2	29.6	347.4	24.9	0.62
IMC Port Sutton	360.1	3087.5	41.5	19.8	338.6	10.5	2.41
Thatcher Glass (Pt. No.)	361.2	3103.3	2.6	41.1	694.1	9.4	1.52
Furnace No. 1			2.6	41.1	656.9	11.4	1.52
Furnace No. 2							
Nitram	363.2	3089.0	3.1	27.4	505.2	10.8	1.37
National Gypsum (Pt. No.)	347.3	3082.7					
Dryer No. 1/Zone 1			0.66	12.5	388.6	8.5	1.07
Zone 2			0.66	12.5	424.7	9.1	0.91
Zone 3			0.66	12.5	330.2	9.1	0.91
Dryer No. 2/Zones 1&2			1.0	10.1	421.9	20.7	0.76
Zone 3			0.5	10.1	408.0	10.4	0.76
Zone 4			0.5	11.3	394.1	25.9	0.91

Table V-2
Hillsborough County Resource Recovery Project
Maximum Hourly Emission Rates Used
in Modeling

Pollutant	Emission Rates (1) lb/ton	g/s
Particulate Matter	0.38	3.5
Sulfur Dioxide	3.2 (2)	29.6
Carbon Monoxide	1.8	16.6
Nitrogen Oxides	3.0	27.7
Lead	0.02	0.185
Hydrocarbons (non-methane)	0.2	1.85
Mercury	0.0052	0.048
Beryllium	0.0000131	0.000121
Fluorides	0.06	0.554
Sulfur Acid Mist	0.0768	0.710
Hydrogen Chloride	4.0	37.9

(1) Based on a throughput of 110 percent of design capacity and the operation of four incinerators

(2) 3.2 lb/ton was used for 24-hour and annual average modeling and 8.5 lb/ton was used for 3-hour average modeling

An exemption to the monitoring requirement can be obtained if the maximum air quality impact, as determined through air quality modeling, is less than a pollutant-specific deminimus concentration. In addition, if current monitoring data already exist and these data are representative of the proposed source area, then at the discretion of the Department these data may be used. Such representative data must meet criteria for location, quality, and currentness outlined in EPA publication 450/4-80-012, Ambient Monitoring Guidelines for Prevention of Significant Deterioration.

The predicted maximum air quality impacts of the proposed ERF for the eight pollutants subject to PSD review are given in Table V-3 along with the monitoring deminimus levels. From this table it is seen that SO_2, lead, and fluorides have maximum predicted air impacts greater than the deminimus levels and are thus subject to preconstruction monitoring requirements. Sufficient data in the area, however, exists for SO_2 and lead. The department did not require additional monitoring for these pollutants, since the existing data comply with the requirements of EPA 450/4-80-012. Although fluorides are subject to the monitoring requirements, no EPA-approved method currently exists to measure the ambient concentration of this pollutant. Also, requirement for monitoring of noncriteria pollutants is at the discretion of the Department.

Table V-4 shows the monitored ambient air quality levels for the most recent year (1983) for all the criteria pollutants, including the required data for SO_2 and lead. These data were collected from existing monitors in Hillsborough County.

c. PSD Increment Analysis

1. Class II Area

The proposed Hillsborough County ERF is to be located in an area designated as a Class II attainment area for the pollutant SO_2. Because the proposed facility is to be located in an area designated as nonattainment for PM, a PSD increment analysis is required for SO_2 only.

The PSD increments represent the amount that new sources in the area may increase ambient ground-level concentrations of SO_2 and PM. At no time, however, can the increased loading of these pollutants cause or contribute to a violation of the ambient air quality standards.

All SO_2 emission increases from sources constructed or modified after December 1977 will consume PSD increment.

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Table V-3
Maximum Air Quality Impacts Of The ERF
For Comparison To The De Minimus Ambient Levels

Pollutant	Maximum Modeled Concentration (1)(ug/m^3)	De Minimus Ambient Impact Level (ug/m^3)
SO_2 (24-hour)	21.6	13
CO (8-hour)	16.3	575
NO_2 (Annual)	1.0	14
Lead (24-hour)	0.14	0.1
Mercury (24-hour)	0.035	0.25
Beryllium (24-hour)	0.000088	0.00050
Fluorides (24-hour)	0.405	0.25
Sulfuric Acid Mist	0.52	-
PM (2)	2.6	10

(1) Highest second-high concentration assuming four incinerators

(2) PM included for informational purposes.

Appendix - I

Table V-4

Hillsborough County 1983 Monitoring Data in the Vicinity of the Proposed Resource Recovery Facility

Pollutant	Site	Location with Respect to the Proposed Facility Direction	Distance (km)	Averaging Time	Concentration Category	Concentration (ug/m^3)
SO_2	4360-052	278°	9.9	3-hour	Second-high	493
				24-hour	Second-high	86
				Annual	Highest	16
NO_2	4360-052	278°	9.9	Annual	Highest	35
CO	4360-052	278°	9.9	1-hour	Second-high	12,600
				8-hour	Second-high	5,700
Lead	1800-082	285°	3.3	Calendar quarter	Highest	0.8
PM(1)	1800-082	285°	3.3	24-hour	Second-high	115
				Annual	Highest	54
O3(1)	4360-035	259°	11.5	1-hour	Second Daily High	281

(1) Nonattainment Pollutants

In addition, all SO_2 emission increases associated with the construction or modification of major sources which occurred after January 6, 1975, will consume increment. For the proposed project all emissions from the ERF consume increment. Several other sources in the area have been identified by the applicant as also consuming PSD increment and have been included in the analysis.

The Department has identified four other sources as having the potential to consume additional PSD increment for SO_2. These sources are the Columbus Company, Couch Construction Company, Weyerhaeuser Company, and Scrapall Company. The first two were included in the modeling for determination of total impact but not for the determination of increment consumption. The latter two were not included in any modeling. A review of these sources indicated that only Columbus Company and Couch Company could potentially have a significant impact on increment consumption in the area of the proposed project. These sources will not interact with the increment consuming sources already modeled by the consultant.

It should be noted that the major increment consuming source identified by the applicant is the TECO Big Bend power plant. All units at this plant were modeled as increment consuming. In actuality only Unit 4 consumes increment and these emissions are largely offset by emission decreases (increment expansion) from Units 1, 2 and 3. As such, increment consumption is greatly overestimated.

Atmospheric dispersion modeling was performed taking into account only those new sources which consume PSD increment. The results of this modeling are summarized in Table V-5.

2. Class I Areas

A Class I area increment analysis is required for the Chassahowitzka National Wilderness Area located 79.6 kilometers to the north-northwest. The impact of the proposed ERF on this Class I area was determined. Although the distance to the Class I areas is greater than 50 kilometers (the distance to which the models are generally considered valid) the results indicate an extremely small (insignificant) impact on this area.

Table V-5

Comparison of New Source Impacts
with PSD Increments

Pollutant and Averaging Time	PSD Class II Increment (ug/m^3)	Predicted Increased Concentration (ug/m^3)	Increment Consumed (%)	PSD Class I Increment (ug/m^3)	Predicted Increased Concentration (ug/m^3)
SO_2					
3-hour	512	465	91	25	<1
24-hour	91	87	96	5	<1
Annual	20	5	25	2	<<1

d. AAQS Analysis

Given existing air quality in the area of the proposed Hillsborough County ERF, emissions from the new source are not expected to cause or contribute to a violation of an AAQS. The results of the AAQS analysis are contained in Table V-6.

Of the pollutants subject to PSD review only the criteria pollutants SO_2, CO, NO_2, and lead have an AAQS to compare with. All sources listed in Table V-1 were modeled to determine the maximum ground-level impacts for SO_2 within the area of significant impact. For CO, NO_x, and lead only the proposed ERF was modeled to determine the maximum ground- level concentrations.

The total impact on ambient air is obtained by adding a "background" concentration to the maximum modeled concentration. This "background" concentration takes into account all sources of the particular pollutant in question that were not explicitly modeled. A conservative estimate of these "background" concentrations is given by the second highest monitored concentration listed in Table V-4. This is a conservative estimate because sources used in the modeling may have contributed to the monitored value and hence contribute doubly to the total impact.

VI. Additional Impacts Analysis

a. Impacts on Soils and Vegetation

The maximum ground-level concentrations predicted to occur for the criteria pollutants as a result of the proposed project in conjunction with all other sources, including a background concentration, will be below all applicable AAQS including the secondary standards designed to protect public welfare-related values. As such these pollutants are not expected to have a harmful impact on soils and vegetation.

The applicant has additionally addressed the impacts of the noncriteria pollutants. No soils or species of vegetation near the proposed project are known to be sensitive to these pollutants at the concentrations predicted to occur. These pollutants include sulfuric acid mist, fluorides, mercury, beryllium, and hydrochloric acid. Hydrochloric acid (HCL) is not one of the PSD review pollutants but was included at the Department's request because of its large emissions.

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Table V-6

Comparison of Total Impacts with
Ambient Air Quality Standards

Pollutant and Averaging Time	Maximum Impact Project	Maximum Impacts All Sources (ug/m^3)	Existing Background (ug/m^3)	Maximum Total Impact (ug/m^3)	National AAQS (ug/m^3)
SO_2					
3-hour	106	519	493	1012	1300
24-hour	22	163	86	249	365
Annual	1	9	16	25	80
CO					
1-hour	32	-	12600	12632	40,000
8-hour	16	-	5700	5716	10,000
NO_2					
Annual	1	-	35	36	100
Lead					
Quarterly	0.14 [1]	-	0.8	0.9	1.5

[1] The maximum quarterly average was conservatively estimated by using the maximum 24 hour average

b. Impact on Visibility

A level-1 visibility screening analysis was performed to determine any impact on the Chassahowitzka National Wilderness Class I area. The analysis showed that there was no potential for an adverse impact on visibility in this area due to emission from the proposed project.

c. Acid Rain Impact

The increased emissions of SO_2 and NO_x, precursors to possible acid formation and subsequent acidic rain, from the proposed project are extremely small in comparison with the emissions of these pollutants from nearby power plants. Thus, no significant adverse impact on the acidity of rainfall is expected as a result of this project.

d. Growth-Related Air Quality Impacts

The construction and operation of the proposed source will have a minor positive net effect on industrial and commercial development. The source will promote development by providing for solid waste disposal, and thereby be an integral part of the plans for development within Hillsborough County. On a regional basis this effect is not expected to be significant. The project is not expected to significantly change employment, population, housing, or commercial/industrial development in the area to the extent that an air quality impact will result.

e. GEP Stack Height Determination

Good engineering practice (GEP) stack height means the greater of: (1) 65 meters; or (2) the maximum nearby building height plus 1.5 times the building height or width, whichever is less. For the proposed project the building height is 42.7 meters above ground level and the projected width is 56.4 meters. Thus definition (2) above leads to a GEP stack height of 106.8 meters.

The proposed stack height is 67 meters. This is less than the GEP height. The applicant has addressed the possible increased ground-level concentrations (as a result of aerodynamic effects of the nearby building) by including a downwash mechanism in the modeling.

VII. Nonattainment Review

EPA announced approval of Florida's new source review program for major sources in designated nonattainment areas on March 18, 1980 (45 FR 17140). Subsequently, in 1985, EPA discovered that the

Florida Power Plant Siting Act supercedes in part the nonattainment new source review regulations under Florida law. Consequently, the Florida SIP is deficient with respect to electrical power plants. EPA plans to issue, in the near future, a federal register notice clarifying that two sets of nonattainment regulations will apply:

(1) For sources located in designated nonattainment areas, EPA's construction ban (40 CFR 52.24) applies to major sources and major modifications, and

(2) For sources locating in designated attainment or unclassifiable areas, EPA's Interpretative Ruling (40 CFR 51.18 Appendix S) will apply to major sources and major modifications.

The proposed source will be located in an area designated nonattainment for particulate matter and ozone, but is not a major source for either pollutant, and thus will not subject to the construction ban. The source will be located 43.5 kilometers from an SO_2 nonattainment area and is a major source for SO_2. Under the Interpretative Ruling, the proposed source would be subject to certain more stringent requirements if the impact of its SO_2 emissions on the nearby nonattainment area exceeded 1 ug/m^3 annual average, 5 ug/m^3 24-hour average, or 25 ug/m^3 3-hour average. The modeling analysis shows the impact of the proposed source to be less than each of those levels, so the Interpretative Ruling will not apply.

PART I

Specific Conditions

1. Emission Limitations

   a. Stack emissions from each unit shall not exceed the following:

      (1) Particulate matter: 0.021 grains per dry standard cubic foot corrected to 12% CO_2 (gr/dscf-12%) or 7.0 pounds per hour per unit, whichever is more restrictive.

      (2) Visible Emissions: Opacity of stack emissions shall not be greater than 15% opacity except that 20% opacity may be allowed for one six-minute period (average of 24 consecutive observations recorded at 15-second intervals) in any one hour. Excess opacity resulting from startup or shutdown shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess opacity shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by EPA for longer duration.

      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 start-up or shutdown shall be prohibited. Opacity of other emission points at the plant shall not exceed 5%.

      (3) VOC: 0.01 gr/dscf-12%, or 0.2 lb/ton, whichever is more restrictive

      (4) SO_2: 0.17 gr/dscf-12% or 3.2 lb/ton, whichever is more restrictive, 24-hour average, 0.45 gr/dscf-12% or 8.5 lb/ton, whichever is more restrictive, 3-hour average

      (5) Nitrogen Oxides: 0.16 gr/dscf-12%, or 3.0 lb/ton, whichever is more restrictive

      (6) Carbon Monoxide: 0.093 gr/dscf-12%, or 1.8 lb/ton, whichever is more restrictive.

(7) Lead: 0.00104 gr/dscf-12%, or 0.020 lb/ton, whichever is more restrictive.

(8) Fluorides: 0.0031 gr/dscf-12%, or 0.060 lb/ton, whichever is more restrictive.

(9) Sulfuric Acid Mist: 0.0040 gr/dscf-12%, or 0.077 lb/ton, whichever is more restrictive.

(10) Beryllium: 6.8 x 10-7 gr/dscf-12%, or 1.3 x 10-5 lb/ton, whichever is more restrictive.

(11) Each of the emission limits in conditions (1) and (3) through (10) is to be expressed as a 3-hour average. This averaging time, which is applicable to the emission limits for all pollutants, is based on the expected length of time for a particulate compliance test. The concentration standards in conditions (3) through (10) are included as the primary compliance limit to facilitate simpler compliance testing, since the process weight, in tons per hour, is not easily measured. The concentration limit is intended to be equivalent to the lb/ton limit. The concentration limits were derived by dividing the lb/ton limits by the calculated volume of flue gas produced when one ton of refuse is combusted. If actual process conditions, i.e., dscf per ton of refuse fired, are different than projected by the applicant, EPA may, at its discretion, determine compliance based upon the lb/ton limits.

(12) Mercury: 2200 grams/day

(13) The potential for dust generation by ash handling activities will be mitigated by quenching the ash prior to loading in ash transport trucks. Additionally, all portions of the proposed facility including the ash handling facility which have the potential for fugitive emissions will be enclosed. Also those areas which have to be open for operational purposes, e.g., tipping floor of the refuse bunker while trunks are entering and leaving, will be under negative air pressure.

(14) Each of the three units is subject to 40 CFR Part 60, Subpart E, New Source Performance Standards

(NSPS), except that where requirements in this permit are more restrictive, the requirements in this permit shall apply.

(15) Only natural gas will be used as an auxillary fuel.

b. Compliance Tests

(1) Compliance tests for particulate matter, SO_2, nitrogen oxides, CO, VOC, sulfuric acid mist, fluorides, mercury and beryllium shall be conducted in accordance with 40 CFR 60.8 (a), (b), (d), (e), and (f), except that an annual test will be conducted for particulate matter. Compliance tests for opacity will be conducted simultaneously during each compliance test run for particulate matter.

Compliance tests shall be conducted for such time and under such conditions as specified by EPA prior to the compliance test. These conditions will be specified by EPA upon notification of performance tests as required by General Condition 1. The permittee shall make available to EPA such records as may be necessary to determine the conditions of the performance tests.

(2) The following test methods and procedures from 40 CFR Parts 60 and 61 shall be used for compliance testing:

a. Method 1 for selection of sample site and sample traverses

b. Method 2 for determining stack gas flow rate when converting concentrations to or from mass emission limits.

c. Method 3 for gas analysis when needed for calculation of molecular weight or percent CO_2.

d. Method 4 for determining moisture content when converting stack velocity to dry volumetric flow rate for use in converting concentrations in dry gases to or from mass emission limits.

e. Method 5 for concentration of particulate matter and associated moisture content. One sample shall constitute one test run.

f. Method 9 for visible determination of the opacity of emissions.

g. Method 6 for concentration of SO_2. Two samples, taken at approximately 30 minute intervals, shall constitute one test run.

h. Method 7 for concentration of nitrogen oxides. Four samples, taken at approximately 15 minute intervals, shall constitute one test run.

i. Method 8 for determination of sulfuric acid mist concentration and associated moisture content. One sample shall constitute one test run.

j. Method 10 (continuous) for determination of CO concentrations. One sample constitutes one test run.

k. Method 12 for determination of lead concentration and associated moisture content. One sample constitutes one test run.

l. Method 25 for determination of volatile organic compounds (VOC) concentration. One sample shall constitute one test run.

m. Method 13A or 13B for determination of fluoride concentrations and associated moisture content. One sample shall constitute one test run.

n. Method 101A for determination of mercury emission rate and associated moisture content. One sample shall constitute one test run.

o. Method 104 for determination of beryllium emission rate and associated moisture content. One sample shall constitute one test run.

(3) The stack tests shall be performed at $\pm 10\%$ of the heat input rate of 150 million Btu per hour per boiler; however, compliance with the particulate matter emission limit shall be at design capacity.

2. The height of the boiler exhaust stack shall be 220 feet above ground level at the base of the stack.

3. The incinerator boilers shall not be loaded in excess of their rated capacity of 36,666 pounds per hour each.

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

5. The permittee must submit to EPA and DER within fifteen (15) days after it becomes available to the County, copies of technical data pertaining to the incinerator boiler design, to the electrostatic precipitator design, and to the fuel mix that can be used to evaluate compliance of the facility with the preceeding emission limitations.

6. Grease, scum, grit screenings or sewage sludge shall not be charged into the solid waste to energy facility boilers.

7. Electrostatic Precipitator

   The electrostatic precipitator shall be designed and constructed to limit particulate emissions to no more than 0.021 grains per dscf corrected to 12% CO_2.

8. Stack Monitoring Program

   The permittee shall install and operate continuous monitoring devices for stack oxygen and opacity. The monitoring devices shall meet the applicable requirements of Rule 17-2.710, FAC, 40 CFR Part 60, Subparts A and D, Sections 60.13 and 60.45 respectively, except that emission rates shall be calculated in units consistent with emission limits in this permit. The conversion procedure shall be approved by EPA.

9. Reporting

   a. A copy of the results of the stack tests shall be submitted within forty-five days of testing to the DER Southwest Florida District Office, the Hillsborough County Environmental Protection Commission (HCEPC) and EPA Region IV.

   b. Stack monitoring shall be reported to HCEPC, the DER Southwest District Office and EPA Region IV on a quarterly basis in accordance with Section 17-2.710, FAC, and 40 CFR, Part 60, Subsection 60.7.

10. Fuel

The Resource Recovery Facility shall utilize refuse such as garbage and trash (as defined in Chapter 17-7, FAC) but not sludge from sewage treatment plants as its fuel. Use of alternate fuels would necessitate application for a modification to this permit.

11. Addresses for submitting reports are:

a. EPA - Region IV

Chief, Air Compliance Branch
U.S. Environmental Protection Agency
345 Courtland St.
Atlanta, GA 30365

b. DER

Chief, Compliance and Ambient Monitoring
Bureau of Air Quality Management
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32301

c. Southwest District Office of DER

District Manager
Department of Environmental Regulation
7601 Highway 301 N.
Tampa, FL 33610

d. HCEPC

Chief, Air Group
Hillsborough County Environmental Protection Commission
1900 9th Ave.
Tampa, FL 33605

12. The facility shall provide space for the future installation, if necessary, of a wet or dry flue gas scrubber.

PART II

General Conditions

1. The permittee shall comply with the notification and record-keeping requirements codified at 40 CFR Part 60, Subpart A, ¶ 60.7.

2. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of two (2) years from the date of recording.

3. If, for any reason, the permittee does not comply with or will not be able to comply with the emission limitations specified in this permit, the permittee shall provide EPA with the following information in writing within five (5) days of such conditions:

   (a) description of noncomplying emission(s),
   (b) cause of noncompliance,
   (c) anticipated time the noncompliance is expected to continue or, if corrected, the duration of the period of noncompliance,
   (d) steps taken by the permittee to reduce and eliminate the noncomplying emission, and
   (e) steps taken by the permittee to prevent recurrence of the noncomplying emission.

   Failure to provide the above information when appropriate shall constitute a violation of the terms and conditions of this permit. Submittal of the aforementioned information does not constitute a waiver of the emission limitations contained within this permit.

4. Any proposed change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that would result in new or increased emissions or ambient air quality impact must be reported to EPA. If appropriate, modifications to the permit may then be made by EPA to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause violation of the emission limitations specified herein. Any construction or operation of the source in material variance with the application shall be considered a violation of this permit.

PERMIT TO CONSTRUCT UNDER THE RULES FOR THE
PREVENTION OF SIGNIFICANT DETERIORATION OF AIR QUALITY

Pursuant to and in accordance with the provisions of Part C, Subpart 1 of the Clean Air Act, as amended, 42 U.S.C. ¶7470 et. seq., and the regulations promulgated thereunder at 40 CFR ¶52.21, as amended at 45 Fed. Reg. 52676, 52735-41 (August 7, 1980),

Hillsborough County, Florida

is, as of the effective date of this permit (PSD-FL-104) authorized to construct a stationary source at the following location:

> Two miles east of Tampa on a site owned by the County on Faulkenburg Road, 0.6 miles north of State Road 60.

Upon completion of authorized construction and commencement of operation/production, this stationary source shall be operated in accordance with the emission limitations, sampling requirements, monitoring requirements and other conditions set forth in the attached Specific Conditions (Part I) and General Conditions (Part II)

> This permit is hereby issued on _________ and shall become effective thirty (30) days after receipt hereof unless a petition for administrative review is filed with the Administrator during that time. If a petition is filed any applicable effective date shall be determined in accordance with 40 CFR ¶124.19(f)(1).

If construction does not commence within 18 months after the effective date of this permit, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time, this permit shall expire and authorization to construct shall become invalid.

This authorization to construct/modify shall not relieve the owner or operator of the responsibility to comply fully with all applicable provisions of

________________ ____________________________

Date Signed Regional Administrator

5. In the event of any change in control or ownership of the source described in the permit, the permittee shall notify the succeeding owner of the existence of this permit and EPA of the change in control of ownership within 30 days.

6. The permittee shall allow representatives of the state and local environmental control agency or representatives of the EPA upon the presentation of credentials:

   (a) to enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of the permit;

   (b) to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit, or the Clean Air Act;

   (c) to inspect at reasonable times any monitoring equipment or monitoring method required in this permit;

   (d) to sample at reasonable times any emissions of pollutants; and

   (e) to perform at reasonable times an operation and maintenance inspection of the permitted source.

7. The conditions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

p.2-51 Solid Waste Disposal. Figure 2.14 shows the location of existing and proposed solid waste management facilities within the County. Currently, all of the solid waste generated in Hillsborough County, including that generated by the three cities, is disposed of at the County's Hillsborough Heights landfill. The monthly solid waste quantities received at the Hillsborough Heights Sanitary Landfill from May 1981 to April 1983 are shown in Table 2.21. Approximately 2,000 tons per day (six days per week) of solid waste are disposed of at this site, of which about 750 tons per day (six days per week) is delivered by the City of Tampa.

p.3-5 The Board of County Commissioners has officially stated that the County will own the project. The contractor will provide a full-service arrangement, including design, construction, acceptance testing, and 20 years of continuous operation, for a "mass-burn" type resource recovery facility with a continuous design rated capacity of 1,200 tons per day using three combustion/steam generation units each with a continuous design rated capacity of 400 tons per day. Additionally, the layout of the project will allow the addition of a fourth combustion/steam generation unit. Initial project construction will include a tipping area and refuse storage pit sized to handle 1,600 tons per day (continuous design rated capacity) and the stack shall have four (4) flues.

p.3-6 Since the proposed facility will utilize mass-burn technology, there will be no preprocessing of wastes at the facility prior to combustion (except for some limited size reduction of oversized items.) A schematic diagram of a typical resource recovery facility is presented in Figure 3.1. MSW will be truck-delivered to the facility and ash residue removed by the same mode of transport. Under a 1600 tpd configuration, four 400 tpd units would be used in the facility.

p.3-7 As noted above, while the proposed facility will have a maximum design rated capacity of 1600 tpd, its initial design rated capacity will be about 1200 tpd (comprised of three 400 tpd units). Each boiler unit operates independently from the others. It will, therefore, be possible to routinely shut down one unit for periods of maintenance and inspection.

p.3-14 The pit shall be sized for minimum storage capacity of three days of solid waste; i.e. 4,800 tons of solid at a density of 450 pounds per cubic yard.

As noted previously, the proposed energy recovery facility is a new facility to be located in Hillsborough County. At ultimate size, the facility is planned would contain four boilers each with a rated capacity of 400 tpd of MSW for a total of 1600 tod.

p.13 The contractor will provide a full-service arrangement, including design, construction, acceptance testing, and 20 years of continuous operation, for a "mass-burn" type resource recovery facility with a continuous design rated capacity of 1,200 tons per day using three combustion/steam generation units each with a continuous design rated capacity of 400 tons per day. Additionally, the layout of the project will unit. Initial projection construction shall include a tipping area and refuse storage pit sized to handle 1,600 tons per day (continuous design rated capacity) and the stack shall have four (4) flues.

p.14 Once the site is certified by the state, no other state permits will be required for the project. Although the rate continuous design capacity of the project will be 1,200 tons per day (generating about 29 megawatts), site certification is being sought for an ultimate continuous design rated capacity of 1,600 tons per day (generated about 39 megawatts) since it is anticipated that the County may expand the project in the future.

C. Costs of pollution control system(s): (Note: show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Electrostatic Precipitators (4) $4,500.00 total

p.6-12 Total Weight Incinerated (lbs/hr) 133,333. Calculations by GPL 6/13/94 lbs/hr. 400 Tons/day/unit. Stack Diamter: flues, each 5'-9' Diam.

Suppl. Section V: Supplemental Requirements
Total process input rate at design capacity (i.e. name-plate rating) is 1600 TPS, 4 units each at 400 TPD. Residue amount will be 29,000. lb/hr (dry basis) and is derived as follows:

Inert Material = (133,333 wet lb/feed (o.7265 dry lb) (o.3567 lb.Carbon
hr wet lb dry lb
28,100 dry lb inert
hr

Emission estimates are contained in the Prevention of Significant Deterioration (PSD) Permit Application

p.3-3 ...using 1,200 tons per day (tpd) of solid waste as fuel. However, certification for an ultimate site capacity of about 39 megawatts, capable of processing 1,600 tons of solid waste per day, is being sought in anticipation of future solid waste disposal requirements.

Conceptual schematic diagram of the recovery facility is presented in Figure 3-2. Truck transport will be used to deliver MSW to the facility and to remove ash residue from the facility. Under a 1600 tpd configuration, four 400-tpd units would be used in the facility.

p.3-5 Bottom ash from the furnace and flyash from the precipitator will be mixed prior to removal from the facility. Ash will comprise 10 percent of the volume and 25 percent of the weight of the MSW processed by the facility. The ash will be quenched with water to about 30 percent moisture prior to transport to a landfill.

As noted above, while the proposed facility will have a maximum design rated capacity of 1600 tpd, its initial throughput will be about 1200 tpd (comprised of three 400 tpd units). Each boiler unit operates independently from the others. It would, therefore, be possible to routinely shut down one unit for periods of maintenance and inspection

p.3-9 The resource recovery facility will consist of four boilers each capable of firing 400 tpd of reference waste (see Section 3.3 of Volume I) at its maximum continuous rating (MCR). This firing rate will be adjusted as the waste quality changes, i.e. changes in the higher heating value (HHV). This is because one of the objectives of plant operation is to maintain the heat load to the boiler by maintaining the heat release on the grate. When the HHV is low (higher moister and ash fractions, lower combustibles fraction) more waste will be processed, up to 440 tpd per boiler. Likewise, when the HHV is high, less waste will be processed.

The maximum load condition with a heating value of 4,000 Btu/lb resulted in the highest pollutant impacts and therefore this condition is used throughout the modeling assessment (see Section 7.1). This provides for a conservative analysis as the facility is expected to operate, over the long-term, at its maximum continuous rating (MCR) of 400 TPD of reference solid waste subject to an availability of 85 percent.

p.4-2 Emission Factors for Florida Resource Recovery Facilities

Pounds per ton of MSW

	Hillsborough Proposed
Particular matter	0.48
Sulfur dioxide	2.5
Nitrogen oxides	3.0

Carbon monoxide	1.8
Hydrocarbons	1.2
Lead	0.048
Mercury	0.0052
Beryllium	13.1 x 10-6
Fluorides	0.06
Sulfuric acid	7.68 x 10-2
Hydrogen chloride	4.0

p.6-1 Best Available Control Technology/Lowest Achievable Emission Rate Analysis

It is assumed for this analysis that the facility will operate at 100% availability at the maximum firing rate of 110% of the nameplate rating (equal to 1760 TPD)

p.6-2 The stack parameters that were used in the modeling exercise simulated worst-case conditions. That is, recently cleaned boilers operating at maximum load conditions (1760 tpd or 110 percent of the nameplate rating) and firing a waste with a low HHV (4000 BTU/lb).

Although worst-case conditions should be used to calculate maximum short-term pollutant concentrations, annual average conditions would be used to calculate maximum long-term concentrations. However, to minimize the computer time involved with the modeling activities, all impacts, both shore and long-term were predicted based on worst-case stack gas exist conditions. This would therefore over predict the long-term concentrations providing a degree of conservatism. Also, this assumption of worst-case conditions holds true even under conditions of changing waste throughput due to variations in waste quality (i.e. HHV).

Worst-case conditions at maximum load corresponds to firing 1760 tpd solid waste with an HHV of 4,000 BTU/lb and a stack gas exit temperature of 430 deg. F. (ESP Case).

p.7-3 The resource recovery facility will consist of four boilers each capable of firing 400 tons per day (tpd) of reference solid waste. The boilers will typically to be run above 100% of the maximum continuous rate (MCR) but operations at 110% of the MCR caused the greatest air quality impacts and was, therefore, used throughout the air quality analysis (See Section 3.0).

p.7-6 Emission Rates for the Proposed Facility

*Emission rates based on a throughput equal to 110% of design capacity.

Changes in Paragraph 2, page 1 of the permit:

For the modification of a 1,200 ton per day resource recovery facility located at the permitted existing municipal solid waste resource recovery facility in Hillsborough County approximately two times east of Tampa on the county's Faulkenburg Road site.

This permit is issued under the provisions of Chapter 403, and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing (s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the modification of a 1,200 ton per day resource recovery facility located at the permitted existing municipal solid waste resource recovery facility in Hillsborough County approximately two miles east of Tampa on the County's Faulkenburg Road site. The UTM coordinates of the plant are 368.2 km E and 3092.7 km N.

1-10

p.2-10 This permit is valid only for the specific processes and operations applied for an indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

p.6-10 Nitrogen Oxides: 9.34 gr/dscf-12%, or 6.4 lb/ton, whichever is more restrictive.
The concentration limit is intended to be equivalent to the lb/ton limit. The concentration limits were derived by dividing the lb/ton limits by the calculated volume of flue gas limits by the calculated volume of flue gas produced when one ton of refuse is combusted. If actual process conditions , i.e. dscf per ton of refuse fired, are different than projected by the applicant, DER may, at its discretion, determine compliance based upon the lb/ton limits.

p.8-10 The boilers shall not be loaded in excess of their rated capacity of 36,666 pounds per hour each.

p.3 Page 8, paragraph 3, Modeling Methodology. It should be noted that the prior modeling for the facility utilized a conservative approach. The stack parameters and emission rates were based on a maximum facility capacity of 1,760 tons per day and 100% facility availability. As currently constructed, however, the plant will normally handle approximately 1200 tons per day. In addition, it is generally assumed that resource recovery facilities will only be available approximately 85% of the time.

p.2 Under Section IV, captioned 'BACT Determination," OMSH would propose changing the second sentence of the first paragraph to read as follows:

> The ERF is designed to burn up to 1200 tons per day (TPD) of refuse at a heating value of 4500 BTU's per pound, which amount will increase or decrease, respectively, based upon lower or higher heating values, in each case, resulting in an electrical generating capacity of 29 megawatts.

p.2 The proposed project will be an energy recovery facility boiler which could be used up to 1200 tons per day (TPD) of refuse as fuel.

p.3 The applicant is proposing the construction of three 400 TPD mass burn technology incinerators for the processing of up to 1200 TPD of municipal solid waste.

The maximum annual emissions from all three units for all regulated pollutants have been estimated by the applicant. These emission rates, and the PSD significant emission rates, are listed in Table II.1.

The proposed incinerators will each have a charging rate of 400 tons per day.

Table II-1

Proposed Maximum Emission Rate (Ton/Yr) (1)

Particulate Matter	90
Volatile Organic Compounds	44
Sulfur Dioxide	701
Carbon Monoxide	395
Nitrogrn Oxides	657
Lead	4.4
Mercury	1.1
Beryllium	0.003
Fluorides	13
Sulfuric Acid Mist	17

(1) Based on processing 1200 tons per day. MSW for 365 days per year

p.6 The applicant ultimately plans to construct a 1600 ton per day municipal solid waste (MSW) incinerator facility to be located on Faulkenburg Road in Tampa, Florida.

The present plans are to install the 400 tons per day (TPD) incinerator-boiler units to process a total of 1200 TPD of MSW and generate 29 megawatts of electrical power.

Each incinerator will have an approximate heat input of 150 million Btu per hour, or 49 megawatts, based upon a MSW calorific content of 4500 Btu per pound. Each incinerator will be scheduled to operate 8760 hours per year and on this basis the tons per year of the various air pollutants emitted as calculated.

Screening analyses were initially run using 26 prescribed meteorological conditions with the stack and emission data of the proposed ERF. These runs determined the worst-case boiler operating condition, identified those pollutants emitted from the ERF with a potential for significant impact, and established receptor locations for the more refined modeling. The results of these analyses indicated that a 110 percent boiler load condition (440 tons per day throughput) yielded the greatest air quality impact with the maximum ground-level concentrations occurring approximately 400 meters from the stack.

Table V-2

Pollutant	
Particulate Matter	0.38
Sulfur Dioxide	3.2.
Carbon Monoxide	1.8
Nitrogen Oxides	3.0
Lead	0.02
Hydrocarbons (non-methane)	0.2
Mercury	0.0052
Beryllium	1.0000131
Fluorides	0.06
Sulfur Acid Mist	0.0768
Hydrogen Chloride	4.0

(1) Based on a throughput of 110 percent of design capacity and the operation of four incinerator

Table V-3

(1) Highest second-high concentration assuming four incinerators

p.4 The incinerator boilers shall not be loaded in excess of their rated capacity of 36,666 pounds per hour each. = 440 TPY

Appendix - I

Combustion Fundamentals for Waste Incineration

SPONSORED BY THE
ASME RESEARCH
COMMITTEE ON
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MUNICIPAL WASTES

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
United Engineering Center 345 East 47th Street New York, N.Y. 10017

ATTACHMENT "C" P. 1

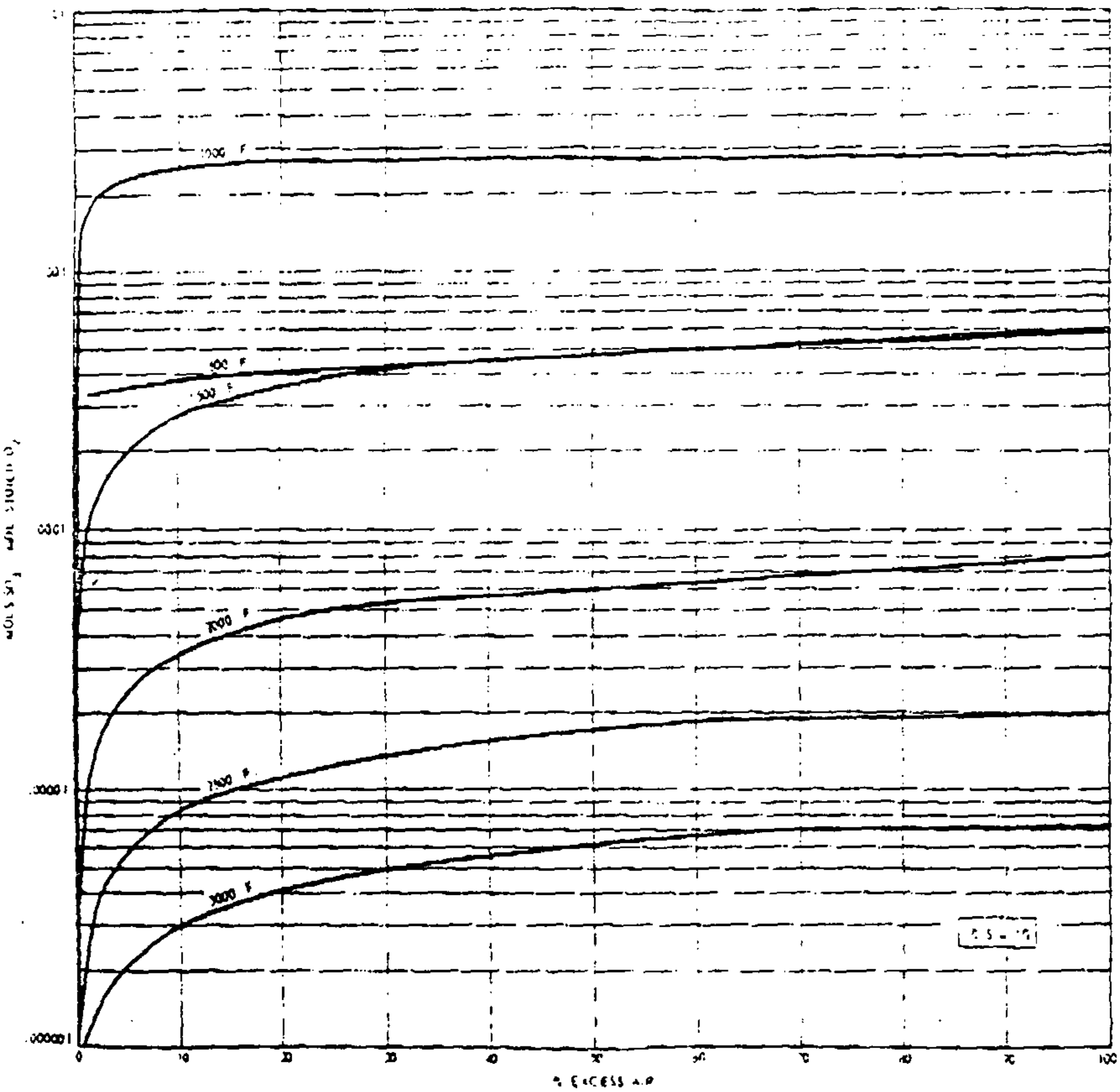

FIG. 8.1

ATTACHMENT "C" P. 4

EDITOR'S NOTE Numbers in parentheses indicate equations. References are noted by numbers in brackets and appear at the end of their respective Chapter or Table. Numbered Source references (also in brackets) for Appendices G and H appear *only* within the text, since they primarily comprise text material.

Library of Congress Catalog Number 74-19743

Chapter 8 – Sulfur Oxides

When sulfur is present in a hydrocarbon fuel, it will form oxides under equilibrium combustion conditions. These can be either sulfur dioxide (SO_2) or sulfur trioxide (SO_3). The amount that goes to SO_3 in relation to SO_2 will always be small, but it is often important. The SO_3 form readily combines with water vapor to form a high dew point sulfuric acid that can be both visible and corrosive. Equilibrium calculations for sulfur containing hydrocarbon fuels were made in the following limits.

Sulfur Content:	0.67 to 5.47%
Excess Air:	0 to 100%
Temperature:	500 to 3000°F

The results are plotted on Fig. 8.1. Values of SO_3 expressed as mols per mol of stoichiometric oxygen are plotted vs. excess air in percent with values given along lines of constant temperature. The curve is drawn for 1 percent sulfur fuel content by weight. Values for other percent sulfur contents can be obtained by multiplying the curve by the ratio of the actual sulfur content to one.

Example.

A 2.8 percent sulfur fuel is burned at 2000°F with 25 percent excess air. Determine the ppm of SO_3 and SO_x if the hydrocarbon part of the fuel is represented by C_4H_5.

From Fig. 8.1, a value of 0.00005 mols SO_3 per stoichiometric mol of O_2 is found at 2000°F and 25 percent excess air. This is for a 1 percent sulfur fuel.

For a 2.8 percent sulfur fuel, the amount of SO_3 produced would be:

$$(2.8)(0.00005) = 0.00014 \text{ mols } SO_3 \text{ per mol stoic. } O_2$$

To convert to ppm.

4 mol C_4H_5	=	53 lbs
1-.028	=	0.972 lbs C_4H_5 per 0.028 lbs S
(0.028/32)	=	0.000875 mols S/0.972 lbs C_4H_5
$\left(\frac{0.000875}{0.972}\right)(53)$	=	0.0477 mols S/mol C_4H_5

So

$$C_4H_5 + 0.0477\,S + 1.25(5.25 + 0.0477)O_2 \longrightarrow 4\,CO_2 + 2.5\,H_2O + 0.00014(5.25 + 0.0477)\,SO_3 + [0.0477 - (0.00014(5.25 + 0.0477))]\,SO_2 + 0.25(5.25 + 0.0477)\,O_2 + (79/21)(1.25(5.25 + 0.0477))\,N_2$$

(Stoichiometry)

or,

$$C_4H_5 + 0.0477\,S + 6.622\,O_2 \longrightarrow 4\,CO_2 + 2.5\,H_2O + 0.0007417\,SO_3 + 0.04696\,SO_2 + 1.324\,O_2 + 24.912\,N_2$$

On a dry basis, the ppm of SO_3 is:

$$\text{ppm } SO_3 = \frac{0.0007417}{4 + 0.0007417 + 0.04696 + 1.324 + 24.912} \times 10^6$$

$$= \frac{0.0007417(10^6)}{30.2837} = 24.5$$

$$\text{ppm } SO_2 = \frac{0.04696(10^6)}{30.2837} = 1550.7$$

$$\text{ppm } SO_x = 24.5 + 1550.7 = 1575$$

Similar calculations can be made for any fuel whose molecular form or ultimate analysis is known. Note that for this particular case, 1.6 percent of the sulfur was converted to SO_3.

The relationship of mols to pounds per million Btu can also be calculated or approximated.

Example:

Express the results of the previous example as lbs/10^6 Btu. Since neither a heat of formation nor heating value is available for C_4H_5, assume 1 mol of stoichiometric O_2 is equal to a fuel heating value of 184,000 Btu.

$$\frac{\text{lbs } SO_3}{10^6 \text{ Btu}} = \frac{0.00014 \text{ mols } SO_3}{\text{mol } O_2{}^*} \times \frac{\text{mol } O_2{}^*}{184{,}000 \text{ Btu}} \times 10^6 \times \frac{80 \text{ lbs}}{\text{mol } SO_3}$$

$$= 0.06$$

$$\frac{\text{lbs } SO_2}{10^6 \text{ Btu}} = \frac{1550.7 \text{ ppm } SO_2}{24.5 \text{ ppm } SO_3} \times \frac{64 \text{ lbs } SO_2}{80 \text{ lbs } SO_3} \times 0.06 = 3.014$$

Appendix - I

Final Determination

Hillsborough County, Florida

Resource Recovery Facility Modification
File No. PSD-FL-121

Florida Department of Environmental Regulation
Bureau of Air Quality Management
Central Air Permitting

October 14, 1987

Final Determination

The application by Hillsborough County, through Ogden Martin Systems of Hillsborough, Inc., to increase the allowable nitrogen oxides (NOx) and sulfuric acid mist (acid mist) emissions at the Resource Recovery Facility in Hillsborough County (HCERF), has been reviewed by the Bureau of Air Quality Management. Public Notice of the Department's Intent to Issue the permit was published in the Tampa Tribune on July 19, 1987.

Comments were received from Bruce Miller, U.S. EPA Region IV; David Dee, attorney for Hillsborough County; and Mr. J. R. Treshler of Ogden Projects, Inc. Although the Department acknowledges that comments concerning the Preliminary Determination help state some issues more clearly, responses will be limited to comments pertaining to the proposed permit. Responses to the comments received are addressed below, on a letter by letter basis.

<u>Letter 1, Hillsborough County (attachment 4)</u>

Comment 6, page 2: Attachment 4 should convey to the County what EPA's view is on the Department's permit processing approach.

Comment 1, page 3: Several specific conditions were repeated from the original permit, PSD-FL-104, in order to maintain continuity on issues pertaining to NOx and acid mist in the proposed permit, PSD-FL-121.

Comments 2, 3, 4, 5, and 6; pages 3 and 4: The Department will make changes in the permit to reflect agreement with these comments.

<u>Letter 2, Ogden Projects (attachment 5)</u>

Comment 1, page 3: The emission increases of NOx, acid mist and particulates are addressed together in the permit overview because they are in the same facility and covered under the same permit.

Comment 2, page 3: The Department will make a change in the permit to make clear the fact that emission limits and compliance testing for acid mist have been deleted in the proposed permit.

<u>Letter 3, U.S. EPA (attachment 6)</u>

The Department agrees with EPA's comments that the proposed permit should state how permit PSD-FL-121 supercedes permit PSD-FL-104 on emission limits for NOx and acid mist. A paragraph will be added to the permit to that effect.

Letter 4, U.S. Department of the Interior (attachment 7)

The Department of the Interior's comment arrived after the closing date of the comment period, however, with the permission of the applicant, DER has reviewed the comment as a courtesy.

DER does not feel that the proposed NOx emission rate of the Hillsborough County RRF shall be compared to other facilities in the State of Florida which incorporate a different type of technology than the Hillsborough facility. In addition, DER is not supportive of setting an emissions limitation which is equivalent to any one test result.

Letter 5, Hillsborough County Environmental Protection Commission (attachment 8)

The Hillsborough County Environmental Protection Commission's comment arrived after the closing date of the comment period. Upon discussing the situation with the applicant, the Department has decided to not include these comments as part of the Final Determination, but will address the comments at a later date by means of a letter.

Listed below are the changes the Department will make in the proposed permit to reflect consideration of the comments received from all the parties, as mentioned earlier.

Changes in Paragraph 2, page 1 of the permit

From:

For the modification of a 1,200 ton per day resource recovery facility to be located at the permitted existing municipal solid waste resource recovery facility in Hillsborough County approximately two miles east of Tampa on the county's Faulkenburg Road site. The UTM coordinates of the proposed plant are 368.2 km E and 3092.7 km N.

To:

For the modification of a 1,200 ton per day resource recovery facility located at the permitted existing municipal solid waste resource recovery facility in Hillsborough County approximately two miles east of Tampa on the county's Faulkenburg Road site. The UTM coordinates of the plant are 368.2 km E and 3092.7 km N.

Change in Paragraph 3, page 1 of the permit

From:

This permit solely pertains to the pollutant increases (nitrogen oxides, sulfuric acid mist, and particulates) which result from this modification. Only specific conditions 1.a.(3), 1.b., and 1.c.(1) have been modified and/or added to reflect the changes requested in this modification. For clarity purposes, the remaining specific conditions which pertain to the pollutants addressed in this modification have been repeated as they appeared in the original PSD permit (PSD-FL-104). The other pollutants emitted from this facility are addressed in the original PSD permit.

To:

This permit solely pertains to the pollutant increases (nitrogen oxides, sulfuric acid mist, and particulates) which result from this modification. Only specific condition 1. has been modified to reflect the changes requested in this modification. For clarity purposes, the remaining specific conditions which pertain to the pollutants addressed in this modification have been repeated as they appeared in the original PSD permit (PSD-FL-104) and also Specific Condition No. 11 has been added. The other pollutants emitted from this facility are addressed in the original PSD permit. This facility is not subject to any emission limitations or testing requirements for sulfuric acid mist. Except as expressly provided in the specific conditions contained herein, all of the other provisions of permit No. PSD-FL-104 remain in effect.

Changes in General Condition No. 13

From:

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards.

To:

13. This permit also constitutes:

(x) Determination of Best Available Control Technology (BACT)
(x) Determination of Prevention of Significant Deterioration (PSD)
(x) Compliance with New Source Performance Standards.

Changes in Specific Conditions No. 1.a.(4)

From:

(4) Each of the emission limits in conditions (1) through (3) is to be expressed as a 3-hour average. This averaging time, which is applicable to the emission limits for all pollutants, is based on the expected length of time for a particulate compliance test. The concentration standards in conditions (2) and (3) are included as the primary compliance limit to facilitate simpler compliance testing, since the process weight, in tons per hour, is not easily measured. The concentration limit is intended to be equivalent to the lb/ton limit. The concentration limits were derived by dividing the lb/ton limits by the calculated volume of flue gas produced when one ton of refuse is combusted. If actual process conditions, i.e., dscf per ton of refuse fired, are different than projected by the applicant, EPA may, at its discretion, determine compliance based upon the lb/ton limits.

To:

(4) Each of the emission limits in conditions (1) and (3) is to be expressed as a 3-hour average. This averaging time, which is applicable to the emission limits for all pollutants, is based on the expected length of time for a particulate compliance test. The concentration standards in conditions (1) and (3) are included as the primary compliance limit to facilitate simpler compliance testing, since the process weight, in tons per hour, is not easily measured. The concentration limit is intended to be equivalent to the lb/ton limit. The concentration limits were derived by dividing the lb/ton limits by the calculated volume of flue gas produced when one ton of refuse is combusted. If actual process conditions, i.e., dscf per ton of refuse fired, are different than projected by the applicant, EPA may, at its discretion, determine compliance based upon the lb/ton limits.

<u>Addition to Specific Condition 1.a.</u>

(7) This facility is not subject to any emission limitations or testing requirements for sulfuric acid mist.

<u>Change in Specific Condition 1.c.(2)g</u>

From:

g. Method 7 for concentration of nitrogen oxides. Four samples, taken at approximately 15 minute intervals, shall constitute one test run.

To:

g. Method 7E for concentration of nitrogen oxides.

Appendix - I

Add Specific Condition No. 11

11. This permit shall supercede the NOx and acid mist emission limitations and testing requirements as contained in permit PSD-FL-104.

Attachments to be Added:

4. Letter from David Dee, attorney for Hillsborough County, dated August 10, 1987.

5. Letter from Ogden Projects, dated August 14, 1987.

6. Letter from U.S. EPA dated September 11, 1987.

7. Letter from U.S. Department of the Interior, dated September 22, 1987.

8. Letter from Hillsborough County Environmental Protection Commission, dated October 2, 1987.

The final action of the Department will be to issue the permit as proposed in the Preliminary Determination with the above mentioned ammendments.

Appendix - I

THE TAMPA TRIBUNE

Published Daily
Tampa, Hillsborough County, Florida

State of Florida
County of Hillsborough

Before the undersigned authority personally appeared G. T. Gleason, who on oath says that he is Controller of The Tampa Tribune, a daily newspaper published at Tampa in Hillsborough County, Florida; that the attached copy of advertisement being a

LEGAL NOTICE

in the matter of STATE OF FLORIDA DEPARTMENT OF PROPOSED AGENCY ACTION ON PERMIT APPLICATION

was published in said newspaper in the issues of

JULY 19, 1987

Affiant further says that the said The Tampa Tribune is a newspaper published at Tampa, in said Hillsborough County, Florida, and that the said newspaper has heretofore been continuously published in said Hillsborough County, Florida, each day and has been entered as second class mail matter at the post office in Tampa, in said Hillsborough County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm, or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

G. T. Gleason

Sworn to and subscribed before me, this 19th *day*

of JULY A.D. 1987

Leslie A. Lualta

(SEAL)

Notary Public, State of Florida
My Commission Expires Nov. 23, 1990
Bonded Thru Troy Fain - Insurance Inc.

Notice of Proposed Agency Action on Permit Application

The Department of Environmental Regulation gives notice of its intent to issue a permit to Hillsborough County to increase the allowable nitrogen oxides, sulfuric acid mist, and particulate emissions from their existing energy recovery (municipal solid waste incineration) facility. The facility is located in Hillsborough County, approximately two miles east of Tampa on the County's Falkenburg Road site. A determination of best available control technology (BACT) was required.

This application was reviewed under Florida Administrative Code Rules 17-2.500, Prevention of Significant Deterioration. Emissions of nitrogen oxides, sulfuric acid mist, and particulates will increase by 739.289, and 7 tons per year, respectively. The allowable emissions of the other pollutants are not being increased. The Department has completed a study of the potential ambient air impact due to the increase in emissions. Based on this study, the Department has reasonable assurance that the increase in emissions will not cause or contribute to an exceedance of the ambient air quality standards for these pollutants. No PSD increment analysis is required for this modification.

Persons whose substantial interests are affected by the department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Fl 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57 Florida Statutes.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this preliminary statement. Therefore, persons who may not object to the proposed agency action may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Model Rule 28-5.207 at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009 Apalachee Parkway, Tallahassee, Florida 32399-2400. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Dept. of Environmental Regulation
Southwest District
7601 Highway 301 North
Tampa, Florida 33610

Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida
32399-2400

Hillsborough County Environmental Protection Commission
1410 N. 21st Street
Tampa, Florida 33605

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 30 days of the publication of this notice will be considered in the Department's final determination.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

PERMITTEE:
Hillsborough County
Hillsborough County Courthouse
419 Pierce Street
Tampa, Florida 33602

Permit Number: PSD-FL-121
Expiration Date: March 31, 1988
County: Hillsborough
Latitude/Longitude: 27° 57' 00" N
82° 40' 22" W
Project: Hillsborough County
Resource Recovery Modification

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the modification of a 1,200 ton per day resource recovery facility located at the permitted existing municipal solid waste resource recovery facility in Hillsborough County approximately two miles east of Tampa on the county's Faulkenburg Road site. The UTM coordinates of the plant are 368.2 km E and 3092.7 km N.

This permit solely pertains to the pollutant increases (nitrogen oxides, sulfuric acid mist, and particulates) which result from this modification. Only Specific Condition No. 1 has been modified to reflect the changes requested in this modification. For clarity purposes, the remaining specific conditions which pertain to the pollutants addressed in this modification have been repeated as they appeared in the original PSD permit (PSD-FL-104) and also Specific Condition No. 11 has been added. The other pollutants emitted from this facility are addressed in the original PSD permit. This facility is not subject to any emission limitations or testing requirements for sulfuric acid mist. Except as expressly provided in the Specific Conditions contained herein, all of the other provisions of permit No. PSD-FL-104 remain in effect.

Attachments:

1. May 1, 1987, letter by Richard W. Seelinger.
2. June 8, 1987, letter by Bruce P. Miller, EPA Region IV.
3. June 12, 1987, letter by J. R. Treshler.
4. Letter from David Dee, attorney for Hillsborough County dated August 10, 1987.
5. Letter from Ogden Projects, dated August 14, 1987.

6. Letter from U.S. EPA dated September 11, 1987.
7. Letter from U.S. Department of the Interior, dated September 22, 1987.
8. Letter from Hillsborough County Environmental Protection Commission, dated October 2, 1987.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor 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 does not constitute a waiver of 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.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement 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.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, 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.

PERMITTEE:
Hillsborough County

Permit Number: PSD-FL-121
Expiration Date: March 31, 1988

GENERAL CONDITIONS:

6. The permittee shall at all times 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.

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, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring 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.

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 notify and provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

PERMITTEE:
Hillsborough County

Permit Number: PSD-FL-121
Expiration Date: March 31, 1988

GENERAL CONDITIONS

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 revocation of this permit.

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 arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

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.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

- (x) Determination of Best Available Control Technology (BACT)
- (x) Determination of Prevention of Significant Deterioration (PSD)
- (x) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

PERMITTEE:
Hillsborough County

Permit Number: PSD-FL-121
Expiration Date: March 31, 1988

GENERAL CONDITIONS:

b. The permittee shall retain 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), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be 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:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

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 submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. Emission Limitations

a. Stack emissions from each unit shall not exceed the following:

(1) Particulate matter: 0.021 grains per dry standard cubic foot corrected to 12% CO_2 (gr/dscf-12%) or 7.0 pounds per hour per unit, whichever is more restrictive.

PERMITTEE:
Hillsborough County

Permit Number: PSD-FL-121
Expiration Date: March 31, 1988

SPECIFIC CONDITIONS:

(2) Visible Emissions: Opacity of stack emissions shall not be greater than 15% opacity except that 20% opacity may be allowed for one six-minute period (average of 24 consecutive observations recorded at 15-second intervals) in any one hour. Excess opacity resulting from startup or shutdown shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess opacity shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by DER for longer duration.

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 start-up or shutdown shall be prohibited. Opacity of other emission points at the plant shall not exceed 5%.

(3) Nitrogen Oxides: 0.34 gr/dscf-12%, or 6.4 lb/ton, whichever is more restrictive

(4) Each of the emission limits in conditions (1) and (3) is to be expressed as a 3-hour average. This averaging time, which is applicable to the emission limits for all pollutants, is based on the expected length of time for a particulate compliance test. The concentration standards in conditions (1) and (3) are included as the primary compliance limit to facilitate simpler compliance testing, since the process weight, in tons per hour, is not easily measured. The concentration limit is intended to be equivalent to the lb/ton limit. The concentration limits were derived by dividing the lb/ton limits by the calculated volume of flue gas produced when one ton of refuse is combusted. If actual process conditions, i.e. dscf per ton of refuse fired, are different than projected by the applicant, DER may, at its discretion, determine compliance based upon the lb/ton limits.

(5) The potential for dust generation by ash handling activities will be mitigated by quenching the ash prior to loading in ash transport trucks.

PERMITTEE:
Hillsborough County

Permit Number: PSD-FL-121.
Expiration Date: March 31, 1988

SPECIFIC CONDITIONS:

Additionally, all portions of the proposed facility including the ash handling facility which have the potential for fugitive emissions will be enclosed. Also those areas which have to be open for operational purposes, e.g., tipping floor of the refuse bunker while trunks are entering and leaving, will be under negative air pressure.

(6) Each of the three units is subject to 40 CFR Part 60, Subpart E, New Source Performance Standards (NSPS), except that where requirements in this permit are more restrictive, the requirements in this permit shall apply.

b. Ash handling facility emissions shall not exceed 1.63 pounds per hour.

c. Compliance Tests

(1) Compliance tests for particulate matter, and, nitrogen oxides shall be conducted in accordance with 40 CFR 60.8 (a), (b), (d), (e), and (f), except that an annual test will be conducted for particulate matter. Compliance tests for opacity will be conducted simultaneously with compliance tests for particulate matter. The compliance test requirements for the ash handling facility shall be waived in accordance with Rule 17-2.700(3)(d), FAC.

Compliance tests shall be conducted for such time and under such conditions as specified by EPA prior to the compliance test. These conditions will be specified by DER upon notification of performance tests as required by General Condition 1. The permittee shall make available to DER such records as may be necessary to determine the conditions of the performance tests.

(2) The following test methods and procedures from 40 CFR Parts 60 and 61 shall be used for compliance testing:

a. Method 1 for selection of sample site and sample traverses.

PERMITTEE:
Hillsborough County

Permit Number: PSD-FL-121
Expiration Date: March 31, 1988

SPECIFIC CONDITIONS:

b. Method 2 for determining stack gas flow rate when converting concentrations to or from mass emission limits.

c. Method 3 for gas analysis when needed for calculation of molecular weight or percent CO_2.

d. Method 4 for determining moisture content when converting stack velocity to dry volumetric flow rate for use in converting concentrations in dry gases to or from mass emission limits.

e. Method 5 for concentration of particulate matter and associated moisture content. One sample shall constitute one test run.

f. Method 9 for visible determination of the opacity of emissions.

g. Method 7E for concentration of nitrogen oxides.

(3) The stack tests shall be performed at +10% of the heat input rate of 150 million Btu per hour per boiler; however, compliance with the particulate matter emission limit shall be at design capacity.

2. The height of the boiler exhaust stack shall not be less than 220 feet above ground level at the base of the stack.

3. The boilers shall not be loaded in excess of their rated capacity of 36,666 pounds per hour each.

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

PERMITTEE:
Hillsborough County

Permit Number: PSD-FL-121
Expiration Date: March 31, 1988

SPECIFIC CONDITIONS:

5. Grease, scum, grit screenings or sewage sludge shall not be charged into the solid waste to energy facility boilers.

6. Electrostatic Precipitator

The electrostatic precipitator shall be designed and constructed to limit particulate emissions to no more than 0.021 grains per dscf corrected to 12% CO_2.

7. Stack Monitoring Program

The permittee shall install and operate continuous monitoring devices for stack oxygen and opacity. The monitoring devices shall meet the applicable requirements of Rule 17- 2.710, FAC, 40 CFR Part 60, Subparts A and D, Sections 60.13 and 60.45 respectively, except that emission rates shall be calculated in units consistent with emission limits in this permit. The conversion procedure shall be approved by DER.

8. Reporting

a. A copy of the results of the stack tests shall be submitted within forty-five days of testing to the DER Southwest Florida District Office, the Hillsborough County Environmental Protection Commission (HCEPC) and EPA Region IV.

b. Stack monitoring shall be reported to HCEPC, the DER Southwest District Office and EPA Region IV on a quarterly basis in accordance with Section 17-2.710, FAC, and 40 CFR, Part 60, Subsection 60.7.

9. Fuel

The Resource Recovery Facility shall utilize refuse such as garbage and trash (as defined in Chapter 17-7, FAC) but not sludge from sewage treatment plants as its fuel. Use of alternate fuels would necessitate application for a modification to this permit.

PERMITTEE:
Hillsborough County

Permit Number: PSD-FL-121
Expiration Date: March 31, 1988

SPECIFIC CONDITIONS:

10. This permit shall supercede the NOx and acid mist emission limitations and testing requirements as contained in permit PSD-FL-104.

Issued this 14 day of Oct., 1987

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

Dale Twachtmann

Dale Twachtmann, Secretary

ATTACHMENT 4

CARLTON, FIELDS, WARD, EMMANUEL, SMITH, CUTLER & KENT, P. A.
ATTORNEYS AT LAW

ONE HARBOUR PLACE
P. O. BOX 3239
TAMPA, FLORIDA 33601
(813) 223-7000

CNA BUILDING
P. O. BOX 1171
ORLANDO FLORIDA 32802
(305) 849-0300

200 EAST GOVERNMENT ST.
P. O. BOX 12426
PENSACOLA FLORIDA 32582
(904) 434-0142

FIRST FLORIDA BANK BUILDING
P. O. DRAWER 190
TALLAHASSEE, FLORIDA 32302
(904) 224-1585

FLORIDA NATIONAL BANK TOWER
P. O. BOX 4700
JACKSONVILLE, FLORIDA 32201
(904) 354-1600

DER
AUG 11 1987
BAQM

PLEASE REPLY TO:
Tallahassee

August 10, 1987

Clair H. Fancy
Deputy Chief
Bureau of Air Quality Management
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Hillsborough County resource recovery facility; DER File No. PSD-FL-121

Dear Mr. Fancy:

This law firm represents Hillsborough County in the above-referenced case. On behalf of Hillsborough County, we are submitting the following comments concerning the Intent to Issue, Technical Evaluation, Preliminary Determination and draft permit issued by the Department of Environmental Regulation (DER) on July 14, 1987.

For the purposes of this submittal, words which have been underlined should be added to the draft document. Words which have been stricken should be deleted.

Intent to Issue

Page 1, paragraph 2, should state that the County applied for a permit modification for "particulate emissions from the existing refuse to energy facility . . . ."

Technical Evaluation and Preliminary Determination

1. Page 1, paragraph 1. Hillsborough County believes that its first PSD permit was properly issued pursuant to the Florida Electrical Power Plant Siting Act. The County does not agree

Clair Fancy
August 10, 1987
Page Two

with the statements in the Preliminary Determination which suggest that the Florida PSD regulations, State Implementation Plan, Power Plant Siting Act, or original Hillsborough County PSD permit were not valid.

2. Page 1, paragraph 1. For purposes of completeness, the Preliminary Determination should discuss the PSD permit (PSD-FL-104) that was issued by the United States Environmental Protection Agency (EPA). Specifically, a preliminary determination was prepared and public comments were solicited by DER on April 6, 1986. DER issued a final determination and recommended issuance of the permit on May 21, 1986. A second PSD permit (PSD-FL-104) for the County's facility was issued by EPA on July 7, 1986.

3. Page 2, paragraph 1. The Preliminary Determination should state that the resource recovery facility has been built. It is no longer a "proposed" project.

4. Page 2, paragraph 2. The Preliminary Determination should be revised to show that "The ERF is ~~will be~~ located . . ." near Faulkenberg Road. Since the site has been the scene of construction activity for the last 2 ½ years, DER should delete the statement that "[t]he site has been recently used as improved pasture for cattle grazing."

5. Page 2, paragraph 3. "The ~~proposed~~ site of the Hillsborough County ERF" is in an area designated as nonattainment for ozone.

6. Pages 2-3, Section II, Rule Applicability. Hillsborough County has requested modifications to certain permit conditions for the resource recovery facility. In the Preliminary Determination, DER classified the County's request as a major modification to a major source. We are not sure whether EPA will agree with DER's decision. Since we have had problems in the past with EPA's approvals of this project, we would like to ensure that EPA approves the proposed DER procedure and decision in this case. Accordingly, we respectfully request the Department to obtain a letter or other written statement from EPA acknowledging that: (a) DER's characterization of the County's request is appropriate; (b) DER followed the proper procedure when evaluating the County's request; and (c) DER's decision is appropriate. We believe this issue is extremely important because we do not want EPA to subsequently challenge the Department's activities in this case.

7. Page 8, paragraph 3, Modelling Methodology. It should be noted that the prior modelling for the facility utilized a conservative approach. The stack parameters and emission rates were based on a maximum facility capacity of 1,760 tons per day and 100% facility availability. As currently constructed, however, the plant will normally handle approximately 1200 tons per day. In addition, it is generally assumed that resource recovery facilities will only be available approximately 85% of the time.

8. Page 10, paragraph 2. The predicted maximum ambient air quality impact for the proposed emissions of NOx is 1 ug/m^3. The preliminary determination incorrectly states that the impact will be 11 ug/m^3.

Draft PSD Permit

1. We are concerned about DER's plan to issue a new permit (PSD-FL-121), rather than modify the existing PSD permit (PSD-FL-104). We believe it would be simpler for DER to issue a permit modification that only addresses the specific changes that will be affected by the Department's proposed action. Accordingly, we believe it is unnecessary for the Department to repeat all of the general conditions and specific conditions that have been incorporated into the draft PSD permit (PSD-FL-121). For ease of reference, we have prepared a draft permit and attached it as Exhibit A.

2. Page 1, paragraph 3. The draft permit should expressly state that the emissions limits and testing protocol for sulfuric acid mist have been deleted. As written, the draft permit appears to include the emission limits and testing methods for sulfuric acid mist.

3. Page 4, pagraph 13. All three of the appropriate spaces should be marked to signify that this permit constitutes a determination of BACT, PSD, and NSPS.

4. Page 6, paragraph (4). This requirement should be modified as follows:

> Each of the emission limits in conditions (1) and ~~through~~ (3) is to be expressed as a three hour average . . . The concentration standards in conditions (1) ~~(2)~~ and (3) are included as the primary compliance limit . . . .

Clair Fancy
August 10, 1987
Page Four

5. Page 7. A new paragraph 1.a.(7) should be added. It should expressly state that the emission limitation for sulfuric acid mist has been deleted.

6. Page 8, paragraph 1.c.(2)g. Method 7E should be used to determine compliance for nitrogen oxides rather than Method 7.

Please feel free to call me if you have any questions.

Sincerely,

David S. Dee

David S. Dee

cc: Bill Thomas
Daryl Smith
Joe Mount
Emmy Acton
Richard Seelinger
Bob Hauser
Don Elias
Bill Gillen

DSD/vc:Hills-RR

EXHIBIT A

DRAFT PSD PERMIT MODIFICATION
FOR HILLSBOROUGH COUNTY RESOURCE RECOVERY FACILITY
(PSD-FL-104)

Page 1, Paragraph 3

This modification to Permit No. PSD-FL-104 addresses the increased emissions of nitrogen oxides and sulfuric acid mist from the stack at the resource recovery facility. It also addresses the particulate emissions from the ash residue facility and dust suppression baghouse. Except as expressly provided in the specific conditions contained herein, all of the other provisions of Permit No. PSD-FL-104 remain in effect.

Specific Conditions

1. Specific Condition 1.a.(5) in Permit No. PSD-FL-104 establishes an emission limitation for nitrogen oxides. It is modified to read as follows:

   (5) Nitrogen Oxides: 0.34 gr/dscf-12%, or 6.4 lb/ton, whichever is more restrictive.

2. Specific Conditions 1.a.(9) and 1.b.(2)i concerning sulfuric acid mist emission limitations and compliance test requirements are deleted.

3. Pursuant to Rule 17-2.700(3)d, FAC, a standard of 5% opacity is hereby set for the minor particulate source control equipment/baghouse (i.e., the ash residue building dust suppression system). The compliance test requirements for the ash handling facility will be waived in accordance with Rule 17-2.700(3)d, FAC.

DSD/vc:Hills-RR2

Copied: CHF/BT
Barry Andrews } 8/12/87 mr

ATTACHMENT 5

Appendix - I

OGDEN MARTIN SYSTEMS
OF HILLSBOROUGH INC.

40 LANE ROAD
CN 2615
FAIRFIELD, NEW JERSEY 07007-2615
(201) 882-9000

AN OGDEN COMPANY

TELECOPIED & SENT FEDERAL EXPRESS

August 14, 1987

DER
AUG 17 1987
BAQM

HC-0918L
C-1005

Mr. C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management
State of Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re:	Permit No.	PSD-FL-121
	Expiration Date:	March 31, 1988
	County:	Hillsborough
	Project:	Hillsborough County Resource Recovery Facility

Dear Mr. Fancy:

Ogden Martin Systems of Hillsborough, Inc. (OMSH) offers the following comments regarding the technical evaluation and preliminary determination in the draft permit to increase the allowable nitrogen oxides, sulfuric acid mist, and particulate emissions from the Resource Recovery Facility in Hillsborough County, Florida. Under Section I, of the Technical Evaluation and Preliminary Determination titled "Introduction," in paragraph two, OMSH would suggest changing the first sentence to read as follows:

> On May 1, 1987, Hillsborough County through Ogden Martin Systems of Hillsborough, Inc., applied to DER to increase the allowable nitrogen oxides (NO_x), and sulfuric acid mist emissions at the Hillsborough County ERF.

OMSH would similarly suggest changing the last sentence on the first page to read:

> Subsequently, on June 16, 1987, Hillsborough County through Ogden Martin Systems of Hillsborough, Inc., submitted an application to operate/construct dust suppression equipment that was added to the final design of the ash handling building to ensure that there would be no visible emissions from this plant area.

On the second page of the Introduction, OMSH would suggest deleting paragraph one in its entirety, since the wording is somewhat misleading. The paragraph refers to "the proposed project" whereas the project has been completed. The existing project consists of three boilers. The fourth boiler may or may not be added in the future; but, in any event, it has nothing to do with the original permit or any modification to date. If the paragraph is not deleted in its entirety, it is suggested that the second sentence of the paragraph be changed to read as follows:

> A future plant expansion could increase the total solid waste processing capacity of the plant to 1600 TPD.

Under Section IV, captioned "BACT Determination," OMSH would propose changing the second sentence of the first paragraph to read as follows:

> The ERF is designed to burn up to 1200 tons per day (TPD) of refuse at a heating value of 4500 BTU's per pound, which amount will increase or decrease, respectively, based upon lower or higher heating values, in each case, resulting in an electrical generating capacity of 29 megawatts.

The reason for this suggested change is that it more adequately reflects the burning capabilities of the facility, inasmuch as tonnage put through the unit decreases with higher heating value, and increases with lower heating value. The new recommended language more accurately reflects the capacity.

In the second paragraph under part IV, at the top of the page, it is recommended that the word "modified" be inserted in front of PSD.

Under Part V, captioned"Air Quality Analyses" in the subsection captioned "Analysis of Existing Air Quality," there is a major typographical error in the last paragraph in line two. The second sentence of the last paragraph should read"

> This value (1 ug/m^3) . . . .

Our copy has an 11 instead of a 1. The value is correct in Table V-2, but needs to be corrected in the explanatory comments.

OMSH recommends that paragraph three of the first page of the permit itself be reworded to segregate particulates from nitrogen oxides and sulfuric acid mist, in order to reflect that these pollutants are emitted from different parts of the plant. It is recommended that the first sentence be reworded to read as follows:

> This permit modification pertains to the increases of nitrogen oxides and sulfuric acid mist from the stack and the emission of particulates from the ash residue dust suppression baghouse.

The second sentence of the third paragraph on the first page of the permit needs to be reworded to reflect acceptance of the increased emissions for sulfuric acid mist. As the second sentence presently reads, only specific conditions 1.a.(3), 1.b., and 1.c.(1), are being modified. None of these sections deals with emissions of sulfuric acid mist. Since the third sentence states that all conditions other than the specific conditions addressed in paragraph two remain unchanged, the combination of the second and third sentences does not reflect approval of the increase in sulfuric acid mist.

Sincerely,

for

J.R. Treshler
Senior Project Manager

JRT:hn

cc: Mr. Bill Thomas

ATTACHMENT 6

Appendix - I

Attachment 4

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

SEP 1 . 1987

DER
SEP 18 1987
BAQM

4APT/APB-aes

Mr. C. H. Fancy, P.E., Deputy Chief
Bureau of Air Quality Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301-2400

Re: Hillsborough County PSD-FL-120

Dear Mr. Fancy:

This is to acknowledge receipt of your July 14, 1987, PSD preliminary determination modifying emissions limits for sulfuric acid mist and nitrogen oxides, and the addition of particulate emission limits for the newly proposed ash handling emission control equipment.

We concur with your determination and permit conditions as indicated. However, the determination should make clear that the significant net emissions increase in nitrogen oxides and sulfuric acid mist for which this source is undergoing PSD review are not the result of a physical change or change in operation at the facility. The "Rule Applicability" section of the determination should provide explanation that the increases are requested permit modifications due to an error in estimating emissions in the construction permit application and that permit modifications resulting in significant net emissions increases require the issuance of a PSD permit. Although this modification requires that a BACT determination be performed for nitrogen oxides and sulfuric acid mist, the determination may consist of the previous BACT determination contained in the original EPA issued PSD permit without further evaluation of present BACT determinations (e.g. acid gas controls). This allowance is made due to the fact that emissions increases are not a result of a physical change in the plant or its operation, and are not due to the failure of prescribed pollution control equipment required in the EPA issued PSD permit.

Please note that the FDER issued PSD permit (PSD-FL-120) will supersede the emission limits for nitrogen oxides and sulfuric acid mist, as contained in the original EPA issued PSD permit (PSD-FL-104). Once the FDER PSD permit is issued, the facility will no longer be required to meet the nitrogen oxides, and sulfuric acid emissions limits contained in the EPA PSD permit PSD-FL-104 for reasons cited in your final determination.

We request that you submit copies of the final determination, which will address our concerns above, and permit when they are issued. If you have any questions, you may contact me or Wayne J. Aronson of my staff at (404) 347-2864.

Sincerely,

Wayne J Aronson / Acting for

Bruce P. Miller, Chief
Air Programs Branch
Air, Pesticides, and Toxics
Management Division

cc: Mr. Roger P. Stewart, Director
Hillsborough County Environmental
Protection Commission
1900 9th Avenue
Tampa, Florida 33605

Mr. William A. Gillen, Jr.
P.O. Box 3324
Tampa, Florida 33601

Copied: Clair Fancy
Barry Andrews
Pradeep Raval } 9/21/87

ATTACHMENT 7

Appendix - I

United States Department of the Interior
FISH AND WILDLIFE SERVICE

MAILING ADDRESS:
Post Office Box 25486
Denver Federal Center
Denver, Colorado 80225

STREET LOCATION:
134 Union Blvd.
Lakewood, Colorado 80228

IN REPLY REFER TO:

SEP 22 1987

DER
SEP 28 1987
BAQM

Mr. Bill Thomas
Bureau of Air Quality Management
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Thomas:

We appreciate the opportunity to review and comment on the Technical Evaluation and Preliminary Determination for the proposed modification of the Prevention of Significant Deterioration permit for the Hillsborough County Resource Recovery facility. The Hillsborough County facility, located near Tampa, Florida, is approximately 80 km south of Chassahowitzka National Wildlife Refuge, a class I air quality area administered by the U.S. Fish and Wildlife Service. Although we do not expect resulting emission increases from the proposed permit modifications to significantly impact the air quality or air quality related values of the refuge, we have several comments regarding the proposed modifications. These comments are discussed in the enclosed technical review document.

If you have any questions regarding our comments please contact Wayne King of our Air Quality staff at 303-969-2806.

Sincerely,

Nelson B. Kverno
Nelson B. Kverno
Acting Regional Director

Enclosure

copied:
B. Andrews
T. Rogers
P. Raval
J. Campbell, HCEPC
CHF / BT
9-24-87 RRN

Technical Review of the Hillsborough County
Resource Recovery Facility Permit Modifications

The Hillsborough County Resource Recovery Facility (RRF) was originally granted a Prevention of Significant Deterioration (PSD) permit in July 1986 and consists of a mass burn boiler which can burn up to 1200 tons per day (TPD) of solid municipal waste. The Hillsborough County facility is located near Tampa, Florida, approximately 80 km south of Chassahowitzka National Wildlife Refuge, a class I air quality area administered by the U.S. Fish and Wildlife Service. The steam from the boiler would be sent to a turbine generator with a capacity of 29 megawatts (gross). Generated electricity would be transmitted to the Tampa Electric Company for distribution. Hillsborough County is now requesting an increase in the permitted nitrogen oxide (NO_x) and sulfuric acid mist (H_2SO_4) emission limitations. The permitted, requested, and resulting emission increases are as follows:

Pollutant	Permitted (TPY)*	Requested (TPY)	Increase (TPY)
NO_x	657	1396	739
H_2SO_4	17	306	289

*Tons Per Year

Based on the proposed emission increases, the requested modification of the Hillsborough County RRF permit constitutes a major modification of an existing major source and is subject to PSD review. Although we do not expect resulting emission increases from the proposed permit modifications to significantly impact the air quality or air quality related values of the refuge, we have several comments regarding the proposed modifications. These comments are discussed below.

The Hillsborough facility was initially issued a PSD permit which limited the emissions of NO_x and H_2SO_4 to 0.16 grains per dry standard cubic foot (gr/dscf) and 0.0040 gr/dscf corrected to 12% CO_2, respectively. Hillsborough County's request to modify the NO_x and H_2SO_4 emission limitations is based on test data that were unavailable at the time the permit was issued. Based on these data, Hillsborough County claims that they will be unable to meet the permitted NO_x and H_2SO_4 levels. Consequently, Hillsborough County has proposed that the NO_x limitation be increased from 0.16 gr/dscf to 0.34 gr/dscf, and the H_2SO_4 limitation be increased from 0.004 gr/dscf to 0.072 gr/dscf. The State of Florida has agreed to raise the NO_x limitation to 0.34 gr/dscf, or 6.4 lb NO_x/ton of refuse burned, whichever is more restrictive. For H_2SO_4, the State is deleting the emission limitation altogether based on the recommendation by EPA Region 4 that because no acceptable test method exists for measuring H_2SO_4 emissions from municipal solid waste incinerators, an emission limitation should not be specified in the permit.

Review of the NO_x emission test data provided by Hillsborough County shows that similar resource recovery facilities have NO_x concentrations similar to the preliminary test results at the Hillsborough County facility. For example, the Wurzburg facility tested at 318 ppm and the Stockholm facility tested at 311 ppm, compared to 327 ppm for the Hillsborough County facility. However, as a basis for the revised NO_x limitation, it appears Hillsborough County selected the permitted rate applicable to the Tulsa facility (404 ppm).

In addition, three other proposed mass burn resource recovery facilities, Broward South, Broward North, and Lake County, were recently permitted by the State of Florida at 5.0 lb NO_x/ton refuse burned. The 327 ppm concentration obtained from preliminary test results at the Hillsborough County facility converts to approximately 5.2 lb NO_x/ton of refuse burned, whereas the proposed 404 ppm limitation corresponds to 6.4 lb/ton. The proposed limitation for the Hillsborough County facility appears to be inconsistent with the preliminary test data from the facility and three other recent permitting decisions by the State which limited facilities to 5.0 lb/ton.

In conclusion, based on the information provided in the Technical Evaluation and Preliminary Determination for the modification of the Hillsborough County RRF permit, we recommend that the revised NO_x permit limit be based on (1) the preliminary test results of the Hillsborough facility of 5.2 lbs NO_x/ton refuse burned (327 ppm), or (2) the permitted NO_x emission limits set for the Broward South, Broward North and Lake County facilities (5.0 lbs NO_x/ton refuse burned). Another option available to the State is to leave the permit as it is until actual emission data from the facility are available. Rather than basing the revised NO_x limit on emissions data from other facilities or preliminary test results from the Hillsborough County facility, the State could wait until the Hillsborough facility achieves normal operation and conducts stack testing, and then modify the permit accordingly.

ATTACHMENT 8

ENVIRONMENTAL PROTECTION COMMISSION
HILLSBOROUGH COUNTY

COMMISSION
RODNEY COLSON
PAM IORIO
RUBIN E. PADGETT
JAN KAMINIS PLATT
HAVEN POE
JAMES D. SELVEY
PICKENS C. TALLEY II

ROGER P. STEWART
DIRECTOR

1900 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

October 2, 1987

Mr. Clair Fancy, P.E., Deputy Chief
Florida Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Hillsborough County RRF
RE: Proposed PSD Permit No. PSD-FL-121

Dear Mr. Fancy:

Thank you for still allowing our Agency the opportunity to comment on the Bureau's proposed permit for our county's resource recovery facility at Faulkenburg Road.

Our comments on the proposed permit are as follows:

1. Proposed specific condition 1.b. states PM emissions from from the ash handling facility shall not exceed 1.63 pounds per hour. Furthermore, condition 1.c.(1) mentioned Method 5 requirements on this source are waived by limiting the emissions to 5% opacity pursuant to Section 17-2.700(3)(d), F.A.C..

We recommend the above statements be changed to read:

1.b. In accordance with Subsection 17-2.650(2)(c)11., b.,F.A.C., the maximum allowable emissions for the ash handling baghouse based on design flow of 9500 ACFM shall not exceed:

Pollutant	lbs/hr	tons/yr	Emission Limitation
Particulate Matter	2.44	10.7	0.03 gr/dscf
Visible Emissions			None (visible emissions less than or equal to 5% opacity)

1.c.(1) Change last sentence of first paragraph to: "EPA Method 5 testing requirements on the ash handling baghouse exhaust shall be waived pursuant to Section 17-2.700(1)(d)6.,F.A.C."

DER
OCT 5 1987
BAQM

Appendix - I

Add the following to Section II. A. 3. as 'd'.

This baghouse shall be tested for visible emissions within 30 days of issuance of this permit and annually thereafter. The DER Method #9 test interval on this source shall be thirty (30) minutes. Two copies of the test data shall be submitted to the Air Section of the Environmental Protection Commission of Hillsborough County within 45 days of testing.

The above conditions are being recommended to clearly indicate the source is in a non-attainment area for particulates. As such, RACT requirements should be implemented. Furthermore, since no compliance test has yet been conducted on this baghouse, another sentence was added to require an annual Method 9 on the baghouse.

2. We recommend specific condition 9.b. be revised to require the permittee to submit quarterly reports within a certain time frame. Locally, we require all sources subject to 40 CFR 60.7 to submit excess emissions reports no later than 30 days from the end of each calendar quarter. We recommend this same time frame be used.

3. Specific condition 8 indicates annual compliance testing requirements are required for particulate matter and opacity. The operating permit for City of Tampa's RTE facility requires annual compliance testing requirements for particulate matter, opacity, SO2, NOx, and lead. Due to the varying nature of the garbage being burned, there is potential for SO2, NOx, and lead emissions to vary significantly from the results of the initial tests. Further, we feel it would be unfair to require different annual compliance tests between our two refuse to energy facilities. Both should have uniform testing requirements. We recommend condition 8 include annual testing requirements for SO2, NOx, and lead.

Your consideration of our input is appreciated. Please call me or Jerry Campbell if you have any questions.

Sincerely,

Victor San Agustin

Victor San Agustin
Senior Air Permitting Engineer
Environmental Protection Commission
of Hillsborough County

Pradeep Raval

cc:
Bill Thomas, CAPS/CHF, CAPS
Barry Andrews, BAQM
Bill Thomas, SWFDER

10/5/87

Appendix - I

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

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

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 Blairstone 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.

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

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

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.]**

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

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}

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

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= $[1/1+(CO/CO_2)]$ X 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 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 O_2. 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 SO_2 at an efficiency of 75 percent, or to not exceed a maximum emission rate of 29 ppmdv corrected to 7 percent O_2, 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 NOx emission rate of 205 ppmdv corrected to 7 percent O_2, 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.

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

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.

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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 <u>segregated loads</u> 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 <u>segregated loads</u> 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

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)]**

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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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
Be (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			
SO_2 (5) 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 (5) 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
NOx (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 NOx 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 % CO_2 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
SO_2: 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, H_2SO_4 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 Couty Environmental Protection Commisssion (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% O_2 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. <u>Test Procedures</u>: 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 operations and shall be scheduled to coincide with as much of the normal cleaning (soot blowing) cycle as practicable. Initial performance tests for SO_2 and NOx 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 (SO_2) 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 determined 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 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
(SO_2 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) 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 maximun 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;

(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 measured 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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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.

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 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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SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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.

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(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 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.]

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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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 appropiate 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 extend 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.

Appendix - I

Florida Department of Environmental Protection

Memorandum

BAR

TO: Howard Rhodes

THRU: Jim Pennington
Al Linero

FROM: Teresa Heron T.H.

DATE: June 26, 1998

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

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

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT MODIFICATION

In the Matter of an
Application for Permit Modification

Mr. Daniel A. Kleman County Administrator Hillsborough County 601 East Kennedy Tampa, Florida 33602	Resource Recovery Facility PSD Permit No. PSD-FL-121(C) DEP File No. 0570261-002-AC Air Pollution Control Project Hillsborough County

Enclosed is the Final Permit Modification Number PSD-Fl-121 (C) and 0570261-002-AC. This construction permit modification is to revise and clarify several specific conditions applicable to the resource recovery facility located at 350 Falkenburg Road, Tampa, Hillsborough County, Florida. The changes did not require further review pursuant to PSD and a Best Available Control Technology determination was not required. This permit modification is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

C.H. Fancy, P.E., Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT MODIFICATION (including the FINAL permit Modification) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 7/20/00 to the person(s) listed:

Daniel Kleman, County Administrator *
Mayor, City of Tampa
Gregg Worley, EPA
John Bunyak, NPS
Rebeca S. Bigari, OMS
Jerry Campbell, HCEPC
Bill Thomas, DEP SWD
Buck Oven

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Charlotte J. Hayes 7/20/00
(Clerk) (Date)

Appendix - I

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

PERMITTEE:

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

FID No.	0570261
PSD No.	PSD-FL-121 (C)
SIC No.	4953
PPS No.	PA 83-19
Expires:	December 19, 2000

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

Howard L. Rhodes, Director
Division of Air Resources
Management

AIR CONSTRUCTION PERMIT PSD-FL-121(C) 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. The electric power is introduced into the electric grid and is sold. 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:

- 05/28/00 Notice of Intent published in The Tampa Tribune
- 05/03/00 Issued Notice of Intent to Issue Permit
- 04/05/00 Application deemed complete
- 04/05/00 Application received at the Bureau of Air Regulation

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:

- Permit Modification request received at the Bureau of Air Regulation on April 5, 2000.
- 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.

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

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 Blairstone 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.

AIR CONSTRUCTION PERMIT PSD-FL-121(C) and PA 83-19

SECTION II. EMISSION UNIT(S) GENERAL REQUIREMENTS

SUBSECTION B. CONSTRUCTION REQUIREMENTS

B.1 Unless otherwise indicated in this permit, the construction of the subject emissions unit (s) shall be in accordance with the design specifications stated in the application. Operation of the facility shall be in accordance with applicable provisions of the 40 CFR 60, Subpart Cb and with the emissions limits and process operating rates specified in the permit.

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 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.]**

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

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
100	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, 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}

AIR CONSTRUCTION PERMIT PSD-FL-121(C) and PA 83-19

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 facility has a design net steam energy of 1158 Btu/lb (1378.86 Btu/lb steam enthalpy – 220 Btu/lb feedwater enthalpy)}

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 <u>Process Operating Rates</u>

The maximum individual MWC throughput shall not exceed 460 tons MSW per day (1380 tons per day entire facility), 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.3 <u>Load Level :</u> *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 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 O_2. 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 SO_2 at an efficiency of 75 percent, or to not exceed a maximum emission rate of 29 ppmdv corrected to 7 percent O_2, 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 NOx emission rate of 205 ppmdv corrected to 7 percent O_2, 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.

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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 knowingly 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 61.31(g).

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.

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 on a calendar month basis 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 on a calendar month basis 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 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.

(i) Waste materials specifically authorized in (a) through (g) above do not require Department approval.

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:

		EQUIVALENT EMISSIONS		
POLLUTANT	**40 CFR 60, SUBPART Cb 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
Be (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	0 020	0.087
SAM Sulfuric Acid Mist	To be demonstrated initially. Not to exceed 0.072 gr/dscf corrected to 12 % CO_2			
SO_2(5) Sulfur Dioxide	29 ppmdv or 75% reduction by weight or volume corrected to 7% O_2 (whichever is less stringent)	0.190	32.86	143.9
HCl(5) Hydrochloric Acid	29 ppmdv or 95% reduction corrected to 7% O_2 (whichever is less stringent)	0.099	17.00	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
NOx (2) Nitrogen Oxides	205 ppmdv corrected to 7% O_2	0.34	58.63	256
VOC (4) Volatile Organic Compounds	To be demonstrated during the initial performance test.			

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]

Permitting Note: These equivalent emissions (lb/hr and lb/mmBtu) are listed for the purposes of providing information, to indicate the potential to emit (TPY) and are not emission compliance standards.

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Notes:

(1) This limit for PM is more restrictive than the emission limit for PM in 40 CFR 60.43b

(2) The NOx 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: 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 % CO_2 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.

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
SO_2: 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)] for SO_2, NO_x and CO shall be conducted pursuant to 40 CFR 60.58b, Compliance and Performing 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, H_2SO_4 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 Hillsborough 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.]**

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% O_2 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.

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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 operations and shall be scheduled to coincide with as much of the normal cleaning (soot blowing) cycle as practicable. Initial performance tests for SO_2 and NOx 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 (SO_2) 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)]**

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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 determined 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)]**

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 60 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 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.
(SO_2 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).
Unless required in 40 CFR 60, Subpart Cb, operational data monitoring systems (steam production, baghouse inlet temperature measurement, carbon injection system and power

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generation) shall be calibrated annually and operated in accordance with good engineering practice.
[Rule 62-204.800(8), F.A.C.; Rule 62-4.070 (3), 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) 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 date 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 maximun 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;
(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

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malfunction (if known) and the corrective action taken or preventive measured 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 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.

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 days in the current calendar month. At the end of each calendar month, the resultant monthly total weight of *tires* shall be divided by the total weight of all waste materials received in the same calendar month, and the resultant number shall be multiplied by 100 to express the ratio in percentage terms. The percentage computed shall be compared to the 3% limitation.

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

AIR CONSTRUCTION PERMIT PSD-FL-121(C) and PA 83-19

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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 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)]

AIR CONSTRUCTION PERMIT PSD-FL-121(C) and PA 83-19

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION C. SPECIFIC CONDITIONS:

The following Specific Conditions apply to the following emissions units:

EMISSIONS UNIT NO.	EMISSIONS UNITS DESCRIPTION
100	Ash Building and Handling System
101	Lime Silo
102	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.

(c) 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.]

AIR CONSTRUCTION PERMIT PSD-FL-121(C) and PA 83-19

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
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
100	Ash Building and Handling System
101	Lime Silo
102	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 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.]

AIR CONSTRUCTION PERMIT PSD-FL-121(C) and PA 83-19

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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 appropiate 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.

AIR CONSTRUCTION PERMIT PSD-FL-121(C) and PA 83-19

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 extend 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.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Mr. Daryl Smith, Director
Hillsborough County
601 East Kennedy Boulevard
Tampa, Florida 33602

DEP File No. 0570261-004-AC
Dolomitic Lime Storage Silo
Hillsborough County

Enclosed is Final Permit Number 0570261-004-AC. This permit authorizes Hillsborough County to construct a Dolomitic Lime Storage Silo at its Hillsborough County Resource Recovery Facility located at 350 Falkenburg Road, Tampa, Hillsborough County. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes, by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

C. H. Fancy, P.E., Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 3/27/02 to the person(s) listed:

Mr. Daryl Smith, Director, Hillsborough County Solid Waste Management Department *
Mr. Jason Gorrie, P.E., Camp Dresser & McKee
Mr. Bill Thomas, P.E., DEP SWD

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) 3/27/02 (Date)

Appendix - I

Department of Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

PERMITTEE

Hillsborough County
601 East Kennedy Boulevard
Tampa, Florida 33602

Permit No.	0570261-004-AC
Project	Dolomitic Lime Storage Silo
SIC No.	4953
Expires:	December 31, 2002

Authorized Representative:

Daryl Smith, Director, Hillsborough County Solid Waste Management Department

PROJECT AND LOCATION

This permit authorizes Hillsborough County, to construct a new Dolomitic Lime Storage Silo at the existing Hillsborough County Resource Recovery Facility.

This facility is located at 350 Falkenburg Road, Tampa, Hillsborough County. The UTM coordinates are: Zone 17; 368.2 km E and 3092.7 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. The above named permittee is authorized to construct the emissions units 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).

APPENDICES

The attached appendix is a part of this permit:

Appendix GC General Permit Conditions

for Howard L. Rhodes, Director
Division of Air Resources Management

"More Protection, Less Process"

Printed on recycled paper.

FACILITY AND PROJECT DESCRIPTION

The existing facility consists of three municipal waste combustors (MWCs) having 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. Natural gas fired auxiliary burners and combustion control systems with continuous monitoring devices for combustion and process parameters and SO_2, NOx and CO are installed to improve combustion efficiency and control. The air pollution control equipment consists of a spray dryer absorber, a fabric filter, and activated carbon injection system. A selective non-catalytic reduction system (SNCR) and auxiliary gas burners are installed in the furnaces. The facility also has an ash building and handling system and a new lime storage silo and activated carbon storage silo.

The applicant is proposing to install an additional 3000 cubic feet capacity silo for the storage of dolomitic lime. The lime is used as an ash conditioning agent at the resource recovery facility. Emissions are limited to the pneumatic loading of the silo and will be controlled by a baghouse bin vent filter. The applicant did not seek any relaxation in currently enforceable conditions in its other existing emissions units.

The emissions increases associated with this project were estimated as follows in tons per year. No offsetting emissions were assumed in this estimate.

Pollutant	Net Increase [1]	PSD Significance	Subject to PSD?
PM/ PM_{10}	0.39	25/15	No
SO_2	N/A	40	No
NOx	N/A	40	No
CO	N/A	100	No
VOC	N/A	40	No

[1] Assume 6.32 pounds per hour, when operated as described by the permit application.

The facility information, project scope, emissions and rule applicability are described in detail in the Department's Technical Evaluation and Determination.

REVIEWING AND PROCESS SCHEDULE

November 2, 2001	Received permit application (no application fee required)
December 3, 2001	Application complete
February 27, 2002	Distributed Notice of Intent to Issue and supporting documents
March 12, 2002	Notice of Intent published in The Tampa Tribune

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.

- Permit application
- Department's Technical Evaluation and Determination
- Department's Intent to Issue

AIR CONSTRUCTION PERMIT

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

The following specific conditions apply to all emissions units at this facility addressed by this permit.

ADMINISTRATIVE

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 at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, phone number 850/488-0114. All documents related to reports, tests, minor modifications and notifications shall be submitted to the Department's Southwest District office at 3804 Coconut Palm Drive, Tampa, Florida 33619-8218, and phone number 813/744-6100.
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, F.S. [Rule 62-4.160, F.A.C.]
3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit 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.; Chapters 62-4, 62-110, 62-204, 62-212, 62-213, 62-296, 62-297, F.A.C.; and, the Code of Federal Regulations Title 40, Part 60, adopted by reference in the F.A.C. regulations. 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. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. 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. [Rule 62-4.080, F.A.C.]
6. Expiration: This air construction permit shall expire on December 31, 2002. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit. [Rules 62-210.300(1), 62-4.070(4), 62-4.080, and 62-4.210, F.A.C]
7. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit must be obtained prior to the beginning of construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
8. Title V Operation Permit Required: This permit authorizes construction and/or installation of the permitted emissions unit and initial operation to determine compliance with Department rules. A revision to the Title V operation permit is required for regular operation of the permitted emissions unit. The owner or operator shall apply for a Title V operation permit at least ninety days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a

Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Southwest District office. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

OPERATIONAL REQUIREMENTS

9. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department's Southwest District office. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. [Rule 62-4.130, F.A.C.]

10. Circumvention: No person shall circumvent any air pollution control device or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

11. Excess Emissions: This permit does not change any authorization for excess emissions provided by other Department permits for other emissions units. The following excess emissions provisions of state rule apply to this emissions unit (emissions unit 106) as specified below.

    (a) Excess emissions resulting from start-up and shutdown are permitted for emissions unit 106 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.

    (b) Excess emissions resulting from malfunction of this 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.

    (c) 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 start-up, shutdown, or malfunction shall be prohibited.

    [Rules 62-210.700(1), (4) and (5), F.A.C.]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

12. Determination of Process Variables: [Rule 62-297.310(5), F.A.C.]

    (a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

    (b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight 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.

REPORTING AND RECORD KEEPING REQUIREMENTS

13. Duration of Record Keeping: 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. 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 for this permit. These materials shall be retained at least five years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule. [Rules 62-4.160(14)(a)&(b) and 62-213.440(1)(b)2.b., F.A.C.]

14. Excess Emissions Report: In case of excess emissions resulting from malfunction, the owner or operator shall notify the Department's Southwest District office 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 Department 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 Department. [Rules 62-4.130 and 62-210.700(6), F.A.C.]

15. Annual Operating Report for Air Pollutant Emitting Facility: The Annual Operating Report for Air Pollutant Emitting Facility shall be completed each year and shall be submitted to the Department's Southwest District office and, if applicable, the appropriate local program by March 1 of the following year. [Rule 62-210.370(3), F.A.C.]

The following specific conditions apply to the following emissions units after construction.

EMISSIONS UNIT NO.	EMISSIONS UNIT DESCRIPTION
106	Dolomitic Lime Storage Silo

Lime used for ash conditioning for each municipal waste combustor is stored in a silo. Emissions from the silo are controlled by a baghouse.

{Permitting note(s): This emissions unit is regulated under Rule 62-296.310(b), F.A.C., General Visible Emissions Standard}

The following specific conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

1. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year.
[Rule 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

2. Particulate Matter. Particulate matter emissions shall not exceed 6.32 pounds per hour and 0.39 tons per year.
[Additional information received December 3, 2001]

3. Visible Emissions. Visible emissions shall not be equal to or greater than 20 percent opacity.
[Rule 62-296.320(b)1., F.A.C.]

Test Methods and Procedures

4. Particulate Matter. The test methods for particulate emissions shall be EPA Method 5 incorporated by reference in Chapter 62-297, F.A.C. **The permittee has elected to accept an alternate standard of five (5) percent opacity to waive the particulate matter compliance test requirement.**
[Rule 62-297.620(4), F.A.C.]

5. Visible Emissions. EPA Method 9 shall be used to determine opacity compliance pursuant to Chapter 62-297, F.A.C.
[Rule 62-297.401, F.A.C.]

6. In the case of an emissions unit which has the potential to emit less than 100 tons per year of particulate matter and is equipped with a baghouse, the Secretary or the appropriate Director of District Management may waive any particulate matter compliance test requirements for such emissions unit specified in any otherwise applicable rule, and specify an alternative standard of 5% opacity. The waiver of compliance test requirements for a particulate emissions unit equipped with a baghouse, and the substitution of the visible emissions standard, shall be specified in the permit issued to the emissions unit.

If the Department has reason to believe that the particulate weight emission standard applicable to such an emissions unit is not being met, it shall require that compliance be demonstrated by the test method specified in the applicable rule.
[Rule 62-297.620(4), F.A.C.]

7. Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operation at permitted capacity, which 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 emissions 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.
[Rules 62-297.310(2) & (2)(b), F.A.C.]

8. Applicable Test Procedures.
(a) Required Sampling Time.

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
   a. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.
   b. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.
   c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

[Rule 62-297.310(4), F.A.C.]

9. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

a Did not operate;

4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

a. Visible emissions, if there is an applicable standard;

b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and

c. Each NESHAP pollutant, if there is an applicable emission standard.

9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved]

Recordkeeping and Reporting Requirements

10. Test Reports.
(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
(b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
(c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.

21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rules 62-213.440 and 62-297.310(8), F.A.C.]

APPENDIX GC

GENERAL PERMIT CONDITIONS [RULE 62-4.160, F.A.C.]

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 [RULE 62-4.160, F.A.C.]

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 extend 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 ( ); and
(c) Compliance with New Source Performance Standards ( ).

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.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF PERMIT

In the Matter of an
Application for Permit by:

Mr. Barry M. Boldissar, Director
Hillsborough County
Department of Solid Waste Management
601 East Kennedy Boulevard
Tampa, Florida 33602
______________________________/

DEP File No. 0570261-007-AC
Permit No. PSD-FL-369 (PA83-19A)
Hillsborough County Resource Recovery Facility
Unit 4, Nominal 600 TPD Municipal Waste Combustor
Hillsborough County

Enclosed is Final Permit Number 0570261-007-AC and PSD-FL-369 for the construction of a nominal 600 tons per day municipal waste combustor designated as Unit 4 at the Hillsborough County Resource Recovery Facility Site. The site is located at 350 North Falkenburg Road in Tampa, Hillsborough County. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

Trina L. Vielhauer

Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT (including the Final permit) was sent by certified mail (*) and copies were sent by U.S. Mail or electronic mail before the close of business on 10/3/06 to the person(s) listed:

Barry M. Boldissar, Hillsborough County DSWM*
Jim Norman, Chair, Hillsborough County BCC*
Pam Iorio, Mayor, City of Tampa
Glenn Hoag, Covanta Hillsborough, Inc.*
Gregg Worley, U.S. EPA Region 4, via e-mail
John Bunyak, National Park Service, via e-mail
Steven L. Palmer, P.E., DEP PPSO, via e-mail
Mara Nasca, DEP SWD, via e-mail
Paul Darst, DCA, via e-mail
Jerry Campbell, P.E. Hillsborough Co. EPC, via e-mail
Jason M. Gorrie, P.E., CDM, via e-mail

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) 10/3/06 (Date)

FINAL

PERMITTEE

Hillsborough County Department Solid Waste Management 601 East Kennedy Boulevard Tampa, Florida 33602	**DEP File No.:** 0570261-007-AC **Permit No.:** PSD-FL-369
	Facility ID No.: 0570261
	Project: Resource Recovery Facility Unit 4

PROJECT AND LOCATION

This permit authorizes the construction of a nominal 600 ton per day (TPD) Municipal Waste Combustor referred to as Unit 4 at the existing facility.

The existing facility, Hillsborough County Resource Recovery Facility (HCRRF), is located at 350 N. Falkenburg Road, Tampa, Hillsborough County. The UTM coordinates are Zone 17, 368.2 km East and 3092.7 km North; Latitude: 27° 57' 14" North and Longitude: 82° 40' 22" West.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the work specified 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.

Appendices

The following Appendices are attached as part of this permit.

Appendix A - NSPS Subpart A, Identification of General Provisions

Appendix BD - BACT Determination

Appendix Eb - NSPS Subpart Eb, Standards of Performance For Large Municipal Waste Combustors

Appendix GC - General Conditions

Appendix SC - Standard Conditions

Expiration Date: December 31, 2009

10/2/06

Joseph Kahn, P.E. Effective Date
Director
Division of Air Resource Management

JK/TLV/AAL/sms

FACILITY DESCRIPTION

The existing facility, Hillsborough County Resource Recovery Facility (HCRRF), is located at 350 N. Falkenburg Road, Tampa, Hillsborough County.

The existing facility consists of three municipal waste combustors (MWCs), each having a nominal design rate capacity of 400 tons MSW (municipal solid waste) 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 facility is owned by Hillsborough County and is currently operated by Covanta Hillsborough, Inc. a subsidiary of Covanta Energy Corporation. The Hillsborough County Resource Recovery Facility began operation in 1987.

PROJECT

The permittee, Hillsborough County, proposes to construct a new 600 ton per day (TPD) Municipal Waste Combustor referred to as Unit 4 at the existing facility. The nominal design rate capacity is 600 tons MSW per day, with a nominal heat input of 288 MMBtu per hour and nominal steam production of 163,780 pounds per hour (maximum 190,000 lb/hr). The new unit will be equipped with two natural gas-fired auxiliary burners, each with a nominal heat input of 50 MMBtu per hour. The new unit will be installed at the existing site. The flue for the new boiler is already encased in the existing stack. With the addition of the fourth unit, the existing 220 feet tall stack will contain four active flue streams. With the addition of this unit, the site capacity will increase from approximately 1,200 TPD to 1,800 TPD. The site's steam electric generating capacity will be increased from 39 MW to 47 MW (nominal).

The existing ash building and handling system will be expanded. Two new lime storage silos and a new activated carbon storage silo will be constructed for Unit 4.

Unit 4 will be a mass burn unit incorporating much of the same technology as the existing units including: combustion on a reverse-reciprocating grate system; ash discharge system; energy recovery through the furnace waterwall, superheater and economizers; electrical power production; and a pollution control system consisting of a spray dryer, fabric filter, activated carbon injection system and a selective non-catalytic reduction (SNCR). In addition, the new unit will incorporate flue gas recirculation for energy efficiency and pollution reduction.

REGULATORY CLASSIFICATIONS

Section 111, Clean Air Act, Standards of Performance for New Stationary Sources (NSPS): The new unit is a large Municipal Waste Combustor (MWC) unit subject to 40CFR60, Subpart Eb - Standards of Performance for New Stationary Sources and Emission Guidelines for Municipal Waste Combustors.

Section 112, Clean Air Act, Hazardous Air Pollutants (HAPs): The facility is a major source of HAPs. The maximum achievable control technology (MACT) requirements typically specified in the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for this industry were included in 40CFR60, Subpart Eb as required by Section 169, Clean Air Act, Solid Waste Combustion.

Title IV, Acid Rain: The facility operates no units subject to the acid rain provisions of the Clean Air Act.

Title V, Clean Air Act, Permits: The facility is a Title V or "Major Source" of air pollution because the potential emissions of at least one regulated pollutant exceed 100 tons per year or because it is a Major Source of HAPs. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

Part C, Clean Air Act, Prevention of Significant Deterioration (PSD): The facility is located in an area that is designated as "attainment", "maintenance", or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. The facility is classified as a "municipal incinerator capable of charging more than 250 tons of refuse per day", which is one of the facility categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year, therefore the facility is classified as a "Major Stationary Source" with respect to Rule 62-212.400 F.A.C.

Stationary Sources - Emission Standards in Chapter 62-296, F.A.C.: The facility operates one or more units subject to emission standards. The new Unit 4 is subject to the mercury standard in Rule 62-296.416, F.A.C. The numerical mercury emissions limit under state Rule 62-296.416, F.A.C., is more stringent than the NSPS emissions limit.

Reasonable Available Control Technology (RACT): The entire State of Florida is either classified as attainment or considered to be in attainment (i.e., unclassifiable) with respect to the NAAQS for all pollutants. However, the facility is located in a maintenance area for ozone, particulate matter and lead. The VOC and NO_X RACT provisions do not apply. The new unit has operations that are subject to PM RACT.

Siting: The facility was originally certified under PA83-19 pursuant to the power plant siting provisions of Chapter 62-17, F.A.C.

RELEVANT DOCUMENTS

- Received Site Certification and PSD application on November 21, 2005;
- Sufficiency information requested via Power Plant Siting Office on January 10, 2006;
- Supplemental information received on January 17, 2006;
- Received responses to sufficiency request on March 2, 2006;
- Intent to Issue PSD Permit distributed with Siting Staff Report on May 24, 2006;
- Department's Technical Evaluation & Preliminary Determination dated May 24, 2006;
- Comments received from Camp Dresser McKee (CDM) submitted on behalf of the County and dated June 8 and June 22, 2006;
- Comments received from Covanta Hillsborough, Inc. and dated June 22, 2006;
- Recommended Certification Order issued by the Division of Administrative Hearing on August 2, 2006;
- Final Order, including Conditions of Certification, approved by the Siting Board on September 19 and clerked on September 27, 2006; and
- Department's Final Determination dated September 29, 2006.

GENERAL AND ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct, modify or operate this emissions unit shall be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (DEP), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and phone number 850/488-0114. Copies of these documents shall be submitted to the Compliance Authority.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications should be submitted to the compliance authority. The compliance authority is the Department's Southwest District Office at 13051 N. Telecom Parkway, Temple Terrace, FL 33637-0926.
3. General Conditions: The owner and operator are subject to, and shall operate under, the attached General Conditions listed in *Appendix GC* of this permit. General Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and the Title 40, Parts 51, 52, 60, 63, 72, 73, and 75 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. 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. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
[Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. Construction and Expiration: The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. In conjunction with an extension of the 18-month period to commence or continue construction (or to construct the project in phases), the Department may require the permittee to demonstrate the adequacy of any previous determination of Best Available Control Technology (BACT) for emissions units regulated by the project. For good cause, the permittee may request that this PSD air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, 62-210.300(1), and 62-212.400(6)(b), F.A.C.]
6. New or Additional Conditions: 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. [Rule 62-4.080, F.A.C.]

7. Source Obligation.
   (a) Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between construction of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit.
   (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification
   (c) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   [Rule 62-212.400(12), F.A.C.]
8. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification.
   [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
9. Title V Permit: This permit authorizes construction of the permitted emissions unit and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emission units. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Bureau of Air Regulation and a copy to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

A. Common Conditions

The proposed new emissions units are:

E.U. ID No.	Emission Unit Descriptions
-107	Nominal 288 MMBtu/hr Municipal Waste Combustor & Auxiliary Burners - Unit 4
-108	Pebble Lime Storage Silo - Unit 4
-109	Dolomitic Lime Storage Silo - Unit 4
-110	Activated Carbon Storage Silo - Unit 4
-111	Cooling Tower Cell

CONSTRUCTION ACTIVITIES

1. Unconfined Particulate Matter Emissions: Pursuant to Rules 62-296.320(4)(c)1., 3. & 4., F.A.C., reasonable precautions to prevent emissions of unconfined particulate matter include the following requirements consistent with current practices by the permittee:

   All roads shall be adequately paved, and vacuum swept if appropriate, to minimize accumulations of ash and dust. The unpaved areas of the facility will be maintained and either sodded or landscaped. Hoods, fans, filters, or similar equipment will be used to contain, capture, and/or vent particulate matter. The conveyor systems of the facility will be enclosed or covered. The ash will be wetted before being stored in the ash handling building. 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 or leaving) shall be under negative air pressure. [Rule 62-296.320(4)(c)2., F.A.C.; and, items proposed by the applicant.]

2. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]

B. Municipal Waste Combustor & Auxiliary Burners - Unit 4

This section of the permit addresses the following emissions units.

Emissions Unit 107

Description: Emissions unit 107 consists of a nominal 600 TPD mass-burn municipal waste combustor (MWC) with two nominal 50 mmBtu/hr natural gas-fired auxiliary burners. The project will also include: a new nominal 17 megawatt (MW) steam turbine-electrical generator; expansion of the ash handling and refuse building; a new transformer yard; a new lime silo; a urea reagent storage tank; and a new settling basin. Exhaust from the new unit will be directed to a separate flue already constructed within the existing 220 foot stack.

Steam Capacity: The nominal steam production rate is 163,780 pounds of steam per hour. The maximum steam production limit is 190,000 lb steam/hr (4-hour block average). The nominal heat input is approximately 288 mmBtu/hour.

Controls: Controls consist of: efficient combustion on the grate and furnace; flue gas recirculation (FGR); a spray dryer/absorber in conjunction with a fabric filter (SD/FF) for control of acid gases, particulate matter, and most metals; activated carbon injection (ACI) to enhance mercury (Hg) removal; selective non-catalytic reduction (SNCR) by ammonia or urea injection for NO_X control.

Stack Parameters: The Department may require the permittee to perform additional air dispersion modeling should the actual specified stack dimensions change. The following summarizes the exhaust characteristics:

Fuel	Heat Input Rate	Exhaust Temp., °F	Flow Rate ACFM
MSW	~288 mmBtu/hour	270° F	~125,000

Continuous Monitors: The unit is equipped with continuous emissions monitoring systems (CEMS) to measure and record NO_X, CO, SO_2, and Hg as well as instrumentation to monitor steam flow, flue gas flow rate, oxygen, temperature, and opacity.

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: The emission unit addressed in this section is subject to a Best Available Control Technology (BACT) determination for nitrogen oxides (NO_X), carbon monoxide (CO), MWC acid gases (SO_2+HCl); SO_2 as an individual pollutant, and MWC organics (dioxin/furan). [Rule 62-212.400, F.A.C.]
2. NSPS Requirements: The municipal waste combustor and auxiliary burners shall comply with all applicable requirements of 40 CFR 60, listed below, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The Department determines that the BACT emissions performance requirements are as stringent as or more stringent than the limits imposed by the applicable NSPS provisions. Some separate reporting and monitoring may be required by the individual subparts.

(a) **Subpart A, General Provisions**, including:

- 40 CFR 60.7, Notification and Record Keeping
- 40 CFR 60.8, Performance Tests
- 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
- 40 CFR 60.12, Circumvention
- 40 CFR 60.13, Monitoring Requirements
- 40 CFR 60.19, General Notification and Reporting Requirements

(b) **Subpart Eb, Standards of Performance for Large Municipal Waste Combustors**

3. Emission Standards for Stationary Sources: This unit has a charging rate of 40 tons per day or more and is subject to the requirements of Stationary Sources – Emission Standards for Waste-To-Energy Facilities of Rule 62-296.416, F.A.C.

AIR POLLUTION CONTROL TECHNOLOGY

4. Control Equipment: The owner or operator shall install, operate and maintain the following air pollution control equipment consistent with the manufacturers' specifications.

   NO_X Controls: A flue gas recirculation system (FGR) will be used to limit NO_X formation. A urea-based selective non-catalytic reduction (SNCR) system will be employed for the destruction of NO_X.

   MWC Acid Gas Control: A spray dryer (SD) with lime injection will be installed to absorb MWC acid gases.

   MWC Organics and Mercury (Hg): An activated carbon injection (ACI) system will be installed to adsorb MWC organics and mercury (Hg).

   Particulate Matter (PM/PM_{10}): A fabric filter (FF) baghouse, including absorption/adsorption reagent, will be installed to remove particulate matter.

   [BACT Determination, and Rules 62-4.070(1), and (3), F.A.C.]

OPERATIONAL DESCRIPTIONS AND LIMITATIONS

5. Nameplate: The combustor (boiler) shall have a metal name plate affixed in a conspicuous place on the shell showing the manufacturer, model number, type of waste, and rated capacity. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

6. Hours of Operation. This emissions unit may operate continuously, i.e., 8,760 hours/year. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

7. Permitted Capacity. The maximum steam production rate shall not exceed 190,000 pounds steam per hour (on a 4-hour block arithmetic average).

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

   [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C., 40 CFR 60, Subpart Eb, and Design]

8. Maximum Demonstrated Municipal Waste Combustor Unit Load. Unit load means the steam load of the municipal waste combustor measured as specified in 40 CFR 60.58b(I)(6). Each unit shall not operate at a load level greater than 110 percent of the unit's "maximum demonstrated unit load." Maximum demonstrated municipal waste combustor unit load means the highest 4-hour arithmetic average municipal waste combustor unit load achieved during four consecutive hours during the most recent dioxin/furan performance test demonstrating compliance with the applicable limit for municipal waste combustor organics. Higher loads are allowed for testing purposes as specified in 40 CFR 60.53b(b). [40 CFR 60.34b(b), 60.51b, 60.53b(b), and 60.58b(I)(6)]

9. Prohibited Fuels:

   a. The facility shall not burn:

      i. those materials that are prohibited by state or federal law;
      ii. those materials that are prohibited by this permit;
      iii. lead acid batteries;
      iv. hazardous waste;
      v. nuclear waste;
      vi. radioactive waste;
      vii. sewage sludge;
      viii. explosives;
      ix. beryllium-containing waste, as defined in 40 CFR 61, Subpart C.

   b. Further, the facility shall not knowingly burn:

      i. nickel-cadmium batteries pursuant to Section 403.7192 (3);
      ii. mercury containing devices and lamps pursuant to Sections 403.7186(2), and (3);
      iii. untreated biomedical waste from biomedical waste generators regulated pursuant to Chapter 64E-16, F.A.C., and from similar generators (or sources);
      iv. segregated loads of biological waste; and
      v. CCA treated wood.

10. Authorized 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). 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:

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

       i. Confidential, proprietary or special documents (including but not limited to business records, lottery tickets, event tickets, coupons and microfilm);
       ii. 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;
       iii. Wood pallets, clean wood, and land clearing debris;

iv. Packaging materials and containers;
v. Clothing, natural and synthetic fibers, fabric remnants, and similar debris, including but not limited to aprons and gloves; or
vi. Rugs, carpets, and floor coverings, but not asbestos-containing materials or polyethylene or polyurethane vinyl floor coverings.

b. 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 on a calendar month basis in accordance with **Specific Condition 36.** of this subsection.

c. 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 <u>segregated loads</u> and burned at the facility shall not exceed 5%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined on a calendar month basis in accordance with **Specific Condition 36.** of this subsection.

i. Construction and demolition debris.
ii. Oil spill debris from aquatic, coastal, estuarine or river environments. Such items or materials include but are not limited to rags, wipes, and absorbents.
iii. 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.
iv. 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.
v. Waste materials that:
(a) are generated in the manufacture of items in categories (iii) or (iv), above and are functionally or commercially useless (expired, rejected or spent); or
(b) are not yet formed or packaged for commercial distribution. Such items or materials must be substantially similar to other items or materials routinely found in MSW.
vi. Waste materials that contain oil from:
(a) the routine cleanup of industrial or commercial establishments and machinery; or
(b) spills of virgin or used petroleum products. Such items or materials include but are not limited to rags, wipes, and absorbents.
vii. 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).

{Permitting note: Waste materials specifically authorized above do not require Department approval.}

viii. 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.

[Rule 62-4.070(1), and (3), F.A.C.]

11. Segregated Loads: 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.

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

a. comply with good combustion operating practices in accordance with 40 CFR 60.53b;

b. install, operate and maintain continuous emissions monitors (CEMS) for oxygen, carbon monoxide, sulfur dioxide, oxides of nitrogen and temperature in accordance with 40 CFR 60.58b; and

c. record and maintain the CEMS data in accordance with 40 CFR 60.59b.

These steps shall be used to ensure and verify continuous compliance with the emissions limitations in this permit.

Natural gas may be used as fuel during warm-up, startup, shutdown, and malfunction periods, and at other times when necessary and consistent with good combustion practices.

MONITORING OF OPERATIONS

13. Continuous Steam Flow Monitoring: Municipal waste combustor unit load means the steam load of the municipal waste combustor unit measured as specified in §60.58b(i)(6). 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 unit loads are allowed for testing purposes pursuant to 40 CFR 60.53b(b).
[Rules 62-204.800(8) and 62-4.070(1), and (3), F.A.C., and 40 CFR 60.53(a), and 60.58b(i)]

EMISSIONS STANDARDS

14. Emissions from Unit 4 shall not exceed the emissions standards listed in the following table or in **Specific Conditions 15.-22.** and using the test methods and procedures described in **Specific Conditions 23.-27.**

Pollutant	Emission Standard/Limit[1]	Lb/hour	Basis
Nitrogen Oxides (NO_X)	1st year of operation:		
	150 ppmvd - 24 hour block average and	79.8	Subpart Eb
	110 ppmvd- 30 day rolling average	58.5	Limit PTE
	Thereafter:		
	110 ppmvd - 24 hour block average and	58.5	BACT
	90 ppmvd - 12 month rolling average	47.9	BACT
Carbon Monoxide (CO)	80 ppmvd – 30-day rolling avg.	25.9	BACT
	100 ppmvd - 4 hr block average	32.4	BACT/Eb
Sulfur Dioxide (SO_2)	26 ppmvd - 24 hour block average or 80% reduction[2]	19.2	BACT/Eb
Hydrogen Chloride (HCl)[3]	25 ppmvd or 95% reduction[2]	25.4	BACT/Eb
Particulate Matter (PM/PM_{10})	12.0 mg/dscm	3.3	Avoid PSD
Lead (Pb)	140 μg/dscm	NA	Subpart Eb
Mercury (Hg)	28 μg/dscm or 85% reduction[2]	0.022	Avoid PSD/Eb
Cadmium (Cd)	10 μg/dscm	NA	Subpart Eb
Dioxins/Furans[4]	13.0 ng/dscm	3.61×10^{-6}	BACT/Eb
Opacity	10 % - 6 minute average	NA	BACT/Eb
Ammonia Slip	@ 195 MMBtu/hr: 10 ppmvd @ 260 MMBtu/hr: 15 ppmvd	NA	PM, Opacity.

1 All concentration values are corrected to 7% O_2.
μg/dscm: Micrograms per dry standard cubic meter
mg/dscm: Milligrams per dry standard cubic meter
ng/dscm: Nanograms per dry standard cubic meter
ppmvd: Part per million dry volume
NA: not applicable

2 Whichever standard is less stringent.

3 HCl is not a BACT pollutant. However, it must be limited together with SO_2 because they both comprise MWC-Acid Gases which has its own PSD threshold.

4 Dioxins/furans: Total tetra through octa-chlorinated dibenzo-p-dioxins and dibenzofurans

15. Nitrogen Oxides (NO_X): During the first calendar year of operation, emissions of NO_X in the stack exhaust gas as measured by the required CEMS shall exceed neither 150 ppmvd on a 24-hr daily arithmetic average nor 79.8 lb/hr and shall exceed neither 110 ppmvd nor 58.5 lb/hr on a 30-operating day rolling average.

    Thereafter, emissions of NO_X in the stack exhaust gas as measured by the required CEMS shall exceed neither 110 ppmvd nor 58.5 lb/hr on a 24-hr daily arithmetic average and shall exceed neither 90 ppmvd nor 47.9 lb/hr on a 12-month rolling average, rolled monthly.

    {Permitting Note: The owner or operator may request a permit modification of the 90 ppmvd NO_X standard if ammonia plume or slip issues arise and persist at the facility. The Department reserves the right to make a final determination on any such request.}

16. Carbon Monoxide (CO): Emissions of CO in the stack exhaust gas as measured by the required CEMS shall exceed neither 100 ppmvd on a 4-hr block average nor 32.4 lb/hr and shall exceed neither 80 ppmvd nor 25.9 lb/hr on a 30-operating day rolling average.

17. Sulfur Dioxide (SO_2): Emissions of SO_2 as measured by the required CEMS shall exceed neither 26 ppmvd nor 19.2 lb/hr on a 24-hr daily geometric mean, or an emissions reduction of 80 percent shall be achieved.

18. Hydrogen Chloride (HCl): Emissions of HCl shall exceed neither 25 ppmvd nor 25.4 lb/hr or, an emissions reduction 95 percent shall be achieved as demonstrated during the required stack test.

19. Mercury Hg: Emissions of Hg shall not exceed 28 μg/dscm or an emissions reduction of 85 percent shall be achieved as demonstrated during the required annual stack test.

    During the first two years of operation, emissions of Hg shall not exceed 0.022 lb/hr as measured during quarterly stack tests to provide reasonable assurance that 12-month emissions are less than the applicable PSD threshold of 200 lb/yr.

    After the certification of the Hg-CEMS as described in **Specific Condition 35.,** the owner or operator may demonstrate compliance with all Hg limits in this permit with data collected during an annual stack test or from the Hg-CEMS.

    {Permitting Note: If the Hg-CEMS is certified prior to the end of the first two years of operation, the permittee may use the CEMS in lieu of the remaining quarterly tests.}

20. Dioxins/Furans: Emissions of dioxins/furans shall exceed neither 13.0 ng/dscm nor 3.61×10^{-6} lb/hr.

21. Particulate Matter (PM/PM_{10}): Emissions of PM shall exceed neither 12.0 mg/dscm nor 3.3 lb/hr. This will simultaneously demonstrate compliance with the PM_{10} limits.

    {Permitting note: Compliance with this condition will also demonstrate that emissions are less than the 15 TPY PSD thresholds for PM_{10} and MWC-Metals.}

22. Opacity: Visible emissions shall not exceed 10 percent opacity on a 6-minute average as measured by the required continuous opacity monitoring system (COMS) and measured by an annual visible emissions test (VE).

TEST METHODS AND PROCEDURES

23. Test Methods: Any required stack test shall be performed in accordance with the following methods.

EPA Method	Description of Method and Comments
1 - 4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content. Methods shall be performed as necessary to support other methods.
5	Determination of Particulate Emissions. The minimum sample volume shall be 30 dry standard cubic feet.
6C	Determination of SO_2 Emissions (Instrumental).
7E	Determination of NO_X Emissions (Instrumental). NO_X emissions testing shall be conducted with the air heater operating at the highest heat input possible during the test.
9	Visual Determination of Opacity
10	Measurement of Carbon Monoxide Emissions (Instrumental). The method shall be based on a continuous sampling train.
23	Measurement of Dioxin/Furan Emissions
26 or 26A	Determination of Hydrogen Chloride Emissions
29	Determination of Metals Emissions from Stationary Sources
CTM-027	Procedure for Collection and Analysis of Ammonia in Stationary Source • This is an EPA conditional test method. • The minimum detection limit shall be 1 ppm.

Method CTM-027 is published on EPA's Technology Transfer Network Web Site at "http://www.epa.gov/ttn/emc/ctm.html". The other methods are specified in Appendix A of 40 CFR 60, adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. Tests shall be conducted in accordance with the appropriate test method and the applicable requirements specified in this permit, and NSPS Subpart A in 40 CFR 60. [Rules 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

24. Testing Requirements: Initial tests shall be conducted between 90% and 100% of permitted capacity; otherwise, this permit shall be modified to reflect the true maximum capacity as constructed. Subsequent annual tests shall be conducted between 90% and 100% of permitted capacity in accordance with the requirements of Rule 62-297.310(2), F.A.C. [Rule 62-297.310(7)(a) and (b), F.A.C.; 40 CFR 60.8]

25. Initial Compliance Demonstration: Initial compliance stack tests shall be conducted within 60 days after achieving the maximum production rate, but not later than 180 days after the initial startup. In accordance with the test methods specified in this permit, Unit 4 exhaust stack gas shall be tested to demonstrate compliance with the emission standards for NO_X, CO, SO_2, HCl, PM/PM_{10}, lead, cadmium, Hg, dioxin/furans, and ammonia. The permittee shall provide the Compliance Authority with any other initial emissions performance tests conducted to satisfy vendor guarantees. [Rule 62-297.310(7)(a) and (b), F.A.C.; 40 CFR 60.8]

26. Subsequent Compliance Testing: Annual compliance stack tests for NO_X, CO, SO_2, HCl, PM/PM_{10}, lead, cadmium, dioxins/furans, and ammonia shall be conducted during each federal fiscal year (October 1st to September 30th). Data collected from the reference method during the required RATA tests for CO, NO_X, and SO_2 may be used to satisfy the annual testing requirement provided the notification requirements and emission testing requirements for performance and compliance tests of this permit are satisfied.

    Prior to the certification of the Hg-CEMS as described in **Specific Condition 35.**, performance tests for Hg emissions shall be conducted quarterly during the fist two years of operation then on a calendar year basis to demonstrate compliance with the concentration/reduction standards.

    After the certification of the Hg-CEMS as described in **Specific Condition 35.**, the owner or operator may demonstrate compliance with all Hg limits in this permit with data collected from the Hg-CEMS.

    [Rules 62-297.310(7)(a) and (b), and 62-296.416, F.A.C., and 40 CFR 60.8 and 60.58b]

27. Continuous Compliance: The permittee shall demonstrate continuous compliance with the CO, NO_X, and SO_2 emissions standards based on data collected by the certified CEMS. The permittee shall demonstrate continuous compliance with the opacity limit based on data collected by the required COMS. [Rule 62-210.200 (BACT), F.A.C., and 40 CFR 60, Subpart Eb]

EXCESS EMISSIONS

{Permitting Note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary or supersede any requirement of an NSPS or NESHAP provision.}

28. Department Regulations: The following conditions apply only to the emissions limits given in **Specific Conditions 14.-22.** that were specified pursuant to BACT or to avoid PSD applicability.

    a. Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24-hour period unless specifically authorized by the Department for longer duration. The Department authorizes three hours in any 24-hour period for this emissions unit. A malfunction means any unavoidable failure of air pollution control equipment or process equipment to operate in a normal or usual manner.

    b. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

c. The permittee shall notify the Compliance Authority within one working day of discovering any emissions in excess of a CEMS standard subject to the specified averaging period. All such reasonably preventable emissions shall be included in any CEMS compliance determinations. All valid emissions data (including data collected during startup, shutdown and malfunction) shall be used to report emissions for the Annual Operating Report.

[Rule 62-210.700, F.A.C.]

29. Regulations pursuant to 40 CFR 60, Subpart Eb: The following conditions apply only to the emissions limits given in **Specific Conditions 14.-22.** that were specified pursuant to 40 CFR 60, Subpart Eb.

a. *The opacity standards* set forth in 40 CFR 60 shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard. [40 CFR 60.11(c)]

b. *Startup, Shutdown and Malfunction.* Except as provided by 40 CFR 60.56b, the standards under 40 CFR 60, Subpart Eb, as incorporated in Rule 62-204.800(8)(b), F.A.C., apply at all times except during periods of startup, shutdown, or malfunction. Duration of startup or shutdown periods are limited to 3 hours per occurrence, except as provided in 40 CFR 60.58b(a)(1)(iii). During periods of startup, shutdown, or malfunction, monitoring data shall be dismissed or excluded from compliance calculations, but shall be recorded and reported in accordance with the provisions of 40 CFR 60.59b(d)(7).

i. The startup period commences when the affected facility begins the continuous burning of municipal solid waste and does not include any warm-up period when the affected facility is combusting fossil fuel or other non-municipal solid waste fuel, and no municipal solid waste is being fed to the combustor.

ii. Continuous burning is the continuous, semi-continuous, or batch feeding of municipal solid waste for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of municipal solid waste solely to provide thermal protection of the grate or hearth during the startup period when municipal solid waste is not being fed to the grate is not considered to be continuous burning.

[40 CFR 60.58b(a)]

c. *Special Provisions for CO*: For the purpose of compliance with the carbon monoxide emission limits in 40 CFR 60.53b(a), if a loss of boiler water level control (e.g., loss of combustion air fan, induced draft fan, combustion grate bar failure) is determined to be a malfunction, the duration of the malfunction period is limited to 15 hours per occurrence.
[40 CFR 60.58b(a)(1)(iii)]

CONTINUOUS MONITORING REQUIREMENTS

30. CEM Systems: The permittee shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) to measure and record the emissions of CO, NO_X, Hg and SO_2 from Unit 4 in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this subsection. All continuous monitoring systems other than the Hg CEMS shall be installed and functioning within the required performance specifications by the time of the initial performance tests. The Hg CEMS shall be installed and functioning within the required performance specifications by the end of the second year of operation as specified in **Specific Condition 35**.

    a. *CO Monitor:* The CO monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A and shall comply with all requirements of 40 CFR 60.58b. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The required RATA tests shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately, considering the allowable methods of operation and corresponding emission standards.

    b. *NO_X Monitor:* The NO_X monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 2 and shall comply with all requirements of 40 CFR 60.58b. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The required RATA tests shall be performed using EPA Method 7E in Appendix A of 40 CFR 60. The NO_X monitor span values shall be set appropriately, considering the allowable methods of operation and corresponding emission standards.

    a. *SO2 Monitor.* The SO_2 monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 2 and shall comply with all requirements of 40 CFR 60.58b. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F. The required RATA tests shall be performed using EPA Method 6C in Appendix A of 40 CFR 60. The SO_2 monitor span values shall be set appropriately, considering the expected range of emissions and corresponding emission standards.

    b. *Diluent Monitor.* A continuous emission monitoring system for measuring the oxygen content of the flue gas at each location where carbon monoxide, sulfur dioxide, nitrogen oxides emissions are monitored shall be installed, calibrated, maintained, and operated in accordance with the requirements of 40 CFR 60.58b.

    c. *Mercury Monitor.* A mercury monitor (Hg CEMS) shall be installed, certified and operated as described in **Specific Condition 35.** below.

31. COMS: A continuous opacity monitoring system (COMS) shall be installed, calibrated, operated, and maintained in exhaust stack in a manner sufficient to demonstrate continuous compliance with the opacity standard specified in this section. Opacity shall be based on a 6-minute block average computed from at least one observation (measurement) every 15 seconds. For the COMS, the 6-minute block averages shall begin at the top of each hour. The COMS shall meet the applicable requirements of 40 CFR 60.58b(c)(8).

32. CEMS/COMS Certification and Initial Startup: Each CEMS/COMS, other than the Hg CEMS, required by this permit shall be installed prior to startup. Within 60 calendar days of achieving the maximum production rate, but no later than 180 calendar days after initial startup, the owner or operator shall certify each CEMS/COMS. Upon certification of each CEMS/COMS, the owner or operator shall demonstrate compliance with all applicable standards as specified in this permit. The Hg CEMS shall be installed and functioning within the required performance specifications within the first two years of operation as specified in **Specific Condition 35**. [Rules 62-4.070(3), 62-210.800, 62-210.200(BACT) and 62-297.520, F.A.C.; 40 CFR 60.7(a), 60.13(b), and 60.58b, and Appendix B]

33. CEMS Data Requirements: The CEMS shall express the results in the units of the applicable standard and in accordance with 40 CFR 60 subparts A, and Eb.

    a. *Data Exclusion*: Except for monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, each CEMS shall monitor and record emissions during all operations including episodes of startups, shutdowns, and malfunctions. Limited amounts of CEMS emissions data (other than mercury data) recorded during some of these episodes may be excluded from the corresponding compliance demonstration subject to the provisions of **Specific Conditions 28. and 29.** in this subsection. The permittee shall minimize the duration of data excluded for such episodes to the extent practicable.

    b. *Availability*. Monitor availability for each CEMS used to demonstrate compliance shall be 95% or greater in any calendar quarter. Monitor availability shall be reported in the quarterly excess emissions report. In the event 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit, except as otherwise authorized by the Compliance Authority. The monitor availability requirements of this condition do not apply to the Hg CEMS for the first two years of operation of the CEM system. (This is consistent with the Hg CEMS availability requirement of subpart Eb.)

34. Continuous Flow Monitor: A continuous flow monitor shall be installed to determine the stack exhaust flow rate to be used in determining mass emission rates. The flow monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 6.
[Rules 62-210.200(BACT), 62-204.800(8), and 62-4.070(1) and (3), F.A.C.]

35. Mercury Continuous Emissions Monitoring System (Hg-CEMS): Within 24 months of commencing operation, the owner or operator shall install and certify a mercury CEMS demonstrated to meet the requirements in Performance Specification 12A (PS-12A), "Specifications and Test Procedures for Total Vapor phase Mercury Continuous Monitoring Systems in Stationary Sources," or that has passed verification tests conducted under the auspices of the U.S. Environmental Protection Agency's (EPA) Environmental Technology Verification (ETV) Program. If the vendor provides to the Department verification of certification difficulties such that the CEMS cannot be certified by the certification deadline, and every reasonable effort has been made to do so, the Department shall grant a reasonable extension of time to certify the CEMS. After certification the owner or operator will begin reporting Hg mass emissions data. The owner or operator shall adhere to the calibration drift and quarterly performance evaluation procedures and ongoing data quality assurance procedures in 40 CFR Part 60, Appendix F or 40 CFR Part 75, Appendix B. The mass emissions shall be estimated based on the actual data collected no later than 10 days following the end of the month. The mercury monitoring data results shall be submitted quarterly. The CEMS shall only be used as the method of compliance if the owner or operator, at a minimum, meets the requirements of 40 CFR 60.58b(n). Prior to use of the Hg-CEMS as the method to demonstrate compliance, the owner or operator shall submit written notice to the Department, and receive approval for missing data substitution and a data calculation approach plans.
[Rules 62-4.070(1) and (3), and 62-210.200(BACT), F.A.C., 40 CFR 60.58b, and, Hillsborough County Environmental Protection Commission Local Ordinance 1-3.53.1(f), *Municipal Solid Waste Incinerators* (for Hg monitoring)]

REPORTING AND RECORD KEEPING REQUIREMENTS

36. 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 10.** of this subsection:

a. Each segregated load of non-MSW materials, subject to the percentage weight limitations of **Specific Condition 10.**, 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.

b. Each day the total weight of segregated tires received shall be computed, and the daily total shall be added to the sum of the daily totals from the previous days in the current calendar month. At the end of each calendar month, the resultant monthly total weight of tires shall be divided by the total weight of all waste materials received in the same calendar month, and the resultant number shall be multiplied by 100 to express the ratio in percentage terms. The percentage computed shall be compared to the 3% limitation.

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

[Rules 62-4.070(1) and (3), and 62-210.200(BACT), F.A.C.]

37. Stack Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Compliance Authority on the results of each such test. The required test report shall be filed with the Compliance Authority as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Compliance Authority to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the specified in Rule 62-297.310(8), F.A.C. [Rule 62-297.310(8), F.A.C.]
38. Malfunction Notifications: If temporarily unable to comply with any condition of the permit due to breakdown of equipment (malfunction) or destruction by hazard of fire, wind or by other cause, the permittee shall immediately (within one working day) notify the Compliance Authority. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. If requested by the Compliance Authority, the owner or operator shall submit a quarterly written report describing the malfunction. [Rules 62-210.700(6) and 62-4.130, F.A.C.]
39. SIP Quarterly Report: Within 30 days following the end of each calendar quarter, the permittee shall submit a report to the Compliance Authority summarizing: equipment malfunctions resulting in excluded CEMS data and/or excess emissions; and the monitor availability of each CEMS. The report shall contain the information and follow the general format specified in 40 CFR 60.7(c), subpart A. [Rules 62-4.070(3), 62-4.130, and 62-210.200(BACT), F.A.C.]
40. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370, F.A.C.]

C. Lime and Carbon Storage Silos

This section addresses the following emissions units.

E.U. ID No.	Emission Unit Descriptions
108	Pebble Lime Storage Silo - Unit 4
109	Dolomitic Lime Storage Silo - Unit 4
110	Activated Carbon Storage Silo - Unit 4

EQUIPMENT AND CONTROL TECHNOLOGY

1. Equipment Description: The permittee is authorized to construct one pebble lime storage silo, one dolomitic lime storage silo, and one activated carbon storage silo. Each silo will have a volume of approximately 2,900 cubic feet and will be equipped with its own fabric filter baghouse.
2. Baghouse Controls: Each emissions unit identified for lime and carbon storage shall be controlled by a baghouse system. Each required baghouse shall be designed, operated, and maintained to achieve a PM design specification of 0.015 gr/dscf.

PERFORMANCE REQUIREMENTS

3. Hours of Operation. These emission units may operate continuously (8,760 hours/year). [Rules 62-4.160(2), and 62-210.228(PTE), F.A.C.]
4. Emissions Limits: The following standards apply to each emissions point of this unit:
   a. Visible emissions are limited to 5% opacity from each of the above listed emissions points controlled by a baghouse.
   b. Fugitive emissions are limited to 10% opacity from any emissions point not controlled by a baghouse.

   [Rule 62-070(3), F.A.C.]

   {Note: The baghouses are designed to control PM emissions to 0.015 grains/dry standard cubic foot (gr/dscf). The 5% opacity limitation is consistent with this design and provides reasonable assurance that annual emissions of PM/PM_{10} for all emission points in this emission unit system will be less than 0.5 TPY.}

   [Rules 62-4.070(3), F.A.C.]
5. Compliance Demonstrations: Each emission point shall be tested to demonstrate initial compliance with the emission standards for visible emissions in accordance with EPA Method 9. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup. Thereafter, compliance with the visible emission limits for each emission point shall be demonstrated during each federal fiscal year (October 1st to September 30th). [Rules 62-4.070(3), and 62-297.310(7)(a), F.A.C]
6. Test Methods: Any required tests shall be performed in accordance with the following reference methods and the applicable requirements of Appendix C of this permit, and the applicable NESHAP provisions.

Method	Description of Method and Comments
9	Visual Determination of the Opacity of Emissions from Stationary Sources

REPORTING AND RECORD KEEPING

7. Baghouse O&M Plan: For each baghouse the permittee shall prepare an operation and maintenance (O&M) plan to address proper operation, parametric monitoring, and a schedule for conducting periodic inspections and preventive maintenance. Baghouse inspections and maintenance activities shall be recorded in a written log. The O&M plan shall be submitted to the Compliance Authority prior to the initial compliance tests for this unit. [Rule 62-4.070(3), F.A.C.]
8. Test Reports: For each test conducted, the permittee shall file a test report including the information specified in Rule 62-297.310(8), F.A.C. with the compliance authority no later than 45 days after the last run of each test is completed. [Rules 62-297.310(8), F.A.C.]

This section addresses the following emissions unit.

E.U. ID No.	Emissions Unit Description
111	One Cooling Tower Cell

EQUIPMENT

1. Cooling Tower: The permittee is authorized to construct one cooling tower cell with the following nominal design characteristics: a circulating water flow rate of 11,000 gpm; drift eliminators; a drift rate of no more than 0.001 percent of the circulating water flow. [Application; Design]

EMISSIONS AND PERFORMANCE REQUIREMENTS

2. Drift Rate: Within 60 days of commencing commercial operation, the permittee shall certify that the cooling tower was constructed to achieve the specified drift rate of no more than 0.001 percent of the circulating water flow rate. [Rule 62-210.200(BACT), F.A.C.]

{Permitting Note: This work practice standard is established as BACT avoidance for PM/PM_{10} emissions from the cooling tower. Based on this design criteria, potential emissions are expected to be less than 0.5 tons of PM per year and less than 0.25 tons of PM_{10} per year. Actual emissions are expected to be lower than these rates.}

APPENDIX A - NSPS SUBPART A, IDENTIFICATION OF GENERAL PROVISIONS

Emissions units subject to a New Source Performance Standard of 40 CFR 60 are also subject to the applicable requirements of Subpart A, the General Provisions, including:

§ 60.1 Applicability.

§ 60.2 Definitions.

§ 60.3 Units and abbreviations.

§ 60.4 Address.

§ 60.5 Determination of construction or modification.

§ 60.6 Review of plans.

§ 60.7 Notification and Record Keeping.

§ 60.8 Performance Tests.

§ 60.9 Availability of information.

§ 60.10 State Authority.

§ 60.11 Compliance with Standards and Maintenance Requirements.

§ 60.12 Circumvention.

§ 60.13 Monitoring Requirements.

§ 60.14 Modification.

§ 60.15 Reconstruction.

§ 60.16 Priority List.

§ 60.17 Incorporations by Reference.

§ 60.18 General Control Device Requirements.

§ 60.19 General Notification and Reporting Requirements.

Individual subparts may exempt specific equipment or processes from some or all of these requirements. The general provisions may be provided in full upon request.

APPENDIX BD – BACT DETERMINATION

Refer to the draft BACT proposal discussed in the initial Technical Evaluation for this project and to the Final Determination issued with the Final permit for the rationale regarding the following BACT determination.

Pollutant	Emission Standard/Limit[1]	Lb/hour	Basis
Nitrogen Oxides (NO_X)	110 ppmvd - 24 hour block average and 90 ppmvd - 12 month rolling average	58.5 47.9	BACT BACT
Carbon Monoxide (CO)	80 ppmvd – 30-day rolling avg. 100 ppmvd - 4 hr block average	25.9 32.4	BACT BACT/Eb
Sulfur Dioxide (SO_2)	26 ppmvd - 24 hour block average or 80% reduction[2]	19.2	BACT/Eb
Hydrogen Chloride (HCl)[3]	25 ppmvd or 95% reduction[2]	25.4	BACT/Eb
Dioxins/Furans[4]	13.0 ng/dscm	3.61×10^{-6}	BACT/Eb
Opacity	10 % - 6 minute average	NA	BACT/Eb

[1] All concentration values are corrected to 7% O_2.
µg/dscm: Micrograms per dry standard cubic meter
mg/dscm: Milligrams per dry standard cubic meter
ng/dscm: Nanograms per dry standard cubic meter
ppmvd: Part per million dry volume
NA: not applicable

[2] Whichever standard is less stringent.

[3] HCl is not a BACT pollutant. However, it must be limited together with SO_2 because they both comprise MWC-Acid Gases which has its own PSD threshold.

[4] Dioxins/ furans: Total tetra through octa-chlorinated dibenzo-p-dioxins and dibenzofurans

1. Nitrogen Oxides (NO_X): Emissions of NO_X in the stack exhaust gas as measured by the required CEMS shall exceed neither 110 ppmvd nor 58.5 lb/hr on a 24-hr daily arithmetic average and shall exceed neither 90 ppmvd nor 47.9 lb/hr on a 12-month rolling average, rolled monthly.

2. Carbon Monoxide (CO): Emissions of CO in the stack exhaust gas as measured by the required CEMS shall exceed neither 100 ppmvd on a 4-hr block average nor 32.4 lb/hr and shall exceed neither 80 ppmvd nor 25.9 lb/hr on a 30-operating day rolling average.

3. Sulfur Dioxide (SO_2): Emissions of SO_2 as measured by the required CEMS shall exceed neither 26 ppmvd nor 19.2 lb/hr on a 24-hr daily geometric mean, or an emissions reduction of 80 percent shall be achieved.

4. Hydrogen Chloride (HCl): Emissions of HCl shall exceed neither 25 ppmvd nor 25.4 lb/hr or, an emissions reduction 95 percent shall be achieved as demonstrated during the required stack test.

5. Dioxins/Furans: Emissions of dioxins/furans shall exceed neither 13.0 ng/dscm nor 3.61×10^{-6} lb/hr.

   {Permitting note: Compliance with this condition will also demonstrate that emissions are less than the 15 TPY PSD thresholds for PM_{10} and MWC-Metals}

6. Opacity: Visible emissions shall not exceed 10 percent opacity on a 6-minute average as measured by the required continuous opacity monitoring system (COMS) and measured by an annual visible emissions test (VE).

[40 CFR 60.44b, Rules 62-210.200(BACT), 62-204.800(8), 62-4.070, F.A.C.]

APPENDIX Eb - NSPS Subpart Eb, Standards of Performance For Large Municipal Waste Combustors.

Applicability of 40CFR60, 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.

The proposed Hillsborough County Resource Recovery Facility Unit 4 is a new Large Municipal Waste Combustor (Large MWC) because it is a waste combustion unit that is capable of combusting more than 250 tons per day (TPD) of municipal solid waste (MSW).

The rules applicable to Large MWC's are given at 40CFR60, Sections 60.50b through 60.59b. More specifically, Unit 4 is a Mass Burn Waterwall Furnace. The emission limits applicable to this category of MWC are specified by type of combustor in the relevant sections, paragraphs and tables that address individual pollutants including CO, NO_X, SO_2, HCl, PM, dioxin/furan, opacity, Cd, Hg, Pb, and various emission monitoring and operational parameters.

Subpart 40CFR60, Subpart Eb was revised on May 10, 2006 just a few days prior to preparation of the draft permit for Unit 4. The Department is revising the Subpart description normally included in this appendix to reconcile the new requirements with the previous ones. An updated and complete Appendix Eb highlighting the requirements applicable to Unit 4 will be included in the final permitting action if and when issued.

The Department has insured that the Permit is at least as stringent as the requirements of the revised Subpart Eb. Particular attention has been given to the revised PM, Pb, Cd and Hg including the use of Hg-CEMS.

The previous version of 40CFR60, Subpart Eb with links to the May 10, 2006 changes is available at:

http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=e62a6113b2c8fd1679806489b479eab4&rgn=div6&view=text&node=40:6.0.1.1.1.15&idno=40

Appendix GC - General Conditions

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

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.

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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any 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.

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.

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.

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.

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.

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.

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.

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.

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.

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

13. This permit also constitutes:

    a. Determination of Best Available Control Technology (X);
    b. Determination of Prevention of Significant Deterioration (X);
    c. Compliance with National Emission Standards for Hazardous Air Pollutants ( ); and
    d. Compliance with New Source Performance Standards (X).

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.

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.

Appendix SC - Construction Permit Standard Conditions

Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at this facility.

EMISSIONS AND CONTROLS

1. 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 permittee shall notify each Compliance Authority 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; 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 or the regulations. [Rule 62-4.130, F.A.C.]

2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]

3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]

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

5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permitee shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]

6. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]

7. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and62-210.200(203), F.A.C.]

8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. [Rule 62-296.320(4)(b)1, F.A.C.]

9. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

TESTING REQUIREMENTS

10. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]

11. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate 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. [Rule 62-297.310(2), F.A.C.]

12. Calculation of Emission Rate: For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

13. Test Procedures: Tests shall be conducted in accordance with all applicable requirements of Chapter 62-297, F.A.C.

    a. Required Sampling Time. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be thirty (30) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur.

    b. Minimum Sample Volume. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet.

    c. Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.

    [Rule 62-297.310(4), F.A.C.]

14. Determination of Process Variables

    a. Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

    b. Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight 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.]

15. Sampling Facilities: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C.

16. Test Notification: The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9, F.A.C.]

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

18. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide

sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

1) The type, location, and designation of the emissions unit tested.
2) The facility at which the emissions unit is located.
3) The owner or operator of the emissions unit.
4) The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5) The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6) The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7) A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8) The date, starting time and duration of each sampling run.
9) The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10) The number of points sampled and configuration and location of the sampling plane.
11) For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12) The type, manufacturer and configuration of the sampling equipment used.
13) Data related to the required calibration of the test equipment.
14) Data on the identification, processing and weights of all filters used.
15) Data on the types and amounts of any chemical solutions used.
16) Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17) The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18) All measured and calculated data required to be determined by each applicable test procedure for each run.
19) The detailed calculations for one run that relate the collected data to the calculated emission rate.
20) The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21) A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

Records and Reports

19. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]

20. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C

Appendix - I

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Hillsborough County
Solid Waste Management Department
P.O. Box 1110
Tampa, Florida 33601

Air Permit No. 0570261-008-AC
Hillsborough County Resource Recovery Facility
Carbon Injection Averaging

Authorized Representative:
Barry M. Boldissar, Director

Enclosed is Final Air Permit No. 0570261-008-AC, which authorizes the implementation of an *hourly averaging method* to calculate carbon mass feed rate levels at the facility. The equipment is operated at the Hillsborough County Resource Recovery Facility, 350 N. Falkenburg Road, Tampa, in Hillsborough County, Florida. This permit is issued pursuant to Chapter 403, Florida Statutes (F.S.).

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S. by filing a Notice of Appeal pursuant to Rule 9.110 of the Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000); and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this order is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

Trina L. Vielhauer

Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the "Final Permit") was sent by electronic mail (with received receipt requested) before the close of business on 3/26/07 to the person(s) listed:

Barry M. Boldissar, Hillsborough County boldissarb@hillsboroughcounty.org
Mara Nasca, Southwest District Office mara.nasca@dep.state.fl.us
Jason M. Gorrie, P.E., CDM GorrieJM@CDM.com
Gregg Worley, EPA Region 4 worley.gregg@epa.gov

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) 3/26/07 (Date)

Appendix - I

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

PERMITTEE

Hillsborough County Solid Waste Management Department
P.O. Box 1110
Tampa, Florida 33601

Authorized Representative:
Barry M. Boldissar, Director

Air Permit No. 0570261-008-AC
Hillsborough County Resource Recovery Facility
Facility ID No. 0570261
SIC No. 4953
Carbon Injection Averaging
Permit Expires: May 31, 2007

PROJECT AND LOCATION

This permit authorizes the implementation of an *hourly averaging method* to calculate carbon mass feed rate levels at the facility. The equipment is installed at the Hillsborough County Resource Recovery Facility, which is located in Hillsborough County at 350 N. Falkenburg Road, Tampa, Florida.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and Title 40, Parts 60 and 63 of the Code of Federal Regulations (CFR). The permittee is authorized to operate the equipment 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).

CONTENTS

Trina L. Vielhauer for 3/26/07

Joseph Kahn, Director (Date)
Division of Air Resource Management

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FINAL DETERMINATION

PERMITTEE

Hillsborough County Solid Waste Management Department
P.O. Box 1110
Tampa, Florida 33601

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation, Permitting South Section
2600 Blair Stone Road, MS 5505
Tallahassee, Florida 32399-2400

PROJECT

Air Permit No. 0570261-008-AC

Hillsborough County Resource Recovery Facility

This permit authorizes the implementation of an *hourly averaging method* to calculate carbon mass feed rate levels at the facility. The equipment is installed at the Hillsborough County Resource Recovery Facility, which is located in Hillsborough County at 350 N. Falkenburg Road, Tampa, Florida. It also establishes this change as an applicable Title V Air Operation Permit condition.

NOTICE AND PUBLICATION

The Department distributed an "Intent to Issue Permit" package on October 27, 2006. The applicant published the "Public Notice of Intent to Issue" in the Tampa Tribune on March 1, 2007. No petitions for administrative hearings or extensions of time to petition for an administrative hearing were filed. No comments were received from the Applicant, EPA Region 4, or the public at large on the Intent to Issue the Air Construction Permit package.

CONCLUSION

The final action of the Department is to issue the permit with an adjusted expiration date.

SECTION 1. GENERAL INFORMATION

FACILITY AND PROJECT DESCRIPTION

The Hillsborough County Solid Waste Management Department operates the Hillsborough County Resource Recovery Facility, which is a Refuse System (SIC No. 4953). The plant currently consists of three municipal waste combustors having a nominal design rate capacity of 400 tons of municipal solid waste (MSW) per day, 150 million British thermal units (MMBtu) per hour, and 94,270 pounds steam per hour, with MSW having a heating value of 4,500 Btu per pound. The facility has a design net steam energy of 1158 Btu per pound. Natural gas fired auxiliary burners and combustion control systems, with continuous monitoring devices for combustion and process parameters and sulfur dioxide, nitrogen oxides and carbon monoxide emissions, are installed to improve combustion efficiency and control. The air pollution control equipment consists of a spray dryer absorber, a fabric filter, an activated carbon injection system, and a selective non-catalytic reduction system. The facility also has an ash building and handling system, two lime storage silos, and an activated carbon storage silo.

This permit authorizes the implementation of an *hourly averaging method* to calculate carbon mass feed rate levels at the facility.

E.U. ID No.	Emission Unit Descriptions
001	150 MMBtu/hr (nominal) Municipal Waste Combustor & Auxiliary Burners - Unit 1
002	150 MMBtu/hr (nominal) Municipal Waste Combustor & Auxiliary Burners - Unit 2
003	150 MMBtu/hr (nominal) Municipal Waste Combustor & Auxiliary Burners - Unit 3

REGULATORY CLASSIFICATION

Title III: The facility IS a potential major source of hazardous air pollutants (HAPs).

Title IV: The facility DOES NOT OPERATE existing units subject to the Acid Rain provisions of the Clean Air Act (CAA).

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

PSD: The facility IS a PSD-major facility in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility OPERATES units subject to New Source Performance Standards in 40 CFR 60.

NEHSAP: The facility DOES NOT OPERATE units subject to National Emissions Standards for HAPs in 40 CFR 63.

RELEVANT DOCUMENTS

The following relevant documents are not a part of this permit, but helped form the basis for this permitting action: the permit application and additional information received to make it complete; the draft permit package including the Department's Technical Evaluation and Preliminary Determination; publication and comments; and the Department's Final Determination.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The Permitting Authority for this project is the Bureau of Air Regulation in the Division of Air Resource Management of the Department. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Southwest District Office. The mailing address and phone number of the Southwest District Office is: 13051 N. Telecom Parkway, Temple Terrace, FL 33637-0926, 813/632-7600.

3. Appendices: The following Appendix is attached as part of this permit: Appendix GC (General Conditions).

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units 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 Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: 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. [Rule 62-4.080, F.A.C.]

6. Modifications: No emissions unit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Bureau of Air Regulation with copies to each Compliance Authority.
[Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

SECTION 3. EMISSIONS UNITS SPECIFIC CONDITIONS

The following existing emissions units are affected by this permit:

E.U. ID No.	Emission Unit Descriptions
001	150 MMBtu/hr (nominal) Municipal Waste Combustor & Auxiliary Burners - Unit 1
002	150 MMBtu/hr (nominal) Municipal Waste Combustor & Auxiliary Burners - Unit 2
003	150 MMBtu/hr (nominal) Municipal Waste Combustor & Auxiliary Burners - Unit 3

Based on this permitting action, these emissions units are subject to the following additional specific condition:

1. Activated Carbon Injection. The owner or operator of an affected facility where activated carbon injection is used to comply with the mercury emission limit, or the dioxin/furan emission limits, or the dioxin/furan emission level specified in 40 CFR 60.58b(g)(5)(iii), shall follow the procedures specified in paragraphs (1) through (3).

   (1) During the performance tests for dioxins/furans and mercury, as applicable, the owner or operator shall estimate an average carbon mass feed rate 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, as specified in paragraphs (i) and (ii).

      (i) An average carbon mass feed rate in kilograms per hour or pounds per hour shall be estimated during the initial performance test for mercury emissions and each subsequent performance test for mercury emissions.

      (ii) An average carbon mass feed rate in kilograms per hour or pounds per hour shall be estimated during the initial performance test for dioxin/furan emissions and each subsequent performance test for dioxin/furan emissions.

   (2) During operation of the affected facility, the carbon injection system operating parameter(s) that are the primary indicator(s) of the carbon mass feed rate (e.g., screw feeder setting) shall be averaged over a block 8-hour period, and the 8-hour block average must equal or exceed the level(s) documented during the performance tests specified under paragraphs (l)(i) and (l)(ii).

   (3) The owner or operator of an affected facility shall estimate the total carbon usage of the plant (kilograms or pounds) for each calendar quarter by two independent methods, according to the procedures in paragraphs (i) and (ii).

      (i) The weight of carbon delivered to the plant.

      (ii) Estimate the average carbon mass feed rate in kilograms per hour or pounds per hour for each hour of operation for each affected facility based on the parameters specified under paragraph (1), and sum the results for all affected facilities at the plant for the total number of hours of operation during the calendar quarter.

   [40 CFR 60.38b and 40 CFR 60.58b, as amended on May 10, 2006.]

SECTION 4. APPENDIX GC – GENERAL CONDITIONS

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

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.

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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any 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.

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.

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.

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.

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.

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.

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.

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.

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.

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

13. This permit also constitutes:

    a. Determination of Best Available Control Technology (not applicable to project);
    b. Determination of Prevention of Significant Deterioration (not applicable to project); and
    c. Compliance with New Source Performance Standards.

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.

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.

Appendix - I

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blairstone Road
Tallahassee, Florida 32399-2400

September 7, 2007

Electronically Sent – Received Receipt Requested

boldissarb@hillsboroughcounty.org
Mr. Barry M. Boldissar, Director
Hillsborough County Department of Solid Waste Management
601 East Kennedy Boulevard
Tampa, Florida 33602

Re: Hillsborough County Resource Recovery Facility
DEP File No. 0570261-009-AC (PSD-FL-369A)
Installation of the Covanta Low NO_X Process in Unit No. 4

Dear Mr. Boldissar:

The Department is in receipt of your modification request submitted by Covanta Inc to modify the previously issued air construction permit to construct Unit No. 4. The request is to allow installation of the Covanta Low NO_X Process. The request is acceptable to the Department and the permit is hereby modified. The changes to the existing sections of the original construction permit are shown in strikethrough (~~strikethrough~~) and double-underlined format as follows:

PROJECT

The permittee, Hillsborough County, proposes to construct a new 600 ton per day (TPD) municipal waste combustor referred to as Unit 4 at the existing facility. The nominal design rate capacity is 600 tons municipal solid waste (MSW) per day, with a nominal heat input of 288 million Btu (mmBtu) per hour and nominal steam production of ~~163,780~~ 170,790 pounds per hour (maximum ~~190,000~~ 200,000 lb/hr). The new unit will be equipped with two natural gas-fired auxiliary burners, each with a nominal heat input of 50 mmBtu per hour. The new unit will be installed at the existing site. The flue for the new boiler is already encased in the existing stack. With the addition of the fourth unit, the existing 220 feet tall stack will contain four active flue streams. With the addition of this unit, the site capacity will increase from approximately 1,200 TPD to 1,800 TPD. The site's steam electric generating capacity will be increased from 39 megawatts (MW) to 47 MW (nominal).

The existing ash building and handling system will be expanded. Two new lime storage silos and a new activated carbon storage silo will be constructed for Unit 4.

Unit 4 will be a mass burn unit incorporating much of the same technology as the existing units including: combustion controls; combustion on a reverse-reciprocating grate system; ash discharge system; energy recovery through the furnace waterwall, superheater and economizers; electrical power production; and a pollution control system consisting of a spray dryer, fabric filter, activated carbon injection system and a selective non-catalytic reduction (SNCR). In addition, the new unit will incorporate the Covanta LN system for strategic combustion air management or flue gas recirculation for energy efficiency and pollution reduction.

SECTION III. EMISSION UNIT SPECIFIC CONDITIONS

B. Municipal Waste Combustor & Auxiliary Burners - Unit 4

Emissions Unit 107

Description: Emissions unit 107 consists of a nominal 600 TPD mass-burn municipal waste combustor with two nominal 50 mmBtu/hr natural gas-fired auxiliary burners. The project will also include: a new nominal 17 MW steam turbine-electrical generator; expansion of the ash handling and refuse building; a new transformer yard; a new lime silo; an ammonia or urea reagent storage tank; and a new settling basin. Exhaust from the new unit will be directed to a separate flue already constructed within the existing 220 foot stack.

Steam Capacity: The nominal steam production rate is 163,780 pounds of steam per hour. The maximum steam production limit is ~~190,000~~ 200,000 lb steam/hr (4-hour block average). The nominal heat input is approximately 288 mmBtu/hour.

Controls: Controls consist of: efficient combustion on the grate and furnace; strategic management of combustion air (Covanta LN system) or flue gas recirculation (FGR); a spray dryer/absorber in conjunction with a fabric filter (SD/FF) for control of acid gases, particulate matter, and most metals; activated carbon injection (ACI) to enhance mercury (Hg) removal; and selective non-catalytic reduction (SNCR) by ammonia or urea injection for nitrogen oxides (NO_X) control.

Stack Parameters: The Department may require the permittee to perform additional air dispersion modeling should the actual specified stack dimensions change. The following summarizes the exhaust characteristics:

Fuel	Heat Input Rate	Exhaust Temp., °F	Flow Rate ACFM
MSW	~288 mmBtu/hour	270° F	~125,000

Continuous Monitors: The unit is equipped with continuous emissions monitoring systems (CEMS) to measure and record NO_X, carbon monoxide (CO), sulfur dioxide (SO_2), and mercury (Hg) as well as instrumentation to monitor steam flow, flue gas flow rate, oxygen, temperature, and opacity.

Appendix - I

Specific Condition No. 4

Control Equipment: The owner or operator shall install, operate and maintain the following air pollution control equipment consistent with the manufacturers' specifications.

NO_X Controls: A combustion air management system (Covanta LN system) or flue gas recirculation system (FGR) will be used to limit NO_X formation. An ammonia or urea-based selective non-catalytic reduction (SNCR) system will be employed for the destruction of NO_X.

MWC Acid Gas Control: A spray dryer (SD) with lime injection will be installed to absorb MWC acid gases.

MWC Organics and Mercury (Hg): An activated carbon injection (ACI) system will be installed to adsorb MWC organics and mercury (Hg).

Particulate Matter (PM/PM_{10}): A fabric filter (FF) baghouse, including absorption/adsorption reagent, will be installed to remove particulate matter.

[BACT Determination; and Rules 62-4.070(1), and (3), F.A.C.]

Specific Condition No.7

Permitted Capacity. The maximum steam production rate shall not exceed ~~190,000~~ 200,000 pounds steam per hour (on a 4-hour block arithmetic average).

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

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; 40 CFR 60, Subpart Eb; and Design]

A copy of this permit modification shall be filed with the referenced permit and shall become part of the permit.

Any party to this permitting modification (order) has the right to seek judicial review of it under section 120.68 of the Florida Statutes, by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Joseph Kahn, Director
Division of Air Resources
Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Permit Modification and all copies were sent electronically (with Received Receipt) before the close of business on **September 7, 2007** to the persons listed below:

Barry M. Boldissar, Hillsborough County DSWM: boldissarb@hillsboroughcounty.org
Thomas Smith, Hillsborough County DSWM: smitht@hillsboroughcounty.org
Jim Little, U.S. EPA Region 4, Atlanta GA: little.james@epa.gov
Katy Forney, U.S. EPA Region 4, Atlanta GA: forney.kathleen@epa.gov
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Joseph Treshler, P.E., Covanta: joseph_treshler@covantaenergy.com
Steve Goff, Covanta: sgoff@covantaenergy.com
Brian Bahor, Covanta: brian_bahor@covantaenergy.com
Peter Young, Covanta: pyoung@covantaenergy.com
Dan Strobridge, CDM: strobridgede@cdm.com

Clerk Stamp

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Barbara J. Friday 9/7/07
(Clerk) (Date)

Appendix - I

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

NOTICE OF FINAL AIR PERMIT

Sent by Electronic Mail – Received Receipt Requested

Barry M. Boldissar, Director
Hillsborough County Solid Waste Management Department
Hillsborough County Resource Recovery Facility
601 East Kennedy Boulevard
Tampa, Florida 33602

Air Permit No. 0570261-010-AC
PSD-FL-369B
Hillsborough County Resource
Recovery Facility
New Wet Scrubber System
Hillsborough County, Florida

Dear Mr. Boldissar:

Enclosed is the final air construction permit revision, which authorizes the installation of a new wet scrubber system to control ventilation air on the expanded ash handling building. The proposed work will be conducted at the existing Hillsborough County Resource Recovery Facility, which is located in Hillsborough County at 350 North Falkenburg Road in Tampa, Florida. As noted in the attached Final Determination, several changes and clarifications were made to the draft permit. This final permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Trina L Vielhauer

Trina Vielhauer, Chief
Bureau of Air Regulation

TLV/jfk/tm

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Air Permit package (including the Final Determination and Final Permit with Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on 9/30/09 to the persons listed below.

Mr. Barry M. Boldissar, Hillsborough County DSWM (boldissarb@hillsboroughcounty.org)
Mr. Glenn Hoag, Covanta Hillsborough, Inc. (ghoag@covantaenergy.com)
Mr. Jason Gorrie, CDM (jgorrie@ covantaenergy.com)
Mr. William Crellin, Jr., CDM (crellinwr@cdm.com)
Mr. Robert A. Velasco, P.E., BCEE, CDM (velascora@cdm.com)
Ms. Cindy Zhang-Torres, DEP Southwest District Office (cindy.zhang-torres@dep.state.fl.us)
Ms. Dianna Lee, Hillsborough County EPC (lee@epchc.org)
Mr. Noel Morera, Hillsborough County EPC (morera@epchc.org)
Mr. Mike Halpin, DEP Siting Office (mike.halpin@dep.state.fl.us)
Ms. Kathleen Forney, EPA Region 4 (forney.kathleen@epa.gov)
Ms Ana M. Oquendo, EPA Region 4 (oquendo.ana@epa.gov)
Ms Heather Abrams, EPA Region 4 (abrams.heather@epa.gov)
Ms. Vickie Gibson, DEP BAR Reading File (victoria.gibson@dep.state.fl.us)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

(Clerk) 9/30/09 (Date)

DEPARTMENT OF ENVIRONMENTAL PROTECTION
FLORIDA

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

PERMITTEE

Hillsborough County
Solid Waste Management Department
601 E. Kennedy Boulevard
Tampa, FL 33602

Authorized Representative:
Mr. Barry M. Boldissar, Director

Air Permit No. PSD-FL-369B
Project No. 0570261-010-AC
Expires: October 1, 2010
Hillsborough County Resource Recovery Facility
Facility ID No. 0570261
Air Construction Permit for Unit 4 Expansion
Revision, Wet Scrubber for Ash Building

PROJECT AND LOCATION

This permit authorizes the construction of a nominal 600 ton per day municipal waste combustor referred to as Unit 4 at the existing facility. For this project, the permit is revised to include a new wet dust collection system for expanded ash handling building (EU-100). The existing Hillsborough County Resource Recovery Facility is a refuse system categorized by Standard Industrial Classification No. 4953. The existing facility is located in Hillsborough County at 350 North Falkenburg Road in Tampa, Florida 33619. The UTM coordinates are Zone 17, 368.2 kilometers (km) East, and 3092.7 km North.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work 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. The existing facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality. This revision is a minor modification of the original PSD air construction permit.

CONTENTS

Executed in Tallahassee, Florida

Joseph Kahn, Director
Division of Air Resource Management

9/30/09
(Date)

SECTION 1. FACILITY INFORMATION

FACILITY DESCRIPTION

The existing Hillsborough County Resource Recovery Facility is located in Hillsborough County at 350 North Falkenburg Road, Tampa, Florida. The existing facility consists of three municipal waste combustors (MWC), each having a nominal design rate capacity of 400 tons municipal solid waste (MSW) per day, 150 million British thermal units (MMBtu) per hour (excluding 9.9 MMBtu per hour from the combustion air preheaters) and 94,270 pounds steam per hour based on MSW with an average heating value of 4,500 Btu per pound. The facility is owned by Hillsborough County and is currently operated by Covanta Hillsborough, Inc. a subsidiary of Covanta Energy Corporation. The Hillsborough County Resource Recovery Facility began operation in 1987.

PROJECT DESCRIPTION

Original Permit No. PSD-FL-369

Hillsborough County proposes to construct a new 600 tons per day (TPD) Municipal Waste Combustor referred to as Unit 4 at the existing facility. The nominal design rate capacity is 600 tons MSW per day, with a nominal heat input of 288 MMBtu per hour and nominal steam production of 163,780 pounds per hour (maximum 200,000 lb/hr). The new unit will be equipped with two natural gas-fired auxiliary burners, each with a nominal heat input of 50 MMBtu per hour. The new unit will be installed at the existing site. The flue for the new boiler is already encased in the existing stack. With the addition of the fourth unit, the existing 220 feet tall stack will contain four active flue streams. With the addition of this unit, the site capacity will increase from approximately 1,200 TPD to 1,800 TPD. The site’s steam electric generating capacity will be increased from 39 MW to 47 MW (nominal).

Unit 4 will be a mass burn unit incorporating much of the same technology as the existing units including: combustion on a reverse-reciprocating grate system; ash discharge system; energy recovery through the furnace waterwall, superheater and economizers; electrical power production; and a pollution control system consisting of a spray dryer, fabric filter, activated carbon injection system and a selective non-catalytic reduction (SNCR). In addition, the new unit will incorporate flue gas recirculation for energy efficiency and pollution reduction. The existing ash building and handling system will be expanded. Two new lime storage silos and a new activated carbon storage silo will be constructed for Unit 4.

Revised Permit No. PSD-FL-369A

This project revised:

- Specific Condition No. 4 for EU-107 to authorize the option of using the strategic management of combustion air (Covanta LN^{TM} system) to limit NO_X formation and use an alternative ammonia reagent storage tank for the destruction of NO_X; and
- Specific Condition No. 7 to authorize an increase in the maximum steam production rate from 190,000 to 200,000 pounds per hour.

Revised Permit No. PSD-FL-369B

This current project authorizes installation of a new wet scrubber system to control particulate emissions from the ash building (EU-100) exhaust system. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is a modification of the original PSD permit; however, the project to add the new wet scrubber maintains annual emissions increases below the PSD significant emissions rates for particulate matter (PM), particulate matter with a mean particle diameter of 10 microns or less (PM_{10}), and MWC metals.

REGULATORY CLASSIFICATIONS

Section 111, Clean Air Act, Standards of Performance for New Stationary Sources (NSPS): The new unit is a large Municipal Waste Combustor (MWC) unit subject to 40 CFR 60, Subpart Eb - Standards of Performance for New Stationary Sources and Emission Guidelines for Municipal Waste Combustors.

Sec*tion 112, Clean Air Act, Hazardous Air Pollutants (HAPs):* The facility is a major source of HAPs. The maximum achievable control technology (MACT) requirements typically specified in the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for this industry were included in 40 CFR 60, Subpart Eb as required by Section 169, Clean Air Act, Solid Waste Combustion.

Title IV, Acid Rain: The facility operates no units subject to the acid rain provisions of the Clean Air Act.

Title V, Clean Air Act, Permits: The facility is a Title V or "Major Source" of air pollution because the potential emissions of at least one regulated pollutant exceed 100 tons per year or because it is a Major Source of HAPs. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

Part C, Clean Air Act, Prevention of Significant Deterioration (PSD): The facility is located in an area that is designated as "attainment", "maintenance", or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. The facility is classified as a "municipal incinerator capable of charging more than 250 tons of refuse per day", which is one of the facility categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year, therefore the facility is classified as a "Major Stationary Source" with respect to Rule 62-212.400 F.A.C.

Stationary Sources - Emission Standards in Chapter 62-296, F.A.C.: The facility operates one or more units subject to emission standards. The new Unit 4 is subject to the mercury standard in Rule 62-296.416, F.A.C. The numerical mercury emissions limit under state Rule 62-296.416, F.A.C., is more stringent than the NSPS emissions limit.

Reasonable Available Control Technology (RACT): The entire State of Florida is either classified as attainment or considered to be in attainment (i.e., unclassifiable) with respect to the NAAQS for all pollutants. However, the facility is located in a maintenance area for ozone, particulate matter and lead. The VOC and NO_X RACT provisions do not apply. The new unit has operations that are subject to PM RACT.

Siting: The facility was originally certified under PA83-19 pursuant to the power plant siting provisions of Chapter 62-17, F.A.C.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct, modify or operate this emissions unit shall be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (DEP), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and phone number 850/488-0114. Copies of these documents shall be submitted to the Compliance Authority.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications should be submitted to the compliance authority. The compliance authority is the Department's Southwest District Office at 13051 N. Telecom Parkway, Temple Terrace, FL 33637-0926.
3. Appendices: The owner and operator shall comply with the applicable requirements in Appendix A (NSPS Subpart A, Identification of General Provisions); Appendix BD (BACT Determination); Appendix Eb (NSPS Subpart Eb, Standards of Performance for Large Municipal Waste Combustors); Appendix GC (General Conditions); and Appendix SC (Standard Conditions). [Rule 62-4.160, F.A.C.]
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.); and the Title 40, Parts 51, 52, 60, 63, 72, 73 and 75 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. 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. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. Construction and Expiration: The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. In conjunction with an extension of the 18-month period to commence or continue construction (or to construct the project in phases), the Department may require the permittee to demonstrate the adequacy of any previous determination of Best Available Control Technology (BACT) for emissions units regulated by the project. For good cause, the permittee may request that this PSD air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, 62-210.300(1), and 62-212.400(6)(b), F.A.C.]
6. New or Additional Conditions: 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. [Rule 62-4.080, F.A.C.]
7. Source Obligation.

   (a) Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between constructions of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit.

   (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification

(c) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

[Rule 62-212.400(12), F.A.C.]

8. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

9. Title V Permit: This permit authorizes construction of the permitted emissions unit and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emission units. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Bureau of Air Regulation and a copy to the Compliance Authority.

[Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS

A. Municipal Waste Combustor & Auxiliary Burners – Unit 4

This section addresses the following group of emissions units.

EU No.	Emission Unit Descriptions
112	Expanded Ash Handling Building with Wet Scrubbing System
107	Nominal 288 MMBtu/hr Municipal Waste Combustor & Auxiliary Burners - Unit 4
108	Pebble Lime Storage Silo - Unit 4
110	Activated Carbon Storage Silo - Unit 4
111	Cooling Tower Cell

CONSTRUCTION ACTIVITIES

1. Unconfined Particulate Matter Emissions: Pursuant to Rules 62-296.320(4)(c)1., 3. & 4., F.A.C., reasonable precautions to prevent emissions of unconfined particulate matter include the following requirements consistent with current practices by the permittee:

   All roads shall be adequately paved, and vacuum swept if appropriate, to minimize accumulations of ash and dust. The unpaved areas of the facility will be maintained and either sodded or landscaped. Hoods, fans, filters, or similar equipment will be used to contain, capture, and/or vent particulate matter. The conveyor systems of the facility will be enclosed or covered. The ash will be wetted before being stored in the ash handling building. 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 or leaving) shall be under negative air pressure. [Rule 62-296.320(4)(c)2., F.A.C.; and, items proposed by the applicant.]

2. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]

This section of the permit addresses the following emissions units.

EU No. 107

Description: Emissions unit 107 consists of a nominal 600 TPD mass-burn municipal waste combustor (MWC) with two nominal 50 mmBtu/hr natural gas-fired auxiliary burners. The project will also include: a new nominal 17 megawatt (MW) steam turbine-electrical generator; expansion of the ash handling and refuse building; a new transformer yard; a new lime silo; a urea reagent storage tank; and a new settling basin. Exhaust from the new unit will be directed to a separate flue already constructed within the existing 220 foot stack.

Steam Capacity: The nominal steam production rate is 163,780 pounds of steam per hour. The maximum steam production limit is 190,000 lb steam/hr (4-hour block average). The nominal heat input is approximately 288 mmBtu/hour.

Controls: Controls consist of: efficient combustion on the grate and furnace; flue gas recirculation (FGR); a spray dryer/absorber in conjunction with a fabric filter (SD/FF) for control of acid gases, particulate matter, and most metals; activated carbon injection (ACI) to enhance mercury (Hg) removal; selective non-catalytic reduction (SNCR) by ammonia or urea injection for NO_X control.

Stack Parameters: The Department may require the permittee to perform additional air dispersion modeling should the actual specified stack dimensions change. The following summarizes the exhaust characteristics:

Fuel	Heat Input Rate	Exhaust Temp., ºF	Flow Rate ACFM
MSW	~288 mmBtu/hour	270° F	~125,000

Continuous Monitors: The unit is equipped with continuous emissions monitoring systems (CEMS) to measure and record NO_X, CO, SO_2, and Hg as well as instrumentation to monitor steam flow, flue gas flow rate, oxygen, temperature, and opacity.

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: The emission unit addressed in this section is subject to a Best Available Control Technology (BACT) determination for nitrogen oxides (NO_X), carbon monoxide (CO), MWC acid gases (SO_2+HCl); SO_2 as an individual pollutant, and MWC organics (dioxin/furan). [Rule 62-212.400, F.A.C.]

2. NSPS Requirements: The municipal waste combustor and auxiliary burners shall comply with all applicable requirements of 40 CFR 60, listed below, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The Department determines that the BACT emissions performance requirements are as stringent as or more stringent than the limits imposed by the applicable NSPS provisions. Some separate reporting and monitoring may be required by the individual subparts.

   (a) **Subpart A, General Provisions**, including:

   - 40 CFR 60.7, Notification and Record Keeping
   - 40 CFR 60.8, Performance Tests
   - 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
   - 40 CFR 60.12, Circumvention
   - 40 CFR 60.13, Monitoring Requirements
   - 40 CFR 60.19, General Notification and Reporting Requirements

   (b) **Subpart Eb, Standards of Performance for Large Municipal Waste Combustors**

3. Emission Standards for Stationary Sources**:** This unit has a charging rate of 40 tons per day or more and is subject to the requirements of Stationary Sources – Emission Standards for Waste-To-Energy Facilities of Rule 62-296.416, F.A.C.

AIR POLLUTION CONTROL TECHNOLOGY

4. Control Equipment: The owner or operator shall install, operate and maintain the following air pollution control equipment consistent with the manufacturers' specifications.

   NO_X Controls: A flue gas recirculation system (FGR) will be used to limit NO_X formation. A urea-based selective non-catalytic reduction (SNCR) system will be employed for the destruction of NO_X.

   MWC Acid Gas Control: A spray dryer (SD) with lime injection will be installed to absorb MWC acid gases.

   MWC Organics and Mercury (Hg): An activated carbon injection (ACI) system will be installed to adsorb MWC organics and Hg.

   Particulate Matter (PM/PM_{10}): A fabric filter (FF) baghouse, including absorption/adsorption reagent, will be installed to remove particulate matter.

   [BACT Determination, and Rules 62-4.070(1), and (3), F.A.C.]

OPERATIONAL DESCRIPTIONS AND LIMITATIONS

5. Nameplate: The combustor (boiler) shall have a metal name plate affixed in a conspicuous place on the shell showing the manufacturer, model number, type of waste, and rated capacity. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

6. Hours of Operation: This emissions unit may operate continuously, i.e., 8,760 hours/year. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

7. Permitted Capacity: The maximum steam production rate shall not exceed 190,000 pounds steam per hour (on a 4-hour block arithmetic average).

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

   [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C., 40 CFR 60, Subpart Eb, and Design]

8. Maximum Demonstrated Municipal Waste Combustor Unit Load: Unit load means the steam load of the municipal waste combustor measured as specified in 40 CFR 60.58b(I)(6). Each unit shall not operate at a load level greater than 110 percent of the unit's "maximum demonstrated unit load." Maximum demonstrated municipal waste combustor unit load means the highest 4-hour arithmetic average municipal waste combustor unit load achieved during four consecutive hours during the most recent dioxin/furan performance test demonstrating compliance with the applicable limit for municipal waste combustor organics**.** Higher loads are allowed for testing purposes as specified in 40 CFR 60.53b(b). [40 CFR 60.34b(b), 60.51b, 60.53b(b), and 60.58b(I)(6)]

9. Prohibited Fuels:

   a. The facility shall not burn:

      i. those materials that are prohibited by state or federal law;
      ii. those materials that are prohibited by this permit;
      iii. lead acid batteries;
      iv. hazardous waste;

v. nuclear waste;
vi. radioactive waste;
vii. sewage sludge;
viii. explosives; and
ix. beryllium-containing waste, as defined in 40 CFR 61, Subpart C.

b. Further, the facility shall not knowingly burn:

i. nickel-cadmium batteries pursuant to Section 403.7192 (3);
ii. mercury containing devices and lamps pursuant to Sections 403.7186(2), and (3);
iii. untreated biomedical waste from biomedical waste generators regulated pursuant to Chapter 64E-16, F.A.C., and from similar generators (or sources);
iv. segregated loads of biological waste; and
v. Chromated Copper Arsenate (CCA) treated wood.

10. Authorized 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). 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:

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

i. Confidential, proprietary or special documents (including but not limited to business records, lottery tickets, event tickets, coupons and microfilm);
ii. 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;
iii. Wood pallets, clean wood, and land clearing debris;
iv. Packaging materials and containers;
v. Clothing, natural and synthetic fibers, fabric remnants, and similar debris, including but not limited to aprons and gloves; or
vi. Rugs, carpets, and floor coverings, but not asbestos-containing materials or polyethylene or polyurethane vinyl floor coverings.

b. 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 on a calendar month basis in accordance with **Specific Condition 36.** of this subsection.

c. Subject to the conditions and limitations contained in this permit, the following other solid waste materials may be used as fuel at the facility (i.e. the following are authorized fuels that are non-MSW material). The total quantity of the following non-MSW material received as segregated loads and burned at the facility shall not exceed 5%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined on a calendar month basis in accordance with **Specific Condition 36.** of this subsection.

i. Construction and demolition debris.
ii. Oil spill debris from aquatic, coastal, estuarine or river environments. Such items or materials include but are not limited to rags, wipes, and absorbents.

iii. 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.

iv. 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.

v. Waste materials that:
   (a) are generated in the manufacture of items in categories (iii) or (iv), above and are functionally or commercially useless (expired, rejected or spent); or
   (b) are not yet formed or packaged for commercial distribution. Such items or materials must be substantially similar to other items or materials routinely found in MSW.

vi. Waste materials that contain oil from:
   (a) the routine cleanup of industrial or commercial establishments and machinery; or
   (b) spills of virgin or used petroleum products. Such items or materials include but are not limited to rags, wipes, and absorbents.

vii. Used oil and used oil filters. Used oil containing a polychlorinated biphenyls (PCB) concentration equal or greater than 50 pound per minute (ppm) shall not be burned, pursuant to the limitations of 40 CFR 761.20(e). {Permitting note: Waste materials specifically authorized above do not require Department approval.}

viii. 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.

[Rule 62-4.070(1), and (3), F.A.C.]

11. <u>Segregated Loads</u>: 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.

12. <u>Combustion Practices</u>: To ensure that the facility's fuel does not adversely affect the facility's combustion process or emissions, the facility operator shall:

    a. comply with good combustion operating practices in accordance with 40 CFR 60.53b;

    b. install, operate and maintain continuous emissions monitors (CEMS) for oxygen, carbon monoxide, sulfur dioxide, oxides of nitrogen and temperature in accordance with 40 CFR 60.58b; and

    c. record and maintain the CEMS data in accordance with 40 CFR 60.59b.

    These steps shall be used to ensure and verify continuous compliance with the emissions limitations in this permit.

    Natural gas may be used as fuel during warm-up, startup, shutdown, and malfunction periods, and at other times when necessary and consistent with good combustion practices.

MONITORING OF OPERATIONS

13. <u>Continuous Steam Flow Monitoring</u>: Municipal waste combustor unit load means the steam load of the municipal waste combustor unit measured as specified in §60.58b(i)(6). 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 unit loads are allowed for testing purposes pursuant to 40 CFR 60.53b(b). [Rules 62-204.800(8), 62-4.070(1) and (3), F.A.C., and 40 CFR 60.53(a) and 60.58b(i)]

EMISSIONS STANDARDS

14. Emissions from Unit 4 shall not exceed the emissions standards listed in the following table or in **Specific Conditions 15. - 22.** and using the test methods and procedures described in **Specific Conditions 23. - 27.**

Pollutant	Emission Standard/Limit[1]	Lb/hour	Basis
Nitrogen Oxides (NO_X)	1st year of operation:		
	150 ppmvd - 24 hour block average and	79.8	Subpart Eb
	110 ppmvd- 30 day rolling average	58.5	Limit PTE
	Thereafter:		
	110 ppmvd - 24 hour block average and	58.5	BACT
	90 ppmvd - 12 month rolling average	47.9	BACT
Carbon Monoxide (CO)	80 ppmvd – 30-day rolling avg.	25.9	BACT
	100 ppmvd - 4 hr block average	32.4	BACT/Eb
Sulfur Dioxide (SO_2)	26 ppmvd - 24 hour block average or 80% reduction[2]	19.2	BACT/Eb
Hydrogen Chloride (HCl)[3]	25 ppmvd or 95% reduction[2]	25.4	BACT/Eb
Particulate Matter (PM/PM_{10})	12.0 mg/dscm	3.3	Avoid PSD
Lead (Pb)	140 µg/dscm	NA	Subpart Eb
Mercury (Hg)	28 µg/dscm or 85% reduction[2]	0.022	Avoid PSD/Eb
Cadmium (Cd)	10 µg/dscm	NA	Subpart Eb
Dioxins/Furans[4]	13.0 ng/dscm	3.61×10^{-6}	BACT/Eb
Opacity	10 % - 6 minute average	NA	BACT/Eb
Ammonia Slip	@ 195 MMBtu/hr: 10 ppmvd		
	@ 260 MMBtu/hr: 15 ppmvd	NA	PM, Opacity

[1] All concentration values are corrected to 7% O_2.
µg/dscm: Micrograms per dry standard cubic meter
mg/dscm: Milligrams per dry standard cubic meter
ng/dscm: Nanograms per dry standard cubic meter
ppmvd: Part per million dry volume
NA: not applicable

[2] Whichever standard is less stringent.

[3] HCl is not a BACT pollutant. However, it must be limited together with SO_2 because they both comprise MWC-Acid Gases which has its own PSD threshold.

[4] Dioxins/Furans: Total tetra through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

15. Nitrogen Oxides (NO_X): During the first calendar year of operation, emissions of NO_X in the stack exhaust gas as measured by the required CEMS shall exceed neither 150 ppmvd on a 24-hr daily arithmetic average nor 79.8 lb/hr and shall exceed neither 110 ppmvd nor 58.5 lb/hr on a 30-operating day rolling average. Thereafter, emissions of NO_X in the stack exhaust gas as measured by the required CEMS shall exceed neither 110 ppmvd nor 58.5 lb/hr on a 24-hr daily arithmetic average and shall exceed neither 90 ppmvd nor 47.9 lb/hr on a 12-month rolling average, rolled monthly.

    {Permitting Note: The owner or operator may request a permit modification of the 90 ppmvd NO_X standard if ammonia plume or slip issues arise and persist at the facility. The Department reserves the right to make a final determination on any such request.}

16. Carbon Monoxide (CO): Emissions of CO in the stack exhaust gas as measured by the required CEMS shall exceed neither 100 ppmvd on a 4-hr block average nor 32.4 lb/hr and shall exceed neither 80 ppmvd nor 25.9 lb/hr on a 30-operating day rolling average.

17. Sulfur Dioxide (SO_2): Emissions of SO_2 as measured by the required CEMS shall exceed neither 26 ppmvd nor 19.2 lb/hr on a 24-hr daily geometric mean, or an emissions reduction of 80 percent shall be achieved.

18. Hydrogen Chloride (HCl): Emissions of HCl shall exceed neither 25 ppmvd nor 25.4 lb/hr or, an emissions reduction of 95 percent shall be achieved as demonstrated during the required stack test.

19. Mercury (Hg): Emissions of Hg shall not exceed 28 μg/dscm or an emissions reduction of 85 percent shall be achieved as demonstrated during the required annual stack test. During the first two years of operation, emissions of Hg shall not exceed 0.022 lb/hr as measured during quarterly stack tests to provide reasonable assurance that 12-month emissions are less than the applicable PSD threshold of 200 lb/yr.

    After the certification of the Hg-CEMS as described in **Specific Condition 35.,** the owner or operator may demonstrate compliance with all Hg limits in this permit with data collected during an annual stack test or from the Hg-CEMS.

    {Permitting Note: If the Hg-CEMS is certified prior to the end of the first two years of operation, the permittee may use the CEMS in lieu of the remaining quarterly tests.}

20. Dioxins/Furans: Emissions of dioxins/furans shall exceed neither 13.0 ng/dscm nor 3.61×10^{-6} lb/hr.

21. Particulate Matter (PM/PM_{10}): Emissions of PM shall exceed neither 12.0 mg/dscm nor 3.3 lb/hr. This will simultaneously demonstrate compliance with the PM_{10} limits.

    {Permitting note: Compliance with this condition will also demonstrate that emissions are less than the 15 TPY PSD thresholds for PM_{10} and MWC-Metals.}

22. Opacity: Visible emissions shall not exceed 10 percent opacity on a 6-minute average as measured by the required continuous opacity monitoring system (COMS) and measured by an annual visible emissions test (VE).

TEST METHODS AND PROCEDURES

23. Test Methods: Any required stack test shall be performed in accordance with the following methods.

EPA Method	Description of Method and Comments
1 - 4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content. Methods shall be performed as necessary to support other methods.

EPA Method	Description of Method and Comments
5	Determination of Particulate Emissions. The minimum sample volume shall be 30 dry standard cubic feet.
6C	Determination of SO_2 Emissions (Instrumental).
7E	Determination of NO_X Emissions (Instrumental). NO_X emissions testing shall be conducted with the air heater operating at the highest heat input possible during the test.
9	Visual Determination of Opacity
10	Measurement of Carbon Monoxide Emissions (Instrumental). The method shall be based on a continuous sampling train.
23	Measurement of Dioxin/Furan Emissions
26 or 26A	Determination of Hydrogen Chloride Emissions
29	Determination of Metals Emissions from Stationary Sources
CTM-027	Procedure for Collection and Analysis of Ammonia in Stationary Source • This is an EPA conditional test method. • The minimum detection limit shall be 1 ppm.

Method CTM-027 is published on EPA's Technology Transfer Network Web Site at "http://www.epa.gov/ttn/emc/ctm.html". The other methods are specified in Appendix A of 40 CFR 60, adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. Tests shall be conducted in accordance with the appropriate test method and the applicable requirements specified in this permit, and NSPS Subpart A in 40 CFR 60. [Rules 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

24. Testing Requirements: Initial tests shall be conducted between 90% and 100% of permitted capacity; otherwise, this permit shall be modified to reflect the true maximum capacity as constructed. Subsequent annual tests shall be conducted between 90% and 100% of permitted capacity in accordance with the requirements of Rule 62-297.310(2), F.A.C. [Rule 62-297.310(7)(a) and (b), F.A.C.; 40 CFR 60.8]

25. Initial Compliance Demonstration: Initial compliance stack tests shall be conducted within 60 days after achieving the maximum production rate, but not later than 180 days after the initial startup. In accordance with the test methods specified in this permit, Unit 4 exhaust stack gas shall be tested to demonstrate compliance with the emission standards for NO_X, CO, SO_2, HCl, PM/PM_{10}, lead, cadmium, Hg, dioxin/furans, and ammonia. The permittee shall provide the Compliance Authority with any other initial emissions performance tests conducted to satisfy vendor guarantees. [Rule 62-297.310(7)(a) and (b), F.A.C.; 40 CFR 60.8]

26. Subsequent Compliance Testing: Annual compliance stack tests for NO_X, CO, SO_2, HCl, PM/PM_{10}, lead, cadmium, dioxins/furans, and ammonia shall be conducted during each federal fiscal year (October 1st to September 30th). Data collected from the reference method during the required RATA tests for CO, NO_X, and SO_2 may be used to satisfy the annual testing requirement provided the notification requirements and emission testing requirements for performance and compliance tests of this permit are satisfied.

    Prior to the certification of the Hg-CEMS as described in **Specific Condition 35.**, performance tests for Hg emissions shall be conducted quarterly during the first two years of operation then on a calendar year basis to demonstrate compliance with the concentration/reduction standards.

After the certification of the Hg-CEMS as described in **Specific Condition 35.,** the owner or operator may demonstrate compliance with all Hg limits in this permit with data collected from the Hg-CEMS.

[Rules 62-297.310(7)(a) and (b), and 62-296.416, F.A.C., and 40 CFR 60.8 and 60.58b]

27. Continuous Compliance: The permittee shall demonstrate continuous compliance with the CO, NO_X, and SO_2 emissions standards based on data collected by the certified CEMS. The permittee shall demonstrate continuous compliance with the opacity limit based on data collected by the required COMS. [Rule 62-210.200 (BACT), F.A.C., and 40 CFR 60, Subpart Eb]

EXCESS EMISSIONS

{Permitting Note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary or supersede any requirement of an NSPS or NESHAP provision.}

28. Department Regulations: The following conditions apply only to the emissions limits given in **Specific Conditions 14. - 22.** that were specified pursuant to BACT or to avoid PSD applicability.

    a. Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24-hour period unless specifically authorized by the Department for longer duration. The Department authorizes three hours in any 24-hour period for this emissions unit. A malfunction means any unavoidable failure of air pollution control equipment or process equipment to operate in a normal or usual manner.

    b. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

    c. The permittee shall notify the Compliance Authority within one working day of discovering any emissions in excess of a CEMS standard subject to the specified averaging period. All such reasonably preventable emissions shall be included in any CEMS compliance determinations. All valid emissions data (including data collected during startup, shutdown and malfunction) shall be used to report emissions for the Annual Operating Report.

    [Rule 62-210.700, F.A.C.]

29. Regulations pursuant to 40 CFR 60, Subpart Eb: The following conditions apply only to the emissions limits given in **Specific Conditions 14. - 22.** that were specified pursuant to 40 CFR 60, Subpart Eb.

    a. *The opacity standards* set forth in 40 CFR 60 shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard. [40 CFR 60.11(c)]

    b. *Startup, Shutdown and Malfunctio:* Except as provided by 40 CFR 60.56b, the standards under 40 CFR 60, Subpart Eb, as incorporated in Rule 62-204.800(8)(b), F.A.C., apply at all times except during periods of startup, shutdown, or malfunction. Duration of startup or shutdown periods are limited to 3 hours per occurrence, except as provided in 40 CFR 60.58b(a)(1)(iii). During periods of startup, shutdown, or malfunction, monitoring data shall be dismissed or excluded from compliance calculations, but shall be recorded and reported in accordance with the provisions of 40 CFR 60.59b(d)(7).

        i. The startup period commences when the affected facility begins the continuous burning of municipal solid waste and does not include any warm-up period when the affected facility is combusting fossil fuel or other non-municipal solid waste fuel, and no municipal solid waste is being fed to the combustor.

ii. Continuous burning is the continuous, semi-continuous, or batch feeding of municipal solid waste for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of municipal solid waste solely to provide thermal protection of the grate or hearth during the startup period when municipal solid waste is not being fed to the grate is not considered to be continuous burning.

[40 CFR 60.58b(a)]

c. *Special Provisions for CO*: For the purpose of compliance with the carbon monoxide emission limits in 40 CFR 60.53b(a), if a loss of boiler water level control (e.g., loss of combustion air fan, induced draft fan, combustion grate bar failure) is determined to be a malfunction, the duration of the malfunction period is limited to 15 hours per occurrence. [40 CFR 60.58b(a)(1)(iii)]

CONTINUOUS MONITORING REQUIREMENTS

30. CEM Systems: The permittee shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) to measure and record the emissions of CO, NO_X, Hg and SO_2 from Unit 4 in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this subsection. All continuous monitoring systems other than the Hg CEMS shall be installed and functioning within the required performance specifications by the time of the initial performance tests. The Hg CEMS shall be installed and functioning within the required performance specifications by the end of the second year of operation as specified in **Specific Condition 35**.

a. *CO Monitor:* The CO monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A and shall comply with all requirements of 40 CFR 60.58b. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The required RATA tests shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately, considering the allowable methods of operation and corresponding emission standards.

b. *NO_X Monitor:* The NO_X monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 2 and shall comply with all requirements of 40 CFR 60.58b. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The required RATA tests shall be performed using EPA Method 7E in Appendix A of 40 CFR 60. The NO_X monitor span values shall be set appropriately, considering the allowable methods of operation and corresponding emission standards.

c. *SO_2 Monitor:* The SO_2 monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 2 and shall comply with all requirements of 40 CFR 60.58b. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F. The required RATA tests shall be performed using EPA Method 6C in Appendix A of 40 CFR 60. The SO_2 monitor span values shall be set appropriately, considering the expected range of emissions and corresponding emission standards.

d. *Diluent Monito:* A continuous emission monitoring system for measuring the oxygen content of the flue gas at each location where carbon monoxide, sulfur dioxide, nitrogen oxides emissions are monitored shall be installed, calibrated, maintained, and operated in accordance with the requirements of 40 CFR 60.58b.

e. *Mercury Monitor:* A mercury monitor (Hg CEMS) shall be installed, certified and operated as described in **Specific Condition 35.** below.

31. COMS: A continuous opacity monitoring system (COMS) shall be installed, calibrated, operated, and maintained in exhaust stack in a manner sufficient to demonstrate continuous compliance with the opacity standard specified in this section. Opacity shall be based on a 6-minute block average computed from at least one observation (measurement) every 15 seconds. For the COMS, the 6-minute block averages shall begin at the top of each hour. The COMS shall meet the applicable requirements of 40 CFR 60.58b(c)(8).

32. CEMS/COMS Certification and Initial Startup: Each CEMS/COMS, other than the Hg CEMS, required by this permit shall be installed prior to startup. Within 60 calendar days of achieving the maximum production rate, but no later than 180 calendar days after initial startup, the owner or operator shall certify each CEMS/COMS. Upon certification of each CEMS/COMS, the owner or operator shall demonstrate compliance with all applicable standards as specified in this permit. The Hg CEMS shall be installed and functioning within the required performance specifications within the first two years of operation as specified in **Specific Condition 35**. [Rules 62-4.070(3), 62-210.800, 62-210.200(BACT) and 62-297.520, F.A.C.; 40 CFR 60.7(a), 60.13(b), and 60.58b, and Appendix B]

33. CEMS Data Requirements: The CEMS shall express the results in the units of the applicable standard and in accordance with 40 CFR 60 subparts A, and Eb.

    a. *Data Exclusion*: Except for monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, each CEMS shall monitor and record emissions during all operations including episodes of startups, shutdowns, and malfunctions. Limited amounts of CEMS emissions data (other than mercury data) recorded during some of these episodes may be excluded from the corresponding compliance demonstration subject to the provisions of **Specific Conditions 28. and 29.** in this subsection. The permittee shall minimize the duration of data excluded for such episodes to the extent practicable.

    b. *Availability*: Monitor availability for each CEMS used to demonstrate compliance shall be 95% or greater in any calendar quarter. Monitor availability shall be reported in the quarterly excess emissions report. In the event 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit, except as otherwise authorized by the Compliance Authority. The monitor availability requirements of this condition do not apply to the Hg CEMS for the first two years of operation of the CEM system. (This is consistent with the Hg CEMS availability requirement of subpart Eb.)

34. Continuous Flow Monitor: A continuous flow monitor shall be installed to determine the stack exhaust flow rate to be used in determining mass emission rates. The flow monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 6.

    [Rules 62-210.200(BACT), 62-204.800(8), and 62-4.070(1) and (3), F.A.C.]

35. Mercury Continuous Emissions Monitoring System (Hg-CEMS): Within 24 months of commencing operation, the owner or operator shall install and certify a mercury CEMS demonstrated to meet the requirements in Performance Specification 12A (PS-12A), "Specifications and Test Procedures for Total Vapor Phase Mercury Continuous Monitoring Systems in Stationary Sources," or that has passed verification tests conducted under the auspices of the U.S. Environmental Protection Agency's (EPA) Environmental Technology Verification (ETV) Program. If the vendor provides to the Department verification of certification difficulties such that the CEMS cannot be certified by the certification deadline, and every reasonable effort has been made to do so, the Department shall grant a reasonable extension of time to certify the CEMS. After certification the owner or operator will begin reporting Hg mass emissions

data. The owner or operator shall adhere to the calibration drift and quarterly performance evaluation procedures and ongoing data quality assurance procedures in 40 CFR Part 60, Appendix F or 40 CFR Part 75, Appendix B. The mass emissions shall be estimated based on the actual data collected no later than 10 days following the end of the month. The mercury monitoring data results shall be submitted quarterly. The CEMS shall only be used as the method of compliance if the owner or operator, at a minimum, meets the requirements of 40 CFR 60.58b(n). Prior to use of the Hg-CEMS as the method to demonstrate compliance, the owner or operator shall submit written notice to the Department, and receive approval for missing data substitution and a data calculation approach plans. [Rules 62-4.070(1) and (3), and 62-210.200(BACT), F.A.C., 40 CFR 60.58b, and, Hillsborough County Environmental Protection Commission Local Ordinance 1-3.53.1(f), *Municipal Solid Waste Incinerators* (for Hg monitoring)]

REPORTING AND RECORD KEEPING REQUIREMENTS

36. 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 10.** of this subsection**:**

    a. Each segregated load of non-MSW materials, subject to the percentage weight limitations of **Specific Condition 10.,** 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.

    b. Each day the total weight of segregated tires received shall be computed, and the daily total shall be added to the sum of the daily totals from the previous days in the current calendar month. At the end of each calendar month, the resultant monthly total weight of tires shall be divided by the total weight of all waste materials received in the same calendar month, and the resultant number shall be multiplied by 100 to express the ratio in percentage terms. The percentage computed shall be compared to the 3% limitation.

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

    [Rules 62-4.070(1) and (3), and 62-210.200(BACT), F.A.C.]

37. Stack Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Compliance Authority on the results of each such test. The required test report shall be filed with the Compliance Authority as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Compliance Authority to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the as specified in Rule 62-297.310(8), F.A.C. [Rule 62-297.310(8), F.A.C.]

38. Malfunction Notifications: If temporarily unable to comply with any condition of the permit due to breakdown of equipment (malfunction) or destruction by hazard of fire, wind or by other cause, the permittee shall immediately (within one working day) notify the Compliance Authority. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of

destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. If requested by the Compliance Authority, the owner or operator shall submit a quarterly written report describing the malfunction. [Rules 62-210.700(6) and 62-4.130, F.A.C.]

39. SIP Quarterly Report: Within 30 days following the end of each calendar quarter, the permittee shall submit a report to the Compliance Authority summarizing: equipment malfunctions resulting in excluded CEMS data and/or excess emissions; and the monitor availability of each CEMS. The report shall contain the information and follow the general format specified in 40 CFR 60.7(c), subpart A. [Rules 62-4.070(3), 62-4.130, and 62-210.200(BACT), F.A.C.]

40. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by April 1st of each year. [Rule 62-210.370, F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

C. Ash Handling Building, Lime and Carbon Storage Silos

This section addresses the following emissions units.

ID No.	Emission Unit Description
112	Expanded Ash Handling Building with Wet Scrubbing System
110	Activated Carbon Storage Silo – Unit 4
108	Pebble Lime Storage Silo – Unit 4

EQUIPMENT AND CONTROL TECHNOLOGY

1. Equipment Description: The permittee is authorized to construct one pebble lime storage silo and one activated carbon storage silo. Each silo will have a volume of approximately 2,900 cubic feet and will be equipped with its own fabric filter baghouse. [Application and Design]

2. Baghouse Controls: Each emissions unit identified for lime and carbon storage shall be controlled by a baghouse system. Each required baghouse shall be designed, operated, and maintained to achieve a PM design specification of 0.015 gr/dscf. [Application, Design and Rule 62-4.070(3), F.A.C.]

3. Wet Scrubber Controls: As part of this project, the ash handling building is being expanded. Currently, the building exhaust is controlled by a baghouse installed in accordance with Permit No. PSD-FL-112B issued on October 14, 1987. In conjunction with the ash building expansion, the permittee shall install a wet dust collection system in addition to the existing baghouse to control the ventilation exhaust from the ash handling building. The wet scrubber shall be a "Whirl/Wet Wet Dust Collector Size 70, Model H" (or equivalent) designed for the following specifications:

   a. 7000 actual cubic feet per minute;

   b. Approximately 40% control for submicron particles;

   c. 80% control for particles ≥ 1.0 micron;

   d. 95% control for particles ≥ 2.0 micron;

   e. 97% control for particles ≥ 3.0 micron;

   f. 98% control for particles ≥ 5.0 micron; and

   g. 99% control for particles ≥ 10.0 micron.

   A Dwyer magnehelic pressure gauge/switch (or equivalent) shall be installed to measure the differential pressure across the unit control and control the water level to maintain a differential pressure of 8.0 ± 0.5 inches of water column. In addition, an alarm system shall be installed to warn of high water levels and low water levels. [Application, Design and Rule 62-4.070(3), F.A.C.]

PERFORMANCE REQUIREMENTS

4. Hours of Operation: These emission units may operate continuously (8,760 hours/year). [Rules 62-4.160(2), and 62-210.228(PTE), F.A.C.]

5. Emissions Limits: The following standards apply to each emissions point of this unit:

   a. Visible emissions are limited to 5% opacity from each of the above listed emissions points controlled by a baghouse or wet scrubber.

   b. Fugitive emissions are limited to 10% opacity from any emissions point not controlled by a baghouse or wet scrubber.

c. Emissions of particulate matter (PM) from the wet scrubber shall not exceed 0.066 lb/hour as determined by EPA Method 5. No initial or subsequent PM stack tests are required as long compliance is demonstrated with the opacity standard and the control device is properly maintained. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, special compliance tests may be required pursuant to Rule 62-297.310(7)(b), F.A.C.

{Permitting Note: The 5% opacity limitation is consistent with the design specifications and provides reasonable assurance that annual emissions of PM/PM_{10} for all emissions units in this subsection combined will be less than 0.40 TPY.}

[Rules 62-4.070(3), F.A.C.]

6. Compliance Demonstrations: Each emission point shall be tested to demonstrate initial compliance with the emission standards for visible emissions in accordance with EPA Method 9. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup. Thereafter, compliance with the visible emission limits for each emission point shall be demonstrated during each federal fiscal year (October 1st to September 30th). [Rules 62-4.070(3), and 62-297.310(7)(a), F.A.C.]

7. Test Methods: Any required tests shall be performed in accordance with the following reference methods and the applicable requirements of Appendix SC of this permit.

Method	Description of Method and Comments
5	Method for Determining Particulate Matter Emissions
9	Visual Determination of the Opacity of Emissions from Stationary Sources

8. Baghouse and Wet Scrubber O&M Plan: For each baghouse and the wet scrubber, the permittee shall prepare an operation and maintenance (O&M) plan to address proper operation, parametric monitoring, and a schedule for conducting periodic inspections and preventive maintenance. Baghouse and wet scrubber inspections and maintenance activities shall be recorded in a written log. The O&M plan shall be submitted to the Compliance Authority prior to the initial compliance tests for these units. [Rule 62-4.070(3), F.A.C.]

9. Wet Scrubber Monitoring: The wet scrubber shall be operated in accordance with the manufacturer's recommendations for the given operating conditions. The permittee shall take corrective actions as necessary when the water level alarm activates. [Rule 62-4.070(3), F.A.C.]

10. Test Reports: For each test conducted, the permittee shall file a test report including the information specified in Rule 62-297.310(8), F.A.C. with the compliance authority no later than 45 days after the last run of each test is completed. [Rules 62-297.310(8), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

D. Cooling Tower

This section addresses the following emissions unit.

EU No.	Emissions Unit Description
111	One Cooling Tower Cell

EQUIPMENT

1. Cooling Tower: The permittee is authorized to construct one cooling tower cell with the following nominal design characteristics: a circulating water flow rate of 11,000 gpm; drift eliminators; and a drift rate of no more than 0.001 percent of the circulating water flow. [Application; Design]

EMISSIONS AND PERFORMANCE REQUIREMENTS

2. Drift Rate: Within 60 days of commencing commercial operation, the permittee shall certify that the cooling tower was constructed to achieve the specified drift rate of no more than 0.001 percent of the circulating water flow rate. [Rule 62-210.200(BACT), F.A.C.]

{Permitting Note: This work practice standard is established as BACT avoidance for PM/PM_{10} emissions from the cooling tower. Based on this design criteria, potential emissions are expected to be less than 0.5 tons of PM per year and less than 0.25 tons of PM_{10} per year. Actual emissions are expected to be lower than these rates.}

Appendix A – NSPS Subpart A, Identification of General Provisions

Emissions units subject to a New Source Performance Standard of 40 CFR 60 are also subject to the applicable requirements of Subpart A, the General Provisions, including:

§ 60.1 Applicability.

§ 60.2 Definitions.

§ 60.3 Units and abbreviations.

§ 60.4 Address.

§ 60.5 Determination of construction or modification.

§ 60.6 Review of plans.

§ 60.7 Notification and Record Keeping.

§ 60.8 Performance Tests.

§ 60.9 Availability of information.

§ 60.10 State Authority.

§ 60.11 Compliance with Standards and Maintenance Requirements.

§ 60.12 Circumvention.

§ 60.13 Monitoring Requirements.

§ 60.14 Modification.

§ 60.15 Reconstruction.

§ 60.16 Priority List.

§ 60.17 Incorporations by Reference.

§ 60.18 General Control Device Requirements.

§ 60.19 General Notification and Reporting Requirements.

Individual subparts may exempt specific equipment or processes from some or all of these requirements. The general provisions may be provided in full upon request.

Appendix BD – BACT Determination

Refer to the draft BACT proposal discussed in the initial Technical Evaluation for this project and to the Final Determination issued with the Final Permit for the rationale regarding the following BACT determination for new MWC Unit 4.

Pollutant	Emission Standard/Limit[1]	Lb/hour	Pollutant
Nitrogen Oxides (NO_X)	110 ppmvd - 24 hour block average and 90 ppmvd - 12 month rolling average	58.5 47.9	BACT BACT
Carbon Monoxide (CO)	80 ppmvd – 30-day rolling avg. 100 ppmvd - 4 hr block average	25.9 32.4	BACT BACT/Eb
Sulfur Dioxide (SO_2)	26 ppmvd - 24 hour block average or 80% reduction[2]	19.2	BACT/Eb
Hydrogen Chloride (HCL)[3]	25 ppmvd or 95% reduction[2]	25.4	BACT/Eb
Dioxins/Furans[4]	13.0 ng/dscm	3.61×10^{-6}	BACT/Eb
Opacity	10% - 6 minute average	NA	BACT/Eb

1 All concentration values are corrected to 7% O_2.
μg/dscm: Micrograms per dry standard cubic meter
mg/dscm: Milligrams per dry standard cubic meter
ng/dscm: Nanograms per dry standard cubic meter
ppmvd: Part per million dry volume
NA: not applicable

2 Whichever standard is less stringent.

3 HCl is not a BACT pollutant. However, it must be limited together with SO_2 because they both comprise MWC-Acid Gases which has its own PSD threshold.

4 Dioxins/furans: Total tetra through octa-chlorinated dibenzo-p-dioxins and dibenzofurans

1. Nitrogen Oxides (NO_X): Emissions of NO_X in the stack exhaust gas as measured by the required CEMS shall exceed neither 110 ppmvd nor 58.5 lb/hr on a 24-hr daily arithmetic average and shall exceed neither 90 ppmvd nor 47.9 lb/hr on a 12-month rolling average, rolled monthly.

2. Carbon Monoxide (CO): Emissions of CO in the stack exhaust gas as measured by the required CEMS shall exceed neither 100 ppmvd on a 4-hr block average nor 32.4 lb/hr and shall exceed neither 80 ppmvd nor 25.9 lb/hr on a 30-operating day rolling average.

3. Sulfur Dioxide (SO_2): Emissions of SO_2 as measured by the required CEMS shall exceed neither 26 ppmvd nor 19.2 lb/hr on a 24-hr daily geometric mean, or an emissions reduction of 80 percent shall be achieved.

4. Hydrogen Chloride (HCl): Emissions of HCl shall exceed neither 25 ppmvd nor 25.4 lb/hr or, an emissions reduction 95 percent shall be achieved as demonstrated during the required stack test.

5. Dioxins/Furans: Emissions of dioxins/furans shall exceed neither 13.0 ng/dscm nor 3.61×10^{-6} lb/hr.

   {Permitting note: Compliance with this condition will also demonstrate that emissions are less than the 15 TPY PSD thresholds for PM_{10} and MWC-Metals}

6. Opacity: Visible emissions shall not exceed 10 percent opacity on a 6-minute average as measured by the required continuous opacity monitoring system (COMS) and measured by an annual visible emissions test (VE).

[40 CFR 60.44b, Rules 62-210.200(BACT), 62-204.800(8), 62-4.070, F.A.C.]

Appendix GC – General Conditions

Applicability of 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.

The proposed Hillsborough County Resource Recovery Facility Unit 4 is a new Large Municipal Waste Combustor (Large MWC) because it is a waste combustion unit that is capable of combusting more than 250 tons per day (TPD) of municipal solid waste (MSW).

The rules applicable to Large MWC's are given at 40 CFR 60, Sections 60.50b through 60.59b. More specifically, Unit 4 is a Mass Burn Waterwall Furnace. The emission limits applicable to this category of MWC are specified by type of combustor in the relevant sections, paragraphs and tables that address individual pollutants including CO, NO_X, SO_2, HCl, PM, dioxin/furan, opacity, Cd, Hg, Pb, and various emission monitoring and operational parameters.

Subpart 40 CFR 60, Subpart Eb was revised on May 10, 2006 just a few days prior to preparation of the draft permit for Unit 4. The Department is revising the Subpart description normally included in this appendix to reconcile the new requirements with the previous ones. An updated and complete Appendix Eb highlighting the requirements applicable to Unit 4 will be included in the final permitting action if and when issued.

The Department has insured that the Permit is at least as stringent as the requirements of the revised Subpart Eb. Particular attention has been given to the revised PM, Pb, Cd and Hg including the use of Hg - CEMS.

The previous version of 40 CFR 60, Subpart Eb with links to the May 10, 2006 changes is available at:

http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=e62a6113b2c8fd1679806489b479eab4&rgn=div6&view=text&node=40:6.0.1.1.1.15&idno=40

SECTION 4. APPENDICES

Appendix GC – General Conditions

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

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.
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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any 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.
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.
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.
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.
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.
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.

Appendix GC – General Conditions

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.
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.
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.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
    a. Determination of Best Available Control Technology (X);
    b. Determination of Prevention of Significant Deterioration (X);
    c. Compliance with National Emission Standards for Hazardous Air Pollutants ( ); and
    d. Compliance with New Source Performance Standards (X).
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.
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.

SECTION 4. APPENDICES
Appendix SC – Construction Permit Standard Conditions

Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at this facility.

EMISSIONS AND CONTROLS

1. 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 permittee shall notify each Compliance Authority 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; 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 or the regulations. [Rule 62-4.130, F.A.C.]

2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]

3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]

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

5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permitee shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]

6. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]

7. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and62-210.200(203), F.A.C.]

8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. [Rule 62-296.320(4)(b)1, F.A.C.]

9. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

TESTING REQUIREMENTS

10. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]

11. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate 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. [Rule 62-297.310(2), F.A.C.]

12. Calculation of Emission Rate: For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

13. Test Procedures: Tests shall be conducted in accordance with all applicable requirements of Chapter 62-297, F.A.C.

    a. Required Sampling Time: Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be thirty (30) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur.

    b. Minimum Sample Volume: Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet.

    c. Calibration of Sampling Equipment: Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.

    [Rule 62-297.310(4), F.A.C.]

14. Determination of Process Variables

    a. Required Equipment: The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

b. Accuracy of Equipment: Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight 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.]

15. Sampling Facilities: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C.

16. Test Notification: The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9, F.A.C.]

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

18. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

1) The type, location, and designation of the emissions unit tested.

2) The facility at which the emissions unit is located.

3) The owner or operator of the emissions unit.

4) The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.

5) The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.

6) The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.

7) A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.

8) The date, starting time and duration of each sampling run.

9) The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.

10) The number of points sampled and configuration and location of the sampling plane.

11) For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12) The type, manufacturer and configuration of the sampling equipment used.
13) Data related to the required calibration of the test equipment.
14) Data on the identification, processing and weights of all filters used.
15) Data on the types and amounts of any chemical solutions used.
16) Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17) The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18) All measured and calculated data required to be determined by each applicable test procedure for each run.
19) The detailed calculations for one run that relate the collected data to the calculated emission rate.
20) The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21) A certification that, to the knowledge of the owner or his authorized agent, all data submitted is true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

RECORDS AND REPORTS

19. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]

20. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C