



Ogden Martin Systems of Hillsborough, Inc.
350 N. Falkenburg Road
Tampa, FL 33619
813 684 5688
Fax 813 684 7964

April 4, 2000

RECEIVED

APR 05 2000

BUREAU OF AIR REGULATION

Mr. C.H. Fancy, Bureau Chief
Bureau of Air Resource Management
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Request to Amend Construction Permit # PSD-FL-121(B)
FID No. 0570261 - Hillsborough County Resource Recovery Facility

0570261-002-AC

Dear Mr. Fancy,

Enclosed is a copy of the letter requesting the amendment of PSD-FL-121(B) for the Hillsborough County Resource Recovery Facility. The original letter was placed in the mail on March 23, 2000, and to date has not been received by your office.

In order to expedite the permit amendment process, we are submitting a replacement check in the amount of \$250 for the permit application fee. The enclosed check replaces check number 5785 that was sent with the original letter.

If the original letter does eventually arrive at your office, please return the original check (#5785) to the above address.

Please do not hesitate to contact Dan Strobridge, Camp Dresser & Mc Kee, Inc. at (813) 281-2900 if you have any question on the permit amendment itself. Otherwise I am available to answer any questions, I can be reached at (813) 684-5688.

Sincerely,

Rebecca S. Bigari
Environmental Engineer



Westshore Center
1715 North Westshore Boulevard, Suite 875
Tampa, Florida 33607
Tel: 813 281-2900 Fax: 813 288-8787

March 23, 2000

RECEIVED
MAR 25 2000

Mr. C. H. Fancy, Bureau Chief
Bureau of Air Resources Management
Florida Department of Environmental Protection
1111 Magnolia Boulevard
Tallahassee, Florida 32399-2400

OGDEN MARTIN SYSTEMS
OF HILLSBOROUGH, INC.

Subject: Request to Amend Construction Permit # PSD-FL-121 (B)
FID No. 0570261 - Hillsborough County Resource Recovery Facility

Dear Mr. Fancy:

This follows up on a March 13, 2000 meeting at the Hillsborough County Resource Recovery facility with Mr. Al Linero - and a March 15th followup meeting with FDEP staff in Tallahassee regarding this request to amend PSD-FL-121 (B) permit. Enclosed is a check for \$250 for the permit application fee. The purpose of this request is to ensure consistency between the pending Title V permit and applicable PSD-related documents for the Hillsborough County facility.

It is our understanding that the PSD permit must be changed to allow the Department to eliminate draft Title V language which we believe is inconsistent with the permitting history of this facility. It is also our understanding that the Department will amend the Power Plant Siting Act approval as needed to reflect approved PSD changes. The requested changes are detailed in a separate Attachment. The rationale for each requested change is also provided.

It is important to both Hillsborough County as the facility owner and permittee and Ogden Martin Systems of Hillsborough, Inc. (OMSI) as the facility operator that the Title V operating permit reflects the operating realities of the facility. Our goal is to ensure that neither document contains language nor permit conditions that unduly restrict operations of the facility or jeopardizes our ability to accurately certify compliance with both documents.

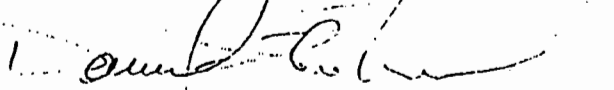
None of the requested changes will increase any emissions beyond that which the Department has already approved. Neither will these requested amendments result in any contravention of applicable ambient air quality standards. They are wholly consistent with 40 CFR 60, Subpart Cb Emissions Guidelines for Municipal Waste Combustors (MWC's).

Mr. C. H. Fancy, Bureau Chief
March 23, 2000
Page 2

Your assistance in processing this request in a time frame that will allow these changes to be incorporated into the final proposed Title V permit will be greatly appreciated.

Very truly yours,

CAMP DRESSER & MCKEE INC.



Daniel E. Strobbridge, QEP
Vice President

cc: A. Linero, P.E., FDEP
S. Sheplak, P.E., FDEP
E. Svek, FDEP
T. Smith, Hillsborough County
J. Burbridge, OMSII

Attachment

Request to Amend Air Construction Permit PSD-FL-121(B) – Facility ID No. 0570261

The following amendment requests refer to the June 26, 1998 air construction permit PSD-FL-121 (B). The referenced permit page number and subsection number are provided for each requested change. Where appropriate, requested/proposed text changes are presented *in italics* to facilitate the review process. PSD permit text for which deletion is requested is "blacked out".

1. Subsection A. Facility Description. Please reword the permit to read that "the Facility generates electricity, and has an electrical generator *capable of generating 32.5 MW* for the entire Facility."

2. Page 4, Subsection B.1. Please reword the first sentence that: "the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application." It is respectfully requested that the permit be revised to state: "*Unless otherwise indicated in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and design specifications stated in the application. Operation of the facility shall be in accordance with the emission limits specified in this permit*"

This change will help ensure that descriptive language in the September 1997 "Source Modification Construction Air Permit Application" prepared by Camp, Dresser and McKee (CDM) on behalf of Hillsborough County does not become proscriptive permit limits. General descriptions of retrofit design and discussions of design operating parameters in the application were neither presented as, nor proposed for incorporation into the PSD document as permit limits. The application described the operating window for the facility. This information should not be restated in permits in a way that effectively binds facility operations to any specific design point within that window.

The requested substitute language intends to clarify that retrofit construction will conform to the design specifications cited in the application. It also intends to clarify that the facility will operate in conformance with specific emissions limits in the permit - based on state and federal regulations.

3. Page 6, Subsection A. As stated in our January 11, 2000 comment letter on the draft Title V permit, the regulatory language in 40 CFR 61, Subpart C indicates that the beryllium NESHAPS is not applicable to this facility. The Hillsborough County WTE facility does not accept any of the beryllium-containing wastes listed in the rule. It is our understanding that only incinerators that accept beryllium-containing waste generated by those source categories are affected by the rule. Therefore, we respectfully request deletion of all permit references to beryllium including emissions limits and testing requirements (Section III, Subsection B.8 on Page 12; page 42, Subsection C.29; Table 2-1).

4. Page 7. Subsection B. Specific Conditions, Permitting Note. This requests that the "shall not be exceeded" language regarding net steam energy either be deleted entirely or

rephrased to indicate that "The facility has a design net steam energy of 1158 Btu/lb". Net steam energy is not a defined regulatory term under Federal Subpart Cb regulations or State regulations. Unlike steam load or boiler feedwater, net steam energy is a calculated value and cannot be monitored on a real time basis. CDM's January 9, 1999 letter to FDEP presented sample calculations with assumptions designed to illustrate the relationship between steam flow and heat input – not as a proposed "not to exceed" value or operations limit. CDM's sample calculation included boiler design values for steam enthalpy (1378.86 Btu/lb) and feedwater enthalpy (220.82 Btu/lb).

This language is also inconsistent with FAC 62-210.300 which states in part that "(a)ny conditions or language in an air construction permit that are included for informational purposes only, if they are transferred to the air operation permit, shall be transferred for informational purposes only and shall not become enforceable conditions unless voluntarily agreed to by the permittee or otherwise required under Department rules." The County and OMSH are concerned about the "shall not" wording in both the PSD and draft Title V permits and respectfully request that this potentially enforceable permit language either be deleted from or rephrased in both permits.

Incorporating design numbers from the application into the PSD with language that functions like an operating limit via this permitting note is problematic. This difficulty is compounded since the draft Title V permit also cites net steam energy (1158 Btu/lb) as a "shall not be exceeded" value. Normal, safe, operation of these boilers can routinely exceed this calculated 1158 BTU/lb value. As currently worded, OMSH would, at times, either need to cut back operations to comply with a theoretical/design value and/or be subject to potential enforcement and non-compliance reporting for a value that has no clear regulatory basis or emissions limiting benefit.

5. Page 7, Subsection B.2 (a) - Please delete reference to "172.5 MMBtu per hour" as a maximum operating rate. The relationship between heat input, steam load and MSW throughput was clearly documented in CDM's 1997 application. Heat input is not directly measurable and is redundant to other, more direct, measurements of processing rates that limit MSW processing capacity. Since this value is not directly measurable, it is not practicably enforceable and it is respectfully requested that it be deleted as an operational limitation.
6. Page 7, Subsection B.2 (b) Please delete the combustion efficiency (CE) requirement; it was not requested by CDM in its construction permit application. CE is not a regulatory requirement under either federal Subpart Cb standard or applicable State regulations. CO is a surrogate for measuring combustion efficiency and Subpart Cb requires continuous CO monitoring. In that context, inclusion of CE in this permit is obsolete and redundant. Since Subpart Cb requires substantial reduction of carbon monoxide relative to prior PSD limits – along with installation of a continuous emissions monitor (CEMS) for CO, the new CO limit and CEMS equipment are more than adequate to document ongoing compliance with federal/state good combustion practice requirements.
7. Page 10, Section III, B.6.6, B.6.7, and B.25 (page 21). Please substitute "monthly average" for 30 day rolling average calculation of segregated waste since normal facility recordkeeping

procedures are done on a calendar month basis (and amend condition B.25 accordingly). The imposition of a 30-day rolling average requirement requires daily calculation of this value and imposes an unnecessarily burdensome additional recordkeeping requirement. A monthly block average eliminates added recordkeeping time/cost.

8. Page 11, Section III, B.6. With respect to segregated wastes, Mr. Drew Lehman of Ogden and Mr. Joseph Kahn of FDEP recently spoke by telephone about the Department's intent in listing specific approved waste streams in the permit. Mr. Kahn indicated that the intent is that no further Department approval will be needed for those wastes. It would be very helpful if the amended PSD permit contain a clarifying statement to the effect that "*Waste materials specifically authorized above do not require Department approval*". While DEP's approval is implicit in the permit as currently worded, an explicit statement will be most appreciated to minimize potential confusion and future questions on this point of regulatory intent.
9. Page 12, Section III, B.8. It is requested that this Table of emission limits be revised as follows.
 - a. Please delete the lb/MMBtu and lb/hr columns since they are derived directly from and therefore wholly redundant to the tons per year (TPY) column. The TPY values in the permit are based upon and consistent with emission factor estimates in CDM's 1997 application. The TPY values were developed for the application using CDM's theoretical, proprietary "BURN" model calculation and presented as part of CDM's "netting" and air quality modeling analyses - not as not-to-exceed permit limits.
 - b. It is our understanding that the TPY values are primarily used by FDEP for mass emissions rate information. Therefore, it is respectfully requested that a footnote be added to the Table stating that: "*The TPY (as well as lbs/hr and lb/MMBtu-if the prior request to delete these units is not granted) values in this Table are included for information purposes only and are not emissions limits.*"

To support this request, it is important to recognize that the emissions values listed in the table represent a substantial reduction (e.g. up to 95% for HCl) from pre-retrofit uncontrolled emissions - and prior PSD permits. Except for fluorides, beryllium, sulfuric acid mist and volatile organic compounds, the "Emissions Standards" presented in the table come directly from federal Subpart Cb standards. Historically, PSD permits for Hillsborough only had annual (TPY) emissions limits for NO_x (739 TPY) and H₂SO₄ (289 TPY). H₂SO₄ limits were subsequently eliminated via PSD-FL-121 (A). Post-retrofit NO_x emissions will be reduced by some 30% (from roughly 300 ppmv @7% O₂ to 205 ppmv@7%O₂) - a reduction of hundreds of TPY relative to the currently permitted annual NO_x limit. With the Subpart Cb NO_x limit of 205 ppmv@7%O₂ being continuously monitored, and an annual inventory value developed, imposing a lower annual permit limit for NO_x is redundant.

Finally, to confirm actual long-term post-retrofit reductions in annual emissions, the PSD permit requires the permittee to compile a ten-year inventory of annual emissions to verify that no significant increase in emissions has occurred. In summary, this

requests that all listed emissions values except those directly taken from Subpart Cb be flagged/footnoted as being for FDEP informational purposes only.

- c. Sulfuric acid mist. The limit for and testing of sulfuric acid mist was specifically eliminated via PSD-FL-121 (A). The Department's January 27, 1998 Technical Evaluation and Preliminary Determination report noted that "the (H₂SO₄) limit appears to have been deleted instead " (page 8). That report also states that "injection of ammonia or urea for NO_x control will further suppress SAM emissions and possibly interfere with their measurement." Since this permit condition was formally eliminated via a prior PSD permit change, and recognizing the potential for test interference, it is respectfully requested that all references to an H₂SO₄ limit and all requirements for testing be eliminated from the permit (i.e. Table B.8, Section III, B.9 and Method 8 reference)
10. Page 16, Subsection B.17 (a) This requests that the deadline for the annual report documenting compliance with the 10% annual fuel capacity factor limitation be extended to 60 days after the end of the calendar year. This is a professional courtesy to allow sufficient time to compile information given a typical crush of end-of-year data compilations.
11. Page 17, Subsection B.18. Technically, steam production, baghouse inlet temperature measurement, carbon injection system, and power generation monitors are not "CEMS" in the sense of gaseous pollutants. There are no federal (40 CFR 60 Appendix B & F) or State calibration and maintenance requirements for these devices. Please rephrase the permit to indicate that: *"These operational data monitoring systems shall be calibrated annually and operated in accordance with good engineering practice."*
12. Page 18, Subsection B. 20. Typo in second line, change to "the following date".

Look for blue background on the front of this check, and the imageSafe® logo on back. If not present, do not cash.

**OGDEN MARTIN SYSTEMS
OF HILLSBOROUGH, INC.**

OPERATIONS IMPREST ACCOUNT
350 N. FALKENBURG RD. 813-684-5688
TAMPA, FL 33619

5808

DATE 4/4/00 **B**

32-1/1110 TX
0

PAY TO THE ORDER OF Florida Department of Environmental Protection \$ 250.00

Two Hundred fifty and 00/100 DOLLARS



VOID AFTER 90 DAYS

FOR Repaceck# 5785 - PSD 121B Amendment

Nancy B Oslaney MP



CHRYSLER FINANCIAL GROUP



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

Teresa

Ed

Windy

Brock

A1

APR 06 2000

4APT-ARB

Mr. Howard L. Rhodes, Director
Department of Environmental Protection
Division of Air Resources Management
Mail Station 5500
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJ: Beryllium-Containing Wastes

Dear Mr. Rhodes:

Thank you for your correspondence, dated March 28, 2000, requesting an Environmental Protection Agency (EPA) determination regarding the applicability of the national emission standard for beryllium (40 C.F.R. part 61, subpart C) to municipal waste combustor (MWC) units subject to the emission guideline requirements of 40 C.F.R. part 60, subpart Cb. The question being addressed is whether a MWC unit is subject to the beryllium standard, because their air permit contains an emission limit for beryllium, although the unit does not accept or combust beryllium-containing wastes (as defined under subpart C).

Existing MWC units with a capacity to combust greater than 250 tons per day of municipal solid waste (MSW) are subject to 40 CFR part 60, subpart Cb (except as exempted in §60.32b). Pursuant to subpart Cb:

"MSW" is defined as household, commercial/retail, and institutional waste. Household waste includes material discarded by single and multiple residential dwellings, hotels, motels, and other similar permanent or temporary housing establishments or facilities. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar establishments or facilities. Institutional waste includes material discarded by schools, nonmedical waste discarded by hospitals, material discarded by nonmanufacturing activities at prisons and government facilities, and material discarded by similar establishments or facilities. Household, commercial/retail, and institutional waste does not include used oil, sewage sludge, wood pallets, construction, renovation and demolition wastes (including but not limited to railroad ties and telephone poles), clean wood, industrial process or manufacturing waste, medical waste, or motor vehicles (including motor vehicle parts or vehicle fluff). Household, commercial/retail, and institutional wastes include yard waste, refuse-derived fuel, and motor vehicle maintenance materials limited to vehicle batteries and tires (as specified in the rule).

2

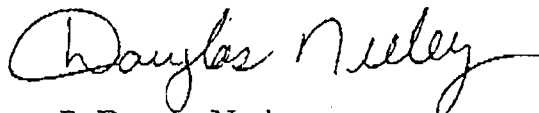
"MWC units" are defined as any setting or equipment that combusts solid, liquid, or gasified MSW including but not limited to, field-erected incinerators (with or without heat recovery), modular incinerators (starved-air or excess-air), boilers (i.e., steam generating units), furnaces (whether suspension-fired, grate-fired, mass-fired, air curtain incinerators, or fluidized bed-fired), and pyrolysis/combustion units. MWC units do not include pyrolysis/combustion units located at a plastics/rubber recycling units, cement kilns firing MSW, or internal combustion engines, gas turbines, or other combustion devices that combust landfill gases collected by landfill gas collection systems.

The provisions of 40 C.F.R. part 61, subpart C, are applicable to extraction plants, ceramic plants, foundries, incinerators, and propellant plants which process beryllium ore, beryllium, beryllium oxide, beryllium alloys, or beryllium-containing waste. Beryllium-containing waste is defined as material contaminated with beryllium and/or beryllium compounds used or generated during any process or operation performed by a source subject to subpart C. For this standard, an incinerator means any furnace used in the process of burning waste for the primary purpose of reducing the volume of the waste by removing combustible matter.

EPA addressed the issue at question in July 16, 1979, correspondence from the Division of Stationary Source Enforcement to EPA Region II regarding the definition of beryllium-containing waste in §61.31 (see Enclosure). According to this determination, beryllium-containing waste does not include materials such as scrap metals and calculators which may be burned at municipal waste incinerators. Beryllium-containing wastes only include wastes generated at ceramic plants, extraction plants, foundries, and propellant plants. However, should any of these wastes be disposed of at a municipal waste incinerator, that incinerator would be subject to the subpart C beryllium regulations. This same conclusion would also apply to MWC units; they would not be subject to subpart C requirements unless the unit combusted beryllium-containing waste from a subpart C affected facility.

Thank you for the opportunity to assist in this determination. If you have any questions, please contact Mr. Scott Davis of the EPA Region 4 staff at (404) 562-9127.

Sincerely,



R. Douglas Neeley
Chief

Air and Radiation Technology Branch
Air, Pesticides and Toxics
Management Division

Enclosure

cc: Don Elias, RTP Environmental Associates
Walt Stevenson, OAQPS
Debbie Thomas, OECA

Determination Detail

Control Number: ZC012

Category: NESHAP
 EPA Office: DSSE
 Date: 07/16/1979
 Title: Beryllium Containing Wastes
 Recipient: Dvorkin, Stephen A.
 Author: Reich, Edward E.
 Comments:

Abstract:

Does the term "beryllium containing wastes" include materials such as scrap metals and discarded electronic calculators which may be burned in municipal incinerators?

The term beryllium containing wastes includes only those wastes generated by a foundry, extraction plant, ceramic plant, or propellant plant.

Letter:

Control Number: ZC12

July 16, 1979

MEMORANDUM

SUBJECT: Beryllium Regulations

FROM: Director
Division of Stationary Source Enforcement

TO: Stephen A. Dvorkin, Chief
General Enforcement Branch
Region II

This is a response to your memo of May 10, 1979, in which you requested a determination regarding the applicability of the beryllium standard to municipal incinerators. Basically, you asked whether the term "beryllium containing waste", as defined in 61.31(g) of the regulations, includes materials such as discarded electronic calculators and scrap metals which may be burned in municipal incinerators or whether it includes only those beryllium wastes generated at ceramic plants, extraction plants, foundries, and propellant plants.

I interpret the term "beryllium containing waste", defined as:

"material contaminated with beryllium and/or beryllium compounds used or generated during any process or operation performed by a source subject to this subpart"

to include only those wastes generated by a foundry, extraction plant, ceramic plant or propellant plant. While one might argue that incinerators are also "sources subject to this subpart" (see above definition) and that any beryllium wastes that contain beryllium which are burned in any incinerator should be subject to the standard, the control techniques and background documents do not support such an interpretation.

Section 3.6 of the document entitled "Control Techniques for Beryllium Air Pollutants" (February 1973) contains a discussion of methods for disposal of beryllium containing wastes. The document clearly indicates that it was the incineration of wastes generated by extraction plants, ceramic plants, propellant plants and foundries that we were concerned about in developing the standard. Moreover, the Economic Impact section of the document "Background Information on Development of National Emission Standards for Hazardous Air Pollutants: Asbestos, Beryllium, and Mercury" (March 1973) discusses the impact of the standard on only four industries: ceramic plants, extraction plants, propellant plants, and foundries. An assumption is made that most of the sources in those four categories will incinerate their own wastes on site. Thus, the cost of controlling emissions from beryllium incinerators seems to be taken into account in estimating the cost of the standard to the four listed source categories. This is one further indication that the standard was only intended to apply to the incineration of wastes generated at foundries, ceramic plants, extraction plants, and propellant plants. There certainly is no indication in either the preambles to the proposed and promulgated standards or any of the background documents that the standard was intended to apply to each municipal incinerator.

While most generators of "beryllium containing waste" may incinerate their wastes on site it is possible that in some cases they may transport the wastes to another facility for disposal. Should the wastes be disposed of at a municipal incinerator, that incinerator would be subject to the beryllium regulations. The regulations apply to any incinerator which burns beryllium containing wastes generated at a foundry, ceramic plant, propellant plant or extraction plant.

If the Regional Offices are not certain where beryllium containing wastes are being incinerated and whether the incineration facilities are in compliance with the NESHAP regulations, it might be desirable to request this information from the owners of beryllium waste generators via 114 letter. In this manner, a list of incinerators subject to the beryllium standard could be assembled.

Should you wish to discuss this issue further, please contact Libby Scopino of my staff at FTS 755-2564.

Edward E. Reich

cc: Simins Roy, ESED
Stu Roth, R. II, Enf.

CDM Camp Dresser & McKee Inc.

consulting
engineering
construction
operations

Westshore Center
1715 North Westshore Boulevard, Suite 875
Tampa, Florida 33607
Tel: 813 281-2900 Fax: 813 288-8787

March 23, 2000

Mr. C. H. Fancy, Bureau Chief
Bureau of Air Resources Management
Florida Department of Environmental Protection
1111 Magnolia Boulevard
Tallahassee, Florida 32399-2400

Subject: Request to Amend Construction Permit # PSD-FL-121 (B)
FID No. 0570261 - Hillsborough County Resource Recovery Facility

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Vice President

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E. Svek, FDEP
T. Smith, Hillsborough County
J. Burbridge, OMSH

RECEIVED

MAR 30 2000
DIVISION OF AIR
RESOURCES MANAGEMENT

Attachment

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7. Page 10, Section III, B.6.6, B.6.7, and B.25 (page 21). Please substitute "monthly average" for 30 day rolling average calculation of segregated waste since normal facility recordkeeping

procedures are done on a calendar month basis (and amend condition B.25 accordingly). The imposition of a 30-day rolling average requirement requires daily calculation of this value and imposes an unnecessarily burdensome additional recordkeeping requirement. A monthly block average eliminates added recordkeeping time/cost.

8. Page 11, Section III, B.6. With respect to segregated wastes, Mr. Drew Lehman of Ogden and Mr. Joseph Kahn of FDEP recently spoke by telephone about the Department's intent in listing specific approved waste streams in the permit. Mr. Kahn indicated that the intent is that no further Department approval will be needed for those wastes. It would be very helpful if the amended PSD permit contain a clarifying statement to the effect that "*Waste materials specifically authorized above do not require Department approval*". While DEP's approval is implicit in the permit as currently worded, an explicit statement will be most appreciated to minimize potential confusion and future questions on this point of regulatory intent.
9. Page 12, Section III, B.8. It is requested that this Table of emission limits be revised as follows.
 - a. Please delete the lb/MMBtu and lb/hr columns since they are derived directly from and therefore wholly redundant to the tons per year (TPY) column. The TPY values in the permit are based upon and consistent with emission factor estimates in CDM's 1997 application. The TPY values were developed for the application using CDM's theoretical, proprietary "BURN" model calculation and presented as part of CDM's "netting" and air quality modeling analyses - not as not-to-exceed permit limits.
 - b. It is our understanding that the TPY values are primarily used by FDEP for mass emissions rate information. Therefore, it is respectfully requested that a footnote be added to the Table stating that: "*The TPY (as well as lbs/hr and lb/MMBtu-if the prior request to delete these units is not granted) values in this Table are included for information purposes only and are not emissions limits.*"

To support this request, it is important to recognize that the emissions values listed in the table represent a substantial reduction (e.g. up to 95% for HCl) from pre-retrofit uncontrolled emissions - and prior PSD permits. Except for fluorides, beryllium, sulfuric acid mist and volatile organic compounds, the "Emissions Standards" presented in the table come directly from federal Subpart Cb standards. Historically, PSD permits for Hillsborough only had annual (TPY) emissions limits for NO_x (739 TPY) and H₂SO₄ (289 TPY). H₂SO₄ limits were subsequently eliminated via PSD-FL-121 (A). Post-retrofit NO_x emissions will be reduced by some 30% (from roughly 300 ppmv @7% O₂ to 205 ppmv@7%O₂) - a reduction of hundreds of TPY relative to the currently permitted annual NO_x limit. With the Subpart Cb NO_x limit of 205 ppmv@7%O₂ being continuously monitored, and an annual inventory value developed, imposing a lower annual permit limit for NO_x is redundant.

Finally, to confirm actual long-term post-retrofit reductions in annual emissions, the PSD permit requires the permittee to compile a ten-year inventory of annual emissions to verify that no significant increase in emissions has occurred. In summary, this

requests that all listed emissions values except those directly taken from Subpart Cb be flagged/footnoted as being for FDEP informational purposes only.

- c. Sulfuric acid mist. The limit for and testing of sulfuric acid mist was specifically eliminated via PSD-FL-121 (A). The Department's January 27, 1998 Technical Evaluation and Preliminary Determination report noted that "the (H₂SO₄) limit appears to have been deleted instead " (page 8). That report also states that "injection of ammonia or urea for NO_x control will further suppress SAM emissions and possibly interfere with their measurement." Since this permit condition was formally eliminated via a prior PSD permit change, and recognizing the potential for test interference, it is respectfully requested that all references to an H₂SO₄ limit and all requirements for testing be eliminated from the permit (i.e. Table B.8, Section III, B.9 and Method 8 reference)
10. Page 16, Subsection B.17 (a) This requests that the deadline for the annual report documenting compliance with the 10% annual fuel capacity factor limitation be extended to 60 days after the end of the calendar year. This is a professional courtesy to allow sufficient time to compile information given a typical crush of end-of-year data compilations.
11. Page 17, Subsection B.18. Technically, steam production, baghouse inlet temperature measurement, carbon injection system, and power generation monitors are not "CEMS" in the sense of gaseous pollutants. There are no federal (40 CFR 60 Appendix B & F) or State calibration and maintenance requirements for these devices. Please rephrase the permit to indicate that: *"These operational data monitoring systems shall be calibrated annually and operated in accordance with good engineering practice."*
12. Page 18, Subsection B. 20. Typo in second line, change to "the following date".

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

In the Matter of an
Application for Permit Modification

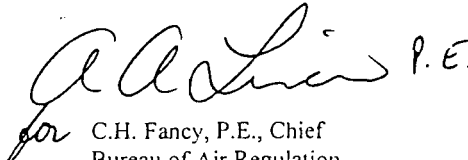
Mr. Daniel A. Kleman
County Administrator
Hillsborough County
601 East Kennedy
Tampa, Florida 33602

Resource Recovery Facility
Permit Nos. PSD-FL-121(B)
FID No. 0570261
Air Pollution Control Project
Hillsborough County

Enclosed is the Final Permit Modification Number PSD-FI-121 (B). This construction permit is to replace and improve the air pollution control system; define process throughput parameters; increase amount of waste that can be burned on a short-term basis, and specify which materials can be burned at its solid waste energy recovery facility located at 350 Faulkenburg Road, Tampa, Hillsborough County, Florida. 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

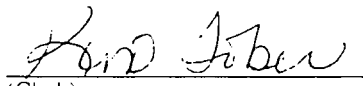
CERTIFICATE OF SERVICE

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 6-29-98 to the person(s) listed:

Daniel Kleman, County Administrator *
Ronnie Mason, City Council Chairman, Tampa
Brian Beals, EPA
John Bunyak, NPS
Douglas W. Fredericks, P.E.
Jerry Campbell, HCEPC
Bill Thomas, SWD
Martha Chumbler, Carlton Fields
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.


(Clerk) 6-29-98
(Date)

FINAL DETERMINATION

Hillsborough County Refuse-to-Energy Facility
Tampa, Florida
PSD-FL-121(B) and PA 83-19
Facility ID. No. 0570261

An Intent to Issue an air construction permit, to authorize the replacement of the air pollution control equipment on existing municipal waste incinerators, for Hillsborough County Refuse-to-Energy Facility was distributed on January 28, 1998. This facility is located at 350 Falkenburg Road in Tampa, Hillsborough County, Florida. The Public Notice of Intent to Issue Air Construction Permit was published in The Tampa Tribune on February 6, 1998.

In response to the public notice, comments were received by telephone from Carlos Gonzalez, Engineer for the Hillsborough County Environmental Protection Commission (HCEPC), Dan Strobridge of Camp Dresser & McKee (CDM) and Michael Hewett from the DARM/OPAPM office. Their verbal comments were primarily related to identifying typographical errors or minor points of clarification.

The County's Consultant, Dan Strobridge of Camp Dresser & McKee (CDM) also sent written comments (letter dated February 20, 1998). These comments were to clarify wording in Section III Subsection B and Specific Condition B.9; to revise limitations expressed in terms of pounds per hour and pounds per million Btu for the pollutants mercury, hydrochloric acid and sulfur dioxide; to delete initial compliance test for volatile organic compounds (VOCs) and sulfuric acid mist (SAM); to change the 45-day requirement for submitting stack test report; and to request only initial and operating permit removal tests for beryllium (Be) and fluorides (F). Mr. Dan Strobridge also requested to change the expiration date of the permit and to clarify that the permit should specify that PM testing using EPA Method 5 would utilize the front-half catch of the sampling train.

The Department evaluated their requests and agreed to the following: 1) To clarify the wording in Section III Subsection B and Specific Condition B.9. 2) To revise the emission limits Table (Specific Condition B.8) to include the percentage reduction as specified in the NSPS guidelines. 3) The initial compliance tests for VOC and SAM were not deleted from the permit nor the annual test requirements for Be and F (the test results will be evaluated for at least a 5 year period), for the reasons stated in the Technical Evaluation (refer to sections 7 and 8 of this technical evaluation). 4) The definition of allowable wastes was also slightly revised for clarity, so the permit properly reflects the Department's intent with respect to the definition of allowable wastes for this facility. 5) The 45-day time period for submitting the stack test report will remain as noted, this requirement is in accordance with Rule 62-297.310 (8) F.A.C. 6) The EPA Method 5 is a front-half catch method, and measurement of particulate matter captured in the back half of the sampling train is not required for this source. The emissions limited pollutant is particulate matter not PM₁₀ as defined in 40 CFR 60.51b which refers specifically to EPA Reference Method 5. To further clarify that the emissions limited pollutant is particulate matter, Specific Condition B.8. has been changed to refer only to PM, not PM₁₀, and the requirements for particulate matter testing from 40 CFR 60.58b(c)(3) have been added to Specific Condition B.10. 7) The expiration date of this permit was changed to March 30, 2003.

The final action of the Department will be to issue the permit with the changes noted above.



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.

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

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

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

B.3 Load Level : *Unit load* means the steam load of the municipal waste combustor (MWC) measured as specified in 40 CFR 60.58b(i)(6). Each MWC unit shall not operate at a load

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

level greater than 110 percent of the unit's "maximum demonstrated unit load." The maximum demonstrated unit load is the highest 4-hour arithmetic averaged MWC unit load achieved during four consecutive hours during the most recent dioxin/furan performance stack test in which compliance with the dioxin/furan emission limit was achieved. Higher loads are allowed for testing purposes as specified at 40 CFR 60.53b(b). [Rule 62-204.800(8), F.A.C., 40 CFR 60.31b; 60.38b; 60.51b; 60.53b(b); and 60.58b(i)(8)]

B.4 Emission Control Equipment

Particulate Matter

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

Spray Dry Scrubber

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

Carbon Injection

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

Selective Non Catalytic Reduction System

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

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

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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

B.6 Fuels

The primary fuel for the facility is municipal solid waste (MSW), including the items and materials that fit within the definition of MSW contained in either 40 CFR 60.51b or Section 403.706(5), Florida Statutes (1995).

B.6.1 Subject to the limitations contained in this permit, the authorized fuels for the facility also include the other solid wastes that are not MSW which are described below. However, the facility shall not burn:

- (a) those materials that are prohibited by state or federal law;
- (b) those materials that are prohibited by this permit;
- (c) lead acid batteries;
- (d) hazardous waste;
- (e) nuclear waste;
- (f) radioactive waste;
- (g) sewage sludge;
- (h) explosives.

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

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

B.6.3 The facility owner/operator shall prepare and maintain records concerning the description and quantities of all segregated loads of non-MSW material which are received and used as fuel at the facility, and subject to a percentage weight limitation, below (B.6.6. and B.6.7). For the purposes of this permit, a segregated load is defined to mean a container or truck that is almost completely or exclusively filled with a single item or homogenous composition of waste material, as determined by visual inspection.

B.6.4 To ensure that the facility's fuel does not adversely affect the facility's combustion process or emissions, the facility operator shall:

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

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 segregated loads and burned at the facility shall not exceed 3%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30 day average in accordance with specific condition No. B.25 below.

B.6.7 Subject to the conditions and limitations contained in this permit, the following other solid waste materials may be used as fuel at the facility (i.e. the following are authorized fuels that are non-MSW material). The total quantity of the following non-MSW material received as segregated loads and burned at the facility shall not exceed 5%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30 day average in accordance with specific condition No. B.25 below.

- (a) Construction and demolition debris.
- (b) Oil spill debris from aquatic, coastal, estuarine or river environments. Such items or materials include but are not limited to rags, wipes, and absorbents.
- (c) Items suitable for human, plant or domesticated animal use, consumption or application where the item's shelf-life has expired or the generator wishes to remove the items from the market. Such items or materials include but are not limited to off-specification or expired consumer

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- products, pharmaceuticals, medications, health and personal care products, cosmetics, foodstuffs, nutritional supplements, returned goods, and controlled substances.
- (d) Consumer-packaged products intended for human or domesticated animal use or application but not consumption. Such items or materials include but are not limited to carpet cleaners, household or bathroom cleaners, polishes, waxes and detergents.
 - (e) Waste materials that:
 - (i) are generated in the manufacture of items in categories (c) or (d), above and are functionally or commercially useless (expired, rejected or spent); or
 - (ii) are not yet formed or packaged for commercial distribution. Such items or materials must be substantially similar to other items or materials routinely found in MSW.
 - (f) Waste materials that contain oil from:
 - (i) the routine cleanup of industrial or commercial establishments and machinery; or
 - (ii) spills of virgin or used petroleum products. Such items or materials include but are not limited to rags, wipes, and absorbents.
 - (g) Used oil and used oil filters. Used oil containing a PCB concentration equal or greater than 50 ppm shall not be burned, pursuant to the limitations of 40 CFR 761.20(e).
 - (h) Waste materials generated by manufacturing, industrial or agricultural activities, provided that these items or materials are substantially similar to items or materials that are found routinely in MSW, subject to prior approval of the Department.

B.7 Startup/Shutdown/Malfuncions

- (a) The emission limitations for this facility shall apply at all times, except during periods of warmup, startup, shutdown, or malfunctions, provided that the duration of startup, shutdown, or malfunction periods do not exceed 3 hours per occurrence. The duration of warmup periods is not limited. The startup period commences when the affected facility begins the continuous burning of MSW and does not include any warmup period when the affected facility is combusting only natural gas and MSW is not being introduced to the combustor. The use of MSW solely to provide thermal protection to the grate during the warmup periods when MSW is not being fed to the combustor is not considered to be continuous burning. During all startups, shutdowns, and malfunctions, the owner/operator shall use best operational practices to minimize air pollutant emissions.
- (b) A malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment to operate in a normal or usual manner. Excess emissions that are caused entirely or in part by poor maintenance, careless operation, any other preventable upset condition, or preventable equipment breakdown shall not be considered malfunctions. Excess emissions resulting from startup, shutdown or malfunction of any source shall be permitted providing: (1) best operational practices to minimize emissions are adhered to, and (2) the duration of excess emissions shall be minimized but in no case exceed 3 hours per occurrence. [Rule 62-210.700, and 62-204.800(8), F.A.C., and 40 CFR 60.58b(a)(1)]

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EMISSION LIMITATIONS

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

POLLUTANT	EMISSION STANDARDS	LB/MMBtu	LB/HR	TON/YR
PM ⁽¹⁾ Particulate Matter	27 mg/dscm or 0.012 gr/dscf corrected to 7% O ₂	0.024	4.1	17.96
VE Visible Emissions	10% (6 min. block avg.)			
Cd Cadmium	0.040 mg/dscm corrected to 7% O ₂	3.47E-05	6.00E-03	0.026
F Fluorides	6.74 mg/dscm corrected to 7 % O ₂	0.0059	1.00	4.43
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 _(s) Mercury	70 ug/dscm or 85% reduction by weight corrected to 7% O ₂ (whichever is less stringent)	1.17E-04 or 85% reduction @ 7% O ₂	0.020 or 85% reduction @ 7% O ₂	0.087
SAM Sulfuric Acid Mist	To be demonstrated initially. Not to exceed 0.072 gr/dscf corrected to 12 % CO ₂			
SO₂ ⁽³⁾ 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 ⁽³⁾ 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 % CO₂ or 0.2 lb/ton, whichever is more restrictive (PSD-FL-104).
- (5) Emission limits in terms of lbs/ MMBtu or lb/hr for those pollutants which have an emission standard expressed, in part by a percent removal efficiency, shall also be dictated by the percent removal provision.

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

Averaging Times

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

Abbreviations

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

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

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

COMPLIANCE AND PERFORMANCE TESTING

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

B.9 Stack Testing

Compliance tests [initial (I) and annual (A) as indicated in Specific Condition No. B.8] for PM, HCl, Dioxin/furans, F, Be, Pb, Cd, Hg, H₂SO₄ mist (SAM), VOC and VE shall be performed by using the following reference methods as described in 40 CFR 60, Appendix A and/or 40 CFR 61 Appendix B adopted by reference in Chapter 62-204, F.A.C., or any other method as approved by FDEP, in accordance with Chapter 62-297, F.A.C.

Stack tests may also require Method 1, 2, 3/3A/3B and 4 tests as appropriate.

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

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

- (1) Pursuant to 40 CFR 60.58b(c)(3) EPA Reference Method 5 shall be used for determining compliance with the particulate matter emission limit. The minimum sample volume shall be 1.7 cubic meters. The probe and filter holder heating systems in the sample train shall be set to provide a gas temperature no greater than 160 ± 14 °C. An oxygen or carbon dioxide measurement shall be obtained simultaneously with each Method 5 run.
- (2) Dioxin/Furan emission limit expressed as the total mass of tetra- through octa chlorinated dibenzo-p-dioxins and dibenzofurans. The facility may perform less frequent testing for dioxin/furan emissions, as allowed by 40 CFR 60.38b(b) and with prior notice to the Department, if the facility's dioxin/furan emissions do not exceed 15 ug/dscm corrected to 7% O₂ or less for all MWC units.
- (3) HCl and mercury stack tests upstream and downstream of the control device (s) shall be conducted to calculate percent control.

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

- B.10. Test Procedures: Compliance tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration etc.) of the Florida Administrative Code Chapter 62-297. The Method 9 test shall be conducted during one run of the particulate matter test. The particulate matter test shall be conducted under conditions representative of normal

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

B.11 Stack Testing Facilities: The owner or operator shall install stack testing facilities in accordance with Rule 62-297.310(6), F.A.C. The owner or operator shall provide ports in the air pollution control equipment outlet duct or stack and shall provide access to the sampling ports. [Rule 62-297.310(6)(c), F.A.C.]

B.12 Monitoring Compliance:

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

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

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

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- B.15 Compliance with the PM Control Device Temperature: Each MWC unit is required to continuously monitor and record the flue gas temperature at the inlet to the PM control device in accordance with the requirements at 40 CFR 60.58b(i)(7). The PM control device temperature shall be calculated in 4-hour block arithmetic averages. Each MWC unit shall be allowed to operate up to 17°C (30° F) above the unit's maximum demonstrated PM control device temperature. The maximum demonstrated PM control device temperature is the highest 4-hour arithmetic block-averaged measurement of temperature at the inlet to the PM control device recorded for 4 consecutive hours during the most recent dioxin/furan performance test which complied with the limits given above. The PM control device inlet temperature and the steam (or feedwater) flow for each unit during the stack test shall be continuously monitored and recorded in accordance with 40 CFR 60, Subpart Cb. Higher temperatures are allowed for testing purposes, as specified at 40 CFR 60.53b(c). [Rule 62-204.800(8), F.A.C. and 40 CFR 60.38b, 40 CFR 60.53b(c) and 60.58b(i)(7) and (9)]
- B.16 Compliance with the Carbon Injection Rate: The carbon injection rate for each MWC unit (kilograms per hour [kg/hr] or pounds per hour [lb/hr]) shall be estimated during each mercury and dioxin/furan compliance stack test based on carbon injection system operating parameters such as the screw feeder speed, hopper volume, hopper refill frequency, or other parameters appropriate to the feed system being employed. During operation of each MWC unit, the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate must equal or exceed the level(s) documented during the most recent mercury and dioxin/furan stack tests in which compliance with the emission limits were achieved. The owner or operator shall estimate the total carbon usage for the facility for each calendar quarter according to the weight of carbon delivered to the facility and the average carbon mass feed rate (kg/hr or lb/hr) for each MWC unit based on the primary indicator(s) for carbon mass feed rate, summing the results for all MWC units and accounting for the total number of operating hours during the calendar quarter. [Rule 62-204.800(8), F.A.C. and 40 CFR 60.58b(m)]
- B.17 Auxiliary Burners Compliance:
- (a) Auxiliary burners for each unit shall be fired only by natural gas. The annual capacity factor for natural gas shall be 10 percent or less. Monthly records shall be maintained of the amount of natural gas used by the auxiliary burners in each unit and the equivalent gross heat input. On an annual basis (no later than 30 days after the end of the calendar year), a demonstration must be performed based on the monthly records showing that the capacity factor for natural gas in each unit was 10 percent or less. The

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

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

MONITORING OF OPERATIONS

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

Carbon Monoxide

Nitrogen Oxides

Opacity

Sulfur Dioxide

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

Oxygen

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

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

Carbon injection system operating parameters

Power generation (MW)

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

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

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

RECORD KEEPING AND REPORTING REQUIREMENTS

B.20 Reports and Records:

All measurements, records, and other data (test reports, etc.) required to be maintained by this facility shall be retained for at least five (5) years following the data on which such measurements, records, or data are recorded. These data shall be made available to the Department of Environmental Protection, Southwest District office and the Hillsborough County Environmental Protection Commission upon request. [Rule 62-4.070(3), F.A.C.; Rule 62-4.160(14)(b), F.A.C. and 40 CFR 60.59b]

The Permittee shall maintain a central file containing all measurements, records, and other data that are required to be collected pursuant to the various specific conditions of this permit. This file shall include but not be limited to:

- (a) Data collected from monitoring instruments, including CEM/COM systems, steam or feedwater flow measurements and PM control device temperatures;
- (b) Continuous steam flow or feedwater flow records on 4-hour block average basis;
- (c) Records on daily solid waste charging rates and hours of operation derived from monthly truck scale data, refuse pit inventory, and operational records.
- (d) Amount of natural gas burned for each unit each month; the equivalent heat input from natural gas for each unit each month, calculated using the heat value for natural gas provided by the natural gas supplier; and the annual records of the natural gas capacity factor for each unit;
- (e) Results of all source tests or performance tests; and records of the maximum demonstrated unit load specified by condition B.3 of this permit.
- (f) Amounts of activated carbon used for mercury control;
- (g) Calibration logs for all instruments subject to this permit;

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- (h) Maintenance/repair logs for any work performed which is subject to this permit;
- (i) Records showing the names of facility personnel who have been provisionally or fully certified, and who have completed the MWC operator training course, and who have completed reviews of the operating manual, including the dates and documentation of certification/review.
- (j) Records demonstrating compliance with the percentage limitations on segregated solid wastes required by specific condition B.25 of this permit.

B.21. Excess Emission Reports

B.21.1 Quarterly Reports

The owner or operator shall submit excess emission reports for any calendar quarter during which there are excess emissions from the facility pursuant to 40 CFR 60.7(c). If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report quarterly stating that no excess emissions occurred during the quarterly reporting period. The report shall include the following:

- (a) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors used, and the date and time of commencement and completion of each period of excess emissions.
[40 CFR 60.7(c)(1)]
- (b) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the furnace boiler system. The nature and cause of any malfunction (if known) and the corrective action taken or preventive measure adopted.
[40 CFR 60.7(c)(2)]
- (c) The date and time identifying each period during which the continuous monitoring system (CEM/COM) was inoperative except for zero and span checks, and the nature of the system repairs or adjustments.
[40 CFR 60.7(d)(2) as applicable].
- (d) When no excess emissions have occurred or the continuous monitoring system (CEM/COM) has not been inoperative, repaired, or adjusted, such information shall be stated in the report [40 CFR 60.7(c)(4)]. In case of excess emissions resulting from

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

B.21.2 Other Excess Emission Reports

In case of excess emissions resulting from malfunctions*, the owner or operator shall notify Department's Southwest District office (DEPSWD) and the Hillsborough County Environmental Protection Commission (HCEPC) in accordance with Section 62-4.130, F.A.C. The DEPSWD and the HCEPC shall be notified within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the DEPSWD or the HCEPC may request a written summary report of the incident. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the DEPSWD or HCEPC.

* Malfunction is defined at Rule 62-210.200(179) to mean any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.

[Rules 62-4.130 and 62-210.700(6), F.A.C.]

- B.22 Continuous Emission Monitoring System Reports:** For CEM and other monitoring systems required by this permit, data on monitoring equipment specifications, manufacturer, type, calibration and maintenance needs, and proposed location shall be provided to the Department's Southwest District office and the Hillsborough County Environmental Protection Commission for review at least 90 days prior to installation.
- B.23 Operating Reports:** Before March 1st of each year, the owner or operator shall submit to the Department Southwest District office (DEPSW) and the Hillsborough County Environmental Protection Commission (HCEPC) the Annual Operating Report [DEP Form No. 62-210.900(5)], which summarizes operations for the previous calendar year. No later than February 1st of each year, the owner or operator shall submit an annual report for the previous calendar year including the information required by 40 CFR 60.59b(g)(1) through (4), as applicable. In addition, if applicable, the owner or operator shall submit to the FDEP and the HCEPC offices the information required in 40 CFR 60.59b(h) on a semiannual basis. **[Rule 62-210.370(3), F.A.C. and 40 CFR 60.59b(g) and if applicable 40 CFR 60.59b(h)]**
- B.24 Sampling Reports:** Drawings of testing facilities including sampling port locations as required by Section 62-297.310(8)(c) shall be submitted to the Southwest District Office at least 60 days prior to construction of the sampling ports.

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- B.25 Segregated Solid Waste Record Keeping: The following records shall be made and kept to demonstrate compliance with the segregated non-MSW percentage limitations of specific condition B.6:

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

Each day the total weight of segregated tires received shall be computed, and the daily total shall be added to the sum of the daily totals from the previous 29 days. The resultant 30 day total weight of tires shall be divided by the total weight of all waste materials received in the same 30 day period, and the resultant number shall be multiplied by 100 to express the ratio in percentage terms. The percentage computed shall be compared to the 3% limitation.

Each day the total weight of segregated non-MSW materials received that are subject to the 5% restriction shall be computed, and the daily total shall be added to the sum of the daily totals from the previous 29 days. The resultant 30 day total weight of segregated non-MSW materials shall be divided by the total weight of all waste materials received in the same 30 day period, and the resultant number shall be multiplied by 100 to express the ratio in percentage terms. The percentage computed shall be compared to the 5% limitation.

OPERATOR TRAINING AND CERTIFICATION

B.26 Requirements

- (a) One of the following persons must be on duty at the facility at any time during which one or more of the MWC units is operating: a fully certified chief facility operator or shift supervisor; or a provisionally certified chief facility operator or shift supervisor who is scheduled to take the full certification exam. If this person must leave the facility during his or her operating shift, a provisionally certified control room operator who is on site may fulfill this requirement. [40 CFR 60.39b(c)(4) (ii) and 40 CFR 60.54b(c)].
- (b) Each chief facility operator and shift supervisor must obtain and maintain a current provisional operator certification and be scheduled for a full certification exam, or receive full certification, with either the ASME or an equivalent state-approved

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certification program before the date that person assumes responsibility for operation of the facility. [40 CFR 60.39b(c)(4)(ii) and 40 CFR 60.54b(a) and (b)]

- (c) Each chief facility operator, shift supervisor, and control room operator must complete the EPA or state approved MWC operator training course before the date that person assumes responsibility for operation of the facility. The operator training course requirements of 40 CFR 60.54b(d) do not apply to chief facility operators, shift supervisors and control room operators who have obtained full ASME certification on or before the date of State plan approval of November 13, 1997 [40 CFR 60.39b(4)(iii)(c)(A)]. The owner or operator may request that the Department waive the requirements specified in 40 CFR 60.54b(d) for chief facility operators, shift supervisors and control room operators who have obtained provisional ASME certification on or before the date of State plan approval of November 13, 1997 [40 CFR 60.39b(4)(iii)(c)(B)].

[40 CFR 60.39b(c)(4) and 40 CFR 60.54b(d)]

- (d) A site-specific operating manual must be developed and updated on an annual basis [40 CFR 60.54b(e)]. A training program must be established to review the operating manual with each person who has responsibilities affecting the operation of the MWC including chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers. Each person must undergo initial training before the day that person assumes responsibilities affecting operation of the facility and annually thereafter [40 CFR 60.54(f)]. The operating manual must be kept in a readily accessible location for all persons required to undergo training.

[40 CFR 60.54b(e) and 40 CFR 60.54b(f)]

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SUBSECTION C. SPECIFIC CONDITIONS:

The following Specific Conditions apply to the following emissions units:

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

EMISSION LIMITATIONS

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

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

- (a) In no case shall PM emissions from the lime storage silos exhaust exceed 0.015 gr/dscf (front-half catch) during filling operations of the lime storage silo. Visible emissions shall not exceed 5% opacity in accordance with specific condition C.3.
- (b) In no case shall particulate matter emissions from the activated carbon storage silo exhaust exceed 0.015 gr/dscf (front-half catch) during filling operations of the activated carbon storage silo. Visible emissions shall not exceed 5% opacity in accordance with specific condition C.3.
- (c) Visible emissions from the ash conveyor systems, transfer points, buildings, or enclosures of ash conveying systems shall not occur more than 5 percent of the time during the observation period, except during times of maintenance or repair of these systems.
- (d) The potential for dust generation by ash handling activities will be mitigated by quenching the ash prior to loading in ash transport trucks. The ash handling facilities shall be enclosed. Unprocessed refuse storage areas which must be open for operational purposes (e.g., tipping floor of the refuse bunker while trucks are entering and leaving) will be under negative air pressure. Residue from the grates, grate siftings, and ash from the combustor/boiler and fabric filter hoppers during normal operations shall be discharged into the ash quenching system to minimize visible dust. The ash/residue in the Ash Handling Building shall remain sufficiently moist to prevent dust during storage and handling operations.

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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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

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

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

COMPLIANCE AND PERFORMANCE TESTING

C.2 Fugitives Emissions Compliance:

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

Method 22 Visual Determination of Fugitives Emissions From Material Sources

- (a) The minimum observation time will be three hours, and will include periods when ash is being transferred from the MWC unit to the storage area, and when ash is being loaded for disposal.
- (b) Compliance testing for the ash handling and ash conveyor systems shall be conducted within 180 days of completion of construction and initial operation and annually thereafter. All notification requirements of 40 CFR Part 60 shall be satisfied.

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

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

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

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

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

AIR CONSTRUCTION PERMIT PSD-FL-121(B) 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
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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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 appropriate air pollution control agency. December 31, 1996 - applicable to units 1, 2 and 3.

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

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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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

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

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

Closure Agreement: Not later than November 13, 2000, the County will cease operation of any unit that has not completed on-site construction or installation of emission control equipment and is not involved in performance testing. After closure, said units may commence startup, shakedown and performance/compliance testing per the closure agreement. Performance/compliance tests must be completed within 180 days of startup. [Rule 62-204.800(8)9.b.,F.A.C.]

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

- G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
- G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
- (a) Have access to and copy and records that must be kept under the conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

- G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
- (a) A description of and cause of non-compliance; and
 - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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

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

- G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.
- G.13 This permit also constitutes:
- (a) Determination of Best Available Control Technology ()
 - (b) Determination of Prevention of Significant Deterioration ();
 - (c) Compliance with New Source Performance Standards (X);
- G.14 The permittee shall comply with the following:
- (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements;
 - 2. The person responsible for performing the sampling or measurements;
 - 3. The dates analyses were performed;
 - 4. The person responsible for performing the analyses;
 - 5. The analytical techniques or methods used; and
 - 6. The results of such analyses.
- G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Florida Department of Environmental Protection

Memorandum

TO: Howard Rhodes

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

FROM: Teresa Heron *T.H.*

DATE: June 26, 1998

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

BAR

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

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

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

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

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

We recommend your approval and signature.

AAL/th

Attachments

RECEIVED

JUN 23 1998

**BUREAU OF
AIR REGULATION**

**STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION**

In Re: Hillsborough County Solid)
Waste Energy Recovery Facility) DEP FILE NO. PA83-19A
Modification of Conditions of) OGC CASE NO. 98-1641
Certification PA 83-19)
Hillsborough County, Florida)

**FINAL ORDER
MODIFYING CONDITIONS OF CERTIFICATION**

On December 20, 1984, the Governor and Cabinet, sitting as the Siting Board, issued a final order approving certification for the Hillsborough County Solid Waste Energy Recovery Facility (facility). That certification order approved the construction and operation of a 29 MW waste-fired turbine generation unit and associated facilities located in Hillsborough County, Florida.

On September 15, 1997, Hillsborough County filed a request with the Florida Department of Environmental Protection (Department) to modify PSD Permit PSD-FL-121(B). On September 15, 1997, Hillsborough County also filed a request to modify the conditions of certification pursuant to Section 403.516(1), Florida Statutes, and Condition XIV, which delegates authority to modify conditions to the Department. Hillsborough County requested that the PSD permit and the conditions be modified to replace the 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 40 CFR 60, 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. The modifications also expand

peak waste input to 115 percent of nominal capacity and define wastes which can be combusted.

The Department is also implementing a modification of the conditions of certification to conform to the requirements of federally delegated or required permits such as, but not limited to, PSD permits, Title V permits or NPDES permits.

Copies of Hillsborough County's and the Department's proposed modifications were made available for public review in September, 1997. On September 8, 1997, all parties to the original proceeding were mailed copies of the intent to modify. On October 10, 1997, a Proposed Modification of Power Plant Certification was published in the Florida Administrative Weekly. The notice specified that a hearing would be held if a party to the original certification hearing objected within 45 days from receipt of the proposed notice of modification or if a person whose substantial interests will be affected by the proposed modification objected in writing within 30 days after issuance of the public notice. No written objections to the proposed modifications were received by the Department. Accordingly, in the absence of any timely objection,

IT IS ORDERED:

The proposed changes to the Hillsborough County Solid Waste Energy Recovery Facility Conditions of Certification as described in the September 15, 1997, request for modification and in the Department's October 10, 1997, Notice of Intent to Issue Proposed Modifications to Power Plant Certification are **APPROVED**. Pursuant to Section 403.516(1)(b), Florida Statutes, the conditions of certification for the Hillsborough County Solid Waste Energy Recovery Facility are **MODIFIED** as follows:

II. OPERATION

A. AIR

~~The operation of the Resource Recovery Facility shall be in accordance with all applicable provisions of Chapter 17-2, 17-4, and 17-7, Florida Administrative Code. In addition to the foregoing, the permittee shall comply with the following specific conditions of certification:~~

~~1. Emission Limitations~~

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

- ~~1. Particulate matter: 0.021 grains per standard cubic foot dry gas corrected to 12% CO₂ with maximum cap of 7.0 pounds per hour per unit~~
- ~~2. SO₂: 3.2 lbs/ton of solid waste fired, maximum 24 hour average~~
- ~~3. Nitrogen Oxides: 6.4 lbs/ton or 404 ppm~~
- ~~4. Carbon Monoxide: 1.8 lbs/ton at 12% CO₂~~
- ~~5. VOC: 0.2 lbs/ton~~
- ~~6. Mercury: 2200 grams/day~~
- ~~7. Odor: there shall be no objectionable odor~~
- ~~8. Visible emissions: opacity from each boiler shall not be greater than 15% except that visible emissions with no more than 20% opacity may be allowed for up to three minutes in any one hour except during start up or upsets when the provision of 17-2.250, F.A.C., shall apply. Opacity from the ash handling facility baghouse shall not exceed 5%. Opacity compliance shall be demonstrated in accordance with Florida Administrative Code Rule 17-2.700(6) (a), DER method 9. The compliance test requirements for the ash handling facility shall be waived in accordance with Rule 17-2.700(3)(d), F.A.C.~~
- ~~9. Beryllium: 13.1 x 10⁻⁶ lb/tons~~

- a. ~~The height of the boiler exhaust stack shall not be less than 220 feet above grade.~~
- b. ~~The incinerator boilers shall not be loaded in excess of their rated capacity of 36,666 pounds per hour each.~~
- c. ~~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. Compliance with the limitations for particulates, sulfur oxides, nitrogen oxides, carbon monoxide and lead shall be determined in accordance with Florida Administrative Code Rule 17-2.700, DER Methods 1, 2, 3, 5, 6, and 40 CFR 60, Appendix A, Method 7. Compliance with the opacity of stack emissions shall be demonstrated in accordance with Florida Administrative Code Rule 17-2.700(6)(a)9, DER Method 9. The stack test shall be performed at +10% of the heat input rate of 150 million Btu per hour; however, compliance with the particulate matter emission limit shall be at design capacity.~~
- e. ~~The permittee must submit to the Department within thirty (30) days after it becomes available, 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 preceding emission limitations.~~
- f. ~~Grease, scum, grit screenings or sewage sludge will not be charged into the solid waste to energy facility boilers.~~

~~2. Electrostatic Precipitator~~

~~—The electrostatic precipitator shall be designed and constructed to achieve a maximum emission rate of 0.021 grains per dscf.~~

~~3. Air Monitoring Program~~

~~a. The permittee shall install and operate continuously monitoring devices for stack oxygen and opacity. The monitoring devices shall meet the applicable requirements of Chapter 17-2.710, FAC, and 40 CFR 60.45, and 40 CFR 60.13, including certification of each device.~~

~~b. The permittee shall provide sampling ports into the stack and shall provide access to the sampling ports in accordance with Section 17-2.700(4), FAC.~~

~~c. The permittee shall have a sampling test of the stack emissions performed by a commercial testing firm within 90 days of the start of operation of the boilers and annually from the date of testing thereafter.~~

~~4. Reporting~~

~~a. Two copies of the results of the stack tests shall be submitted within forty five days of testing to the DER Southwest Florida District Office.~~

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

~~B. 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 modification of these Conditions of Certification.~~

1. ADMINISTRATIVE

a. All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Bureau of Air Regulation, MS 5500, Florida Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, telephone (850) 488-1344, and the Siting Coordination Office, MS 48, Florida Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, telephone (850) 487-0472. All documents related to reports, tests, and notifications should be submitted to the Department's Southwest District office, 3804 Coconut Palm Drive, Tampa, Florida 33619 and phone number (813) 744-6100 and the Environmental Protection Commission of Hillsborough County, 1900 Ninth Avenue, Tampa, Florida 33605 and telephone number (813) 272-5960.

b. The owner and operator is subject to and shall operate under the General Conditions, II.A.16, of this permit. These General Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes.

c. The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.

d. 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.

e. 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. Upon written request by the permittee, the Department may extend the 18-month period upon a satisfactory showing that an extension is justified.

f. An application for a modification of the Title V operating permit, pursuant to Chapter 62-213, F.A.C., must be submitted to the Department's Bureau of Air Regulation, and a copy to the Department's Southwest District office and the Hillsborough County Environmental Protection Commission.

g. 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.

2. CONSTRUCTION

a. 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., Rules 62-4, 62-103, 62-204, 62-212, 62-213, 62-296, 62-297, F.A.C., and the Code of Federal Regulations Section 40, Part 60, adopted by reference in 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.].

3. OPERATION

a. 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.

b. 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's Southwest District office and the Hillsborough County Environmental Protection Commission 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.

c. 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 devices shall be properly trained and certified in plant specific equipment. A list of all such certified personnel shall be submitted to the Department's Southwest District office. Department staff shall be given notice of any formal training sessions related to operation and maintenance of air pollution control devices.

d. 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.

4. DETERMINATION OF PROCESS VARIABLES

a. 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.

b. 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.

5. WASTE DISPOSAL

a. 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.

6. STEAM GENERATION UNIT ACTUAL EMISSIONS

a. The permittee shall provide the Department, within the period not longer than 10 years following any 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.

7. EMISSIONS LIMITS, GENERAL PROVISIONS

a. 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:

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

b. 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]

c. The affected emissions units shall comply with all applicable provisions of the 40 CFR 60, Subpart E and Subpart Cb, New Stationary Source Standards of Performance 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.

8. EMISSIONS LIMITS, SPECIFIC CONDITIONS

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

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

{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 150 MMBtu 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 increased 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 per boiler shall not be exceeded.}

9. OPERATIONAL REQUIREMENTS

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

b. Process Operating Rates

(1) 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 II.A.10.f and II.A.10.g)

(2) Combustion efficiency shall be calculated by: %CE= [1/1+(CO/CO₂)] X 100, and shall be at least 99.5% for an 8-hour average.

c. 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).

d. Emission Control Equipment

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

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

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

(4) 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 ppm_{dv} corrected to 7 percent O₂, 24-hour block arithmetic mean (midnight to midnight).

(5) 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.

e. The height of the boiler exhaust stack shall not be less than 220 feet above grade.

f. 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).

(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.

(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.

(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 as in II.A.9.f.(6) and II.A.9.f.(7) below. 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 waste material as determined by visual inspection.

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

(5) 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. 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.

(6) Subject to the conditions and limitations contained in this permit waste tires may be used as fuel at the facility. The total quantity of waste tires received as segregated loads and burned at the facility shall not exceed 3%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30 day average in accordance with specific condition II.A.12.g below.

(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 as

authorized fuels that are non-MSW material. The total quantity of the following non-MSW material received as segregated loads and burned at the facility shall not exceed 5%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30 day average in accordance with specific condition II.A.12.g 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.

g. Startup/Shutdown/Malfunctions

(1) The emission limitations for this facility shall apply at all times, except during periods of warm-up, startup, shutdown, or malfunctions, provided that the duration of startup, shutdown, or malfunction periods do not exceed 3 hours per occurrence. The duration of warm-up periods is not limited. The startup period commences when the affected facility begins the continuous burning of MSW and does not include any warm-up 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 warm-up 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.

(2) 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 that: (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.

h. The following maximum emissions limits shall not be exceeded:

<u>POLLUTANT</u>	<u>EMISSION STANDARDS</u>	<u>LB/MMB tu</u>	<u>LB/HR</u>	<u>TON/YR</u>
<u>PM⁽¹⁾</u> <u>Particulate Matter</u>	<u>27 mg/dscm or 0.012 gr/dscf corrected to 7% O₂</u>	<u>0.024</u>	<u>4.1</u>	<u>17.96</u>
<u>VE</u> <u>Visible Emissions</u>	<u>10% (6 min. block avg.)</u>			

<u>Cd</u> Cadmium	<u>0.040 mg/dscm</u> <u>corrected to 7% O₂</u>	<u>3.47E-05</u>	<u>6.00E-03</u>	<u>0.026</u>
<u>F</u> Fluorides	<u>6.74 mg/dscm</u> <u>corrected to 7 % O₂</u>	<u>0.0059</u>	<u>1.00</u>	<u>4.43</u>
<u>Be⁽³⁾</u> Beryllium	<u>1.48 ug/dscm</u> <u>corrected to 7 % O₂</u>	<u>1.27E-06</u>	<u>2.18E-04</u>	<u>9.6E-04</u>
<u>Pb</u> Lead	<u>0.44 mg/dscm</u> <u>corrected to 7% O₂</u>	<u>3.81E-04</u>	<u>0.065</u>	<u>0.288</u>
<u>Hg⁽⁵⁾</u> Mercury	<u>70 ug/dscm or 85%</u> <u>reduction by weight</u> <u>corrected to 7% O₂</u> <u>(whichever is less</u> <u>stringent)</u>	<u>1.17E-04</u> <u>or 85%</u> <u>reduction</u> <u>@ 7% O₂</u>	<u>0.020 or</u> <u>85%</u> <u>reduction</u> <u>@ 7% O₂</u>	<u>0.087</u>
<u>SAM</u> Sulfuric Acid Mist	<u>To be initially shown not</u> <u>to exceed 0.072 gr/dscf</u> <u>corrected to 12 % CO₂</u>			
<u>SO₂⁽⁵⁾</u> Sulfur Dioxide	<u>29 ppmdv or 75%</u> <u>reduction</u> <u>by weight or volume</u> <u>corrected to 7% O₂</u> <u>(whichever is less</u> <u>stringent)</u>	<u>0.190 or</u> <u>75%</u> <u>reduction</u> <u>@ 7% O₂</u>	<u>32.86 or</u> <u>75%</u> <u>reduction</u> <u>@ 7 % O₂</u>	<u>143.9</u>
<u>HCl⁽⁵⁾</u>	<u>29 ppmdv or 95%</u>	<u>0.099 or</u>	<u>17.00 or</u>	<u>74.43</u>

<u>Hydrochloric Acid</u>	<u>reduction</u> <u>corrected to 7% O₂</u> <u>(whichever is less</u> <u>stringent)</u>	<u>95%</u> <u>reduction</u> <u>@ 7% O₂</u>	<u>95%</u> <u>reduction</u> <u>@ 7% O₂</u>	
<u>Dioxins/Furans</u>	<u>30 ng/dscm</u> <u>corrected to 7% O₂</u>	<u>2.60 E-08</u>	<u>4.5E-06</u>	<u>1.96E-05</u>
<u>CO</u> <u>Carbon Monoxide</u>	<u>100 ppm_{dv}</u> <u>corrected to 7% O₂</u>	<u>0.101</u>	<u>17.4</u>	<u>76.26</u>
<u>NO_x</u> ⁽²⁾ <u>Nitrogen Oxides</u>	<u>205 ppm_{dv}</u> <u>corrected to 7% O₂</u>	<u>0.34</u>	<u>58.63</u>	<u>256</u>
<u>VOC</u> ⁽⁴⁾ <u>Volatile Organic</u> <u>Compounds</u>	<u>To be demonstrated</u> <u>initially.</u> <u>Not to exceed 0.01</u> <u>gr/dscf at 12%CO₂</u>			

Notes: These maximum allowable emission rates are applicable to each MWC combustor unit.

(1) This limit for PM/PM₁₀ is more restrictive than the emission limit for PM in 40 CFR 60.43b.

(2) The NO_x standard of 40 CFR 60.44b does not apply to these emissions units because this permit subjects this facility to a federally enforceable requirement that limits the facility to an annual capacity factor of 10 percent or less for natural gas.

(3) Beryllium: NESHAP, 40 CFR 61.32 (a)(Subpart C). This limit is adjusted downward to produce no net increase in the annual maximum potential emission rate. Refer to Table 1.1 of the application submitted on September 16, 1997.

(4) VOC emission limit: 0.01 gr/dscf corrected to 12 % CO₂ or 0.2 lb/t_{on}, 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:

SO₂: 24-hour daily block geometric mean (midnight to midnight)

NO_x: 24-hour daily block arithmetic mean (midnight to midnight)

CO: 4-hour block arithmetic mean beginning at midnight

Opacity: 6 minutes block arithmetic mean

Abbreviations:

ug/dscm: Micrograms per dry standard cubic meter

mg/dscm: Milligrams per dry standard cubic meter

ppmdv: Part per million dry volume

ng/dscm: Nanograms per dry standard cubic meter

Dioxins/furans: Total tetra-chlorinated 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 be approximately 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).

10. COMPLIANCE AND PERFORMANCE TESTING

a. 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. Stack Testing

(1) Compliance tests [initial (I) and annual (A) as indicated in condition II.A.9.h] for PM, HCl, Dioxin/furans, F, Be, Pb, Cd, Hg, H₂SO₄ mist (SAM), VOC and VE shall be performed by using the following EPA 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 the Department, in accordance with 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).

NOTES: ¹ Pursuant to 40 CFR 60.58b(c)(3), EPA Reference Method 5 shall be used for determining compliance with the particulate matter emission limit. The minimum sample volume shall be 1.7 cubic meters. The probe and filter holder heating systems in the sample train shall be set to provide a gas temperature no greater than 160 ± 14 °C. An oxygen or carbon dioxide measurement shall be obtained simultaneously with each Method 5 run.

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

³ HCl and mercury stack tests upstream and downstream of the control device(s) shall be conducted to calculate percent control.

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

(2) Stack tests may also require Method 1, 2, 3/3A/3B and 4 tests as appropriate.

(3) A test protocol shall be submitted for approval to the Department's Southwest District office and the Hillsborough County Environmental Protection Commission at least 45 days prior to initial testing.

(4) 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.

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

(6) HCl and mercury stack tests upstream and downstream of the control device(s) shall be conducted to calculate percent control.

(7) 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.

c. Test Procedures: Compliance tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapter 62-297, F.A.C. The Method 9 test shall be conducted during one run of the particulate matter test. The particulate matter test shall be conducted under conditions representative of normal operations and shall be scheduled to coincide with as much of the normal cleaning (soot blowing) cycle as practicable. Initial performance tests for SO₂ and NO_x shall be conducted using Continuous Emissions Monitoring Systems (CEMS) in accordance with the methods and requirements of 40 CFR 60.58b(e)(4) and (h)(3), respectively.

d. 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.

e. Monitoring Compliance

(1) Continuous Compliance with Emission Limits: Continuous compliance with the emission limits for opacity, carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO₂) listed in B.8 and the operational parameters (steam

production, etc.) listed in Specific Condition No. B.3 shall be demonstrated by CEMS operated in accordance with 40 CFR 60.58b and 60.59b(f).

(2) 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).

(3) Compliance with the Continuous Charging Rate: The daily solid waste charging rate and hours of operation shall be determined and recorded for each MWC unit. The daily charging rate shall be determined each month on an average daily basis for each MWC unit using the Facility's truck scale weight data, refuse pit inventory, and MWC operating data for the preceding calendar month. Monthly truck scale weight records on the weight of solid waste received and processed at the Facility and refuse pit inventory shall be used to determine the amount of solid waste charged during the preceding calendar month on an average daily basis. The MWC load level measurements or other operating data shall be used to determine the number of operating hours per MWC unit for each day during the preceding calendar month.

(4) 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).

(5) 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.

(6) 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.

(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.

11. MONITORING OF OPERATIONS

a. Continuous Emission Monitoring System (CEMS): CEMS with recorders shall be installed, calibrated, maintained and operated for each unit subject to review by

the Department for the following pollutants and operational parameters:

Carbon Monoxide

Nitrogen Oxides

Opacity

Oxygen

Sulfur Dioxide

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

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)

b. 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 and the Hillsborough County Environmental Protection Commission 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.

12. RECORD KEEPING AND REPORTING REQUIREMENTS

a. 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.

b. 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:

(1) Data collected from monitoring instruments, including CEM/COM systems, steam or feedwater flow measurements and PM control device temperatures;

(2) Continuous steam flow or feedwater flow records on 4-hour block average basis;

(3) Records on daily solid waste charging rates and hours of operation derived from monthly truck scale data, refuse pit inventory, and operational records;

(4) 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;

(5) Results of all source tests or performance tests, and records of the maximum demonstrated unit load specified by condition B.3 of this permit.

(6) Amounts of activated carbon used for mercury control;

(7) Calibration logs for all instruments subject to this permit;

(8) Maintenance/repair logs for any work performed which is subject to this permit;

(9) 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;

(10) Records demonstrating compliance with the percentage limitations on segregated solid wastes required by specific condition B.25 of this permit.

c. Excess Emission Reports

(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.

(b) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the furnace boiler system.

The nature and cause of any malfunction (if known) and the corrective action

taken or preventive measures adopted.

(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.

(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 the Department and the Hillsborough County Environmental Protection Commission in accordance with Section 62-4.130, F.A.C.

(2) Other Excess Emission Reports: In case of excess emissions resulting from malfunctions, the owner or operator shall notify Department's Southwest District office and the Hillsborough County Environmental Protection Commission in accordance with Section 62-4.130, F.A.C. The Department's Southwest District office and the Hillsborough County Environmental Protection Commission 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 Department's Southwest District office or the Hillsborough County Environmental Protection Commission 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's Southwest District office or the Hillsborough County Environmental Protection Commission.

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.

d. 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.

e. Operating Reports: Before March first of each year, the owner or operator shall submit to the Department's Southwest District office and the Hillsborough County Environmental Protection Commission the Annual Operating Report [DEP Form No. 62-210.900(5)], which summarizes operations for the previous calendar year. No later than February first 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 Department and the Hillsborough County Environmental Protection Commission offices the information required in 40 CFR 60.59b(h) on a semiannual basis.

f. Sampling Reports: Drawings of testing facilities including sampling port locations as required by Section 62-297.310(8)(c), F.A.C. shall be submitted to the Department's Southwest District Office at least 60 days prior to construction of the sampling ports.

g. 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 II.A.9.f:

(1) 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 shall be recorded.

(2) 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.

(3) 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.

13. OPERATOR TRAINING AND CERTIFICATION

a. Requirements

(1) 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.

(2) 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.

(3) 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(c)(4)(iii)(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(c)(4)(iii)(B)].

(4) 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 60.54b(f)]. The operating manual must be kept in a readily accessible location for all persons required to undergo training.

14. THE FOLLOWING SPECIFIC CONDITIONS APPLY TO:

<u>EMISSIONS</u>	
<u>UNIT NO.</u>	<u>EMISSIONS UNITS DESCRIPTION</u>
<u>xxx</u>	<u>Ash Building and Handling System</u>
<u>xxx</u>	<u>Lime Silo</u>
<u>xxx</u>	<u>Carbon Silo</u>

a. Emissions Limitations

(1) 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 II.A.14.b.

(2) 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 II.A.14.b.

(3) 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.

(4) 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.

(5) The ash/residue in the Ash Handling Building shall remain sufficiently moist to prevent dust during storage and handling operations.

(6) 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 II.A.14.b.

{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 under Rule 62-

296.711(2)(c), F.A.C.}

b. Compliance and Performance Testing

(1) Fugitive Emissions Compliance:

(a) The compliance method for fugitive emissions from ash handling facilities shall be EPA Method 22, Visual Determination of Fugitive Emissions From Material Sources.

(b) 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.

(c) 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.

(2) Carbon and Lime Storage Silos and Ash Building Baghouse PM Compliance Requirements:

(a) 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.

(b) Visible emission tests shall be performed for each silo during filling operations and the ash handling baghouse using EPA Method 9.

(c) 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.

(d) 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.

(e) All notification requirements of 40 CFR 60 shall be satisfied.

15. THE FOLLOWING COMMON CONDITIONS APPLY TO:

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

a. Operational Requirements

(1) These emissions units are allowed to operate continuously (8760 hours/year).

(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.

(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.

(b) 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.

(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 startup, shutdown, or malfunction shall be prohibited.

(d) Within 90 days prior to completion of the construction authorized in this permit, the permittee shall submit to the Department's 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.

b. Emissions Limitations

(1) 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 avoid accumulations of ash.

(2) Speed limit signs shall be posted.

c. Compliance and Performance Testing

(1) Test Notification: The owner or operator shall notify the Department's Southwest District office and the Hillsborough County Environmental Protection Commission 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.

(2) 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 or 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 and the Hillsborough County Environmental Protection Commission.

(3) 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.

d. Record Keeping and Reporting Requirements

(1) Emission Compliance Stack Test Reports:

(a) A test report indicating the results of the required compliance tests shall be filed with the Department's Southwest District office and the Hillsborough County Environmental Protection Commission as soon as practical, but no later than 60 days after the last sampling run is completed.

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

e. Schedule of Compliance

(1) The compliance schedule for each unit is provided below.

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

(b) 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.

(c) 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.

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

(d) 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.

(e) Increment 5: Final compliance. December 10, 2000; applicable to units 1, 2 and 3.

(2) 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.

16. GENERAL CONDITIONS

a. 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, and 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.

b. 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.

c. 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.

d. 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.

e. 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 therefor; 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.

f. 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. 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 (reasonable time may depend on the nature of the concern being investigated), access to the premises, where the permitted activity is located or conducted to:

(1) Have access to and copy any records that must be kept under the conditions of the permit;

(2) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and,

(3) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

h. 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:

(1) A description of and cause of non-compliance; and 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.

(2) 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.

i. 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.

j. 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.

k. This permit is transferable only upon Department approval in accordance with 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.

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

m. This permit also constitutes:

(1) Determination of Best Available Control Technology;

(2) Determination of Prevention of Significant Deterioration ;

(3) Compliance with New Source Performance Standards.

n. The permittee shall comply with the following:

(1) 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.

(2) 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.

(3) Records of monitoring information shall include:

(a) The date, exact place, and time of sampling or measurements;

(b) The person responsible for performing the sampling or measurements;

(c) The dates analyses were performed;

(d) The person responsible for performing the analyses;

(e) The analytical techniques or methods used; and

(f) The results of such analyses.

o. 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.

XIV MODIFICATION OF CONDITIONS

A. Pursuant to Subsection 403.516(1), F.S. Florida Statutes, the Board hereby delegates the authority to the Secretary to modify any condition of this certification dealing with sampling, monitoring, reporting, specification of control equipment, related time schedules, SO₂ emission limitations (subject to notice and opportunity for hearing), or any special studies conducted, as necessary to attain the objectives of Chapter 403, Florida Statutes. Requests for modifications of monitoring requirements shall not be unreasonably withheld by the Department.

B. This certification shall be automatically modified to conform to any subsequent amendments, modifications, or renewals made by the Department under a federally delegated or approved program to any separately issued Prevention of Significant Deterioration (PSD) permit, Title V air permit, or National Pollutant Discharge Elimination System (NPDES) permit for the certified facility. The Permittee shall send each party to the original certification proceedings (at the party's last known address as shown in the record of such proceeding) notice of requests for modifications or renewals of the above listed permits if the request involves a relief mechanism (e.g., mixing zone, variance, etc.) from standards, a relaxation of conditions included in the permit

due to state permitting requirements, or the inclusion of less restrictive air emission limitations in the air permits. The Department shall notify all parties to the certification proceeding of any intent to modify conditions under this section prior to taking final agency action.

C. All other modifications to these conditions shall be made in accordance with section 403.516, Florida Statutes.

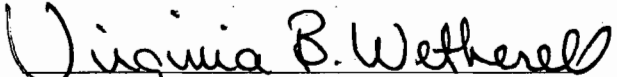
NOTICE OF RIGHTS

Any party to this Notice has the right to seek judicial review of the Order Pursuant to Section 120.68, Florida Statutes, by the filing of Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department of Environmental Protection in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, 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 that the Final Order is filed with the Department of Environmental Protection.

DONE AND ENTERED this 15th day of June, 1998 in Tallahassee,

Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



VIRGINIA B. WETHERELL

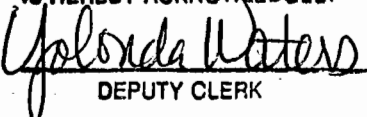
SECRETARY

3900 Commonwealth Boulevard

Tallahassee, FL 32399-3000

Telephone: (850) 488-1554

FILING AND ACKNOWLEDGEMENT
FILED, ON THIS DATE, PURSUANT TO §120.58
FLORIDA STATUTES, WITH THE DESIGNATED
DEPARTMENT CLERK, RECEIPT OF WHICH
IS HEREBY ACKNOWLEDGED.

 6/15/98
DEPUTY CLERK DATE

CERTIFICATE OF SERVICE

I CERTIFY that a true copy of the foregoing Final Order Modifying Conditions of

Certification was sent by U.S. Mail, hand delivery or interagency mail to:

Andrew S. Grayson, Esquire
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100

Earl Peterson, Director
Division of Forestry
Department of Agriculture and
Consumer Services
3125 Conner Boulevard, C-19
Tallahassee, Florida 32399-1650

Mary S. Miller, Esquire
Department of Transportation
Haydon Burns Building
605 Suwannee Street
Tallahassee, Florida 32399

George W. Perry, Director
Division of Historical Resources
Archives and History
R.A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399

Roger Tucker, Esquire
TBRPC, Suite 219
9455 Koger Boulevard
St. Petersburg, Florida 33702

Robert V. Elias, Esquire
Division of Legal Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

James V. Antista, Esquire
Florida Game and Fresh Water
Fish Commission
Bryant Building
620 South Meridian Street
Tallahassee, Florida 32399-1600

Pepe Menendez, P.E.
Department of Health
Environmental Health Services
1317 Winewood Boulevard
Tallahassee, Florida 32399-0070

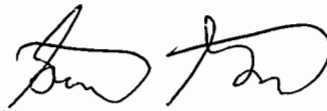
Thomas Smith
Executive Manager
Department of Solid Waste
601 East Kennedy Boulevard
Tampa, Florida 33601

Rick Tschantz, Esquire
Southwest Florida WMD
2379 Broad Street
Brooksville, Florida 34609-6899

Martha Chumbler, Esq.
Carlton, Fields, Ward, Emmanuel,
Smith & Cutter, P.A.
Post Office Box 190
Tallahassee, Florida 32302

on this 16th day of June, 1998.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



SCOTT A. GOORLAND
Assistant General Counsel
Florida Bar No. 0066834

3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000
Telephone: (850) 488-9730



Camp Dresser & McKee Inc.

Fredericks
← address too

consulting
engineering
construction
operations

1715 North Westshore Boulevard, Suite 875
Tampa, Florida 33607
Tel: 813 281-2900 Fax: 813 288-8787

RECEIVED
MAR 27 1998
BUREAU OF
AIR REGULATION

March 26, 1997

Ms. Teresa Heron, P.E.
Engineer, New Source Review Section
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Mail Station #5505
Tallahassee, Florida 32399-2400

Subject: Hillsborough County Draft Permit No. PSD-FL-121(B)
Boiler Engineering Assessment

Dear Ms. Heron:

Enclosed is a letter from DB Riley, Inc., the manufacturer of the boilers at the Hillsborough County waste-to-energy facility. The letter indicates that DB Riley has conducted an engineering assessment of the boilers and that they can be safely operated at a continuous steam flow up to 103,700 pounds per hour. This is a higher steam flow than the 102,000 pounds per hour maximum requested by Hillsborough County.

If you have any questions in this regard, please do not hesitate to contact me.

Sincerely,

CAMP DRESSER & MCKEE INC.

Daniel E. Strobridge, QEP
Associate

Enclosure

c: Thomas Smith, Hillsborough County (w/enclosure)

cc: A. Lino
SWD
Hillsbor Co.
EPA
NPS
R. Mason, City Council, Tampa

March 19, 1998

Mr. Joe Conover
Ogden Energy Group, Inc.
40 Lane Road
Fairfield, NJ 07007-2615

Re: Hillsborough County
Original Riley Contract No(s): 85006, 85007, 85008

Dear Mr. Conover:

This letter provides the results of DB Riley's engineering assessment of the Hillsborough County Resource Recovery Facility (RRF) boilers in connection with Hillsborough County's request to allow an increase in the RRF operating window.

The Hillsborough County RRF processes Municipal Solid Waste (MSW) utilizing three Riley boilers which were originally rated at 94,270 pounds per hour steam flow at 615 psig operating steam outlet pressure and 750°F steam outlet temperature. At the request of Ogden, DB Riley performed an evaluation of the boilers ability to operate at the increased steam flow of 102,000 pounds per hour (108% boiler load) which corresponds to an overall heat input of 172,500,000 btu per hour based on the original design boiler efficiency of 68.3 %.

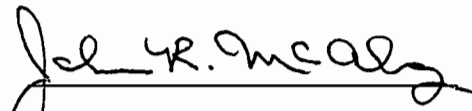
Evaluation Summary:

The results of DB Riley's engineering assessment of the boiler safety relief valves, the boiler operating pressure and the boiler design pressure confirm that the Hillsborough County RRF boilers can safely operate at an increased continuous steam flow up to 103,700 pounds per hour.

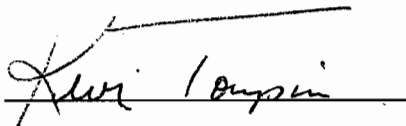
I trust this meets the needs of your project. Please call if you have any comments or questions.

Sincerely,

DB Riley Inc.



John R. McAloney
Service Manager



Kevin R. Toupin
Section Manager
Boiler Design and Results Dept.

SAFETY VALVE CALCULATIONS

OPERATING DATA

		INITIAL		FUTURE	
CONTIN. CAP LBS/HR	A	94,270	FA	103,700	
PEAK LOAD LBS/HR	B	- HRS	FB	HRS	
TYPE OF FUEL	C	REFUSE SOLID WASTE	FC		
BOILER H.S. SQ. FT.	D	3563 x 8 = 28,504	FD	same X =	
W.W.H.S. SQ. FT.	E	5250 x 12 = 63,000	FE	same X =	
TOTAL ST. CAP./CODE	F		FF	91,504	
	G		FG		

DATE: 7-5-84
 BY: A. REID
 APPD:

SOURCE OF H.S. INFORMATION
 PROPOSAL
 TEMPLATE

H BUILT PRESSURE P.S.I. 850 J MAXIMUM S.V. POPPING PRESSURE PER CODE P.S.I. 875

	ITEM	INITIAL			FUTURE 3-19-98		
		W.P.	TEMP.	FACT.	W.P.	TEMP.	FACT.
W.P. AND STEAM TEMP AT STEAM OUTLET (OPERATING)	K	615	750°		FK	615	750°
W.P. AND STEAM TEMP ON HIGH PRESS. SIDE OF ORIFICE PLATE IN SUPHTX OUT HDR	L	-	-		FL	-	-
SAT. STEAM TEMP AT OUTLET PRESS. OR	M		491°		FM		491°
SAT. STEAM TEMP AT W.P. ON HIGH PRESS. SIDE OF ORIFICE PLATE IN SUPHTX OUT HDR	N	-	-		FN	-	-
DEGREE OF SUPERHEAT	P		253°		FP		259°
SUPHTX PRESS. DROP	Q	175			FQ	189	
DRUM W.P.	R	790			FR	804	
SUPERHEAT FACTOR	S			.848	FS		.848

MAKE OF VALVES CONSOLIDATED

				T	INITIAL			FUTURE			
SIZE	CAT. NO.	ORIFICE AREA	LOCATION	ITEM	POP	CLOSE	RELIEVE	POP	CLOSE	RELIEVE	
1 1/2"	1556 HB	.785"	SUPER HEATER	1	660	633	20,806	660	633	20,806	
2"	1556 JA	1.287"	STEAM DRUM	2	850	816	51,699	850	816	51,699	
2"	1556 JA	1.287"	"	3	875	840	53,194	875	840	53,194	
				4							
				5							
				6							
				7							
				8							
TOTAL RELIEVING CAPACITY --- ONE UNIT --- LBS/HR					9	125,699			125,699		

AUTOMATIC RELIEF VALVE CONSOLIDATED

				W	INITIAL			FUTURE		
W.P.	TEMP.	SUPERHEAT	S.H. FACT.	ITEM	POP	CLOSE	RELIEVE	POP	CLOSE	RELIEVE
615	750	259°	.847							
2 1/2"	1533 VX	-.812 SEAT DIA	SUPER HEATER	10	822	800	16,283	10F		

X ITEM 1 FOR 750 °F ITEMS 2 TO 3 FOR 650 °F ITEM FOR °F ITEM FOR °F

NOTES:
 N1 FOR TEMPERATURES 451°F AND HIGHER VALVES MUST BE OF STEEL CONSTRUCTION.
 N2 POP PRESSURE OF ITEM 2 (-) TO BE SET AT OR BELOW BUILT PRESSURE.
 N3 POP PRESSURE OF ITEM 3 (-) LESS POP PRESSURE OF ITEM 2 (-) NOT TO EXCEED 10% OF ITEM 3 (-)
 N4 WHEN THERE ARE ONLY TWO VALVES ON THE BOILER OF DIFFERENT SIZES, THE RELIEVING CAPACITY OF THE SMALLER, ITEM (-) SHALL BE NOT LESS THAN 50% OF THE LARGER, ITEM (-).
 N5 WHEN THERE IS A SUPERHEATER EQUIPPED WITH SAFETY VALVES THE TOTAL RELIEVING CAPACITY OF ITEM 2 (-) TO ITEM 3 (-) INCLUSIVE TO BE NOT LESS THAN 75% OF TOTAL IN ITEM A (-).
 N6 THE TOTAL RELIEVING CAPACITY IN ITEM 9 (F9) TO BE EQUAL TO OR GREATER THAN THE LARGEST AMOUNT GIVEN IN ITEMS A, B, F-G OR FA, FB, FF-FG
 N7 VALVES - ITEMS 1 (-) TO 3 (-) INCLUSIVE ARE 900 P.S.I. STD.
 850 - 804 = 46 + 850 = 5.4%
 660 - 615 = 45 + 660 = 6.8%
 615 x 1.07 = 658

Y NOTE: FOR WATER WALL HEATING SURFACE USE FULL CIRCUMFERENCE OF ALL TUBE SPACINGS 3/2" AND OVER. FOR TUBE SPACINGS LESS THAN 3/2" USE HALF CIRCUMFERENCE.

LOCATION	CON. H.S.	SPCG	FOR SU	S.V. S.I.
TOTALS				

AUTO. RELIEF DATA ADDED PER DRESSER COMMENT 5/19/85 A. REID.
 Reviewed operating gap based on increased steam flow and higher drum operating pressure. Everything good with existing valves. 3-19-98 B. B. Datta

INLET ENDS
 900# AM. STD. RAISED FACE FLANGE

ITEM	W	P
1	2119	3110
2		
3		
4		
5		
6		
7		
8		
9		
10		

RECEIVED

FEB 25 1998

**BUREAU OF
AIR REGULATION**

February 20, 1998

Ms. Teresa Heron P.E.
Engineer, New Source Review Section
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Mail Station #5505
Tallahassee, Florida 32399-2400

Subject: Comments for Hillsborough County Draft Permit No. PSD-FL-121(B)

Dear Ms. Heron:

First, I would like to compliment you on the overall quality of the draft permit. It is well written and clear in its intent and purpose. I am enclosing, for your use, mark-up pages containing comments, most of which were previously relayed to you in our various phone calls. In addition to these comments, Hillsborough County offers and emphasizes the following comments:

1. Hillsborough County requests that Specific Condition B.8, with respect to Mercury (Hg), Sulfur Dioxide (SO₂) and Hydrochloric Acid (HCl), be modified such that the emission limitations expressed in LB/MMBtu and LB/HR be conformed to the emission standard whereby a percent reduction (whichever is less stringent) is also specified. Hillsborough County did not request these limitations. It is our understanding that the Department inserted this nomenclature for the purposes of public information. As presently proposed, the emission rates for these three pollutants are more stringent than the Emission Guideline contained in 40 CFR 60 Subpart Cb. The values for these pollutants represent annual average emission rates which must be achieved in order to meet the annual emission limitation (TON/YR). For Hg and HCl, the only way to demonstrate compliance is through the annual stack test. As proposed, if the stack test reveals an emission rate any higher than the annual average value, the Facility would be in violation of its permit even though it complied with the Emission Guideline and the emission standards. This is a risk unacceptable to Hillsborough County and its Facility operator Ogden Martin Systems of Hillsborough, Inc.

In the event that the stack test results indicate an emission rate higher than the value rate necessary to comply with the annual emission limitation, the County would be willing to provide the Department assurance that the Facility complies with the annual emission limit by performing additional testing or by providing other evidence, subject to Department approval, that the most recent stack test results are not representative for purposes of calculating annual emissions.

Ms. Teresa Heron, P.E.

February 20, 1998

Page 2

2. Hillsborough County requests that the Volatile Organic Compounds (VOC) emission limitation and testing requirement be removed from the Permit. PSD-FL-121 revised PSD-FL-104. Part of that revision was the removal of the VOC emission limitation. Further, the Facility will be equipped with continuous carbon monoxide (CO) emission monitors (CO is a surrogate indicator of VOC emissions). The Facility will also continuously monitor other measures demonstrating good combustion practice.
3. The PM/PM10 emission standard and testing requirements should reflect "front half catch only" for clarification in accordance with the definition of particulate matter in 40 CFR 60.15b and testing requirements in 40 CFR 60.58b(c).
4. Hillsborough County requests that testing requirements and emission limits for sulfuric acid mist (SAM) be removed. SAM limits for the existing facility were dropped in the 1987 PSD Permit modification and the Emission Guideline does not require SAM limits for the facility after the proposed improvements. (The addition of the spray dryer absorbers will effectively control SAM).
5. Hillsborough County requests that less frequent dioxin/furan emissions testing, as allowed by 40 CFR 60.386(b), be permitted with *notice* to the Department instead of Department *approval* (See Section III B.9*).
6. To clarify when compliance with the various requirements/specific conditions is required please add the words "*after improvements to comply with 40 CFR 60 Subpart Cb are completed*" to the first sentence in Section III Subsection B. Specific Conditions (page 7 of 27).
7. Hillsborough County requests that the 45-day time period for submitting stack test reports be extended to 60 days in Specific Condition D.8 (a). The extra time is needed due to the number of tests and the extensive laboratory work required.
8. Because Hillsborough County's WTE Facility is permitted under the Power Plant Site Act, the County questions whether the PSD permit should carry an expiration date. If an expiration date is required it should be for a period of 5 years from the date of issuance (approximately March 9, 2003).
9. Testing requirements for Beryllium and Fluorides in the existing permit only require an initial stack test, which was performed in 1987 [See Condition 1. A. (8) and (10) and 1. B.(m) and (o)]. There are no Emission Guideline requirements for these pollutants. Therefore, Hillsborough County is requesting only initial and operating permit renewal testing for these two pollutants, rather than annual tests, in accordance with current permit requirements.

Ms. Teresa Heron, P.E.

February 20, 1998

Page 3

If you have you any questions or comments, do not hesitate to call me.

Sincerely,

CAMP DRESSER & McKEE INC.



Daniel E. Strobridge

Associate

Attachment

c: Thomas Smith, Hillsborough County
Martha Chumbler, Carlton Fields
Don Elias, RTP

cc: *File*

SWD

J. Campbell, Hillsboro Co.

R. Mason, City Council, Tampa

EPA

NPS

BEST AVAILABLE COPY

DB RILEY, INC.

March 17, 1998

Mr. Joe Conover
Ogden Energy Group, Inc.
40 Lane Road
Fairfield, NJ 07007-2615

Re: Hillsborough County
Original Riley Contract No(s): 85006, 85007, 85008

Dear Mr. Conover:

This letter provides the results of DB Riley's engineering assessment of the Hillsborough County Resource Recovery Facility (RRF) boilers in connection with Hillsborough County's request to allow an increase in the RRF operating window.

The Hillsborough County RRF processes Municipal Solid Waste (MSW) utilizing three Riley boilers which were originally rated at 94,270 pounds per hour steam flow at 815 psig operating steam outlet pressure and 750°F steam outlet temperature. At the request of Ogden, DB Riley performed an evaluation of the boilers ability to operate at the increased steam flow of 103,700 pounds per hour (corresponds to an increase of 110% load).

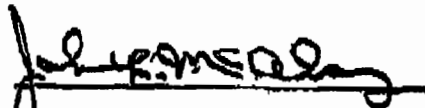
Evaluation Summary:

The results of DB Riley's engineering assessment of the boiler safety relief valve capacity and boiler operating pressure confirm that the Hillsborough County RRF boilers can safely operate at a increased continuous steam generation rate of 103,700 pounds per hour.

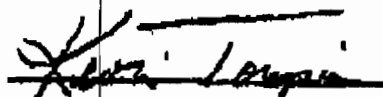
I trust this meets the needs of your project. Please call if you have any comments or questions.

Sincerely,

DB Riley, Inc.



John R. McAloney
Service Manager



Kevin Toupin
Section Manager/Boiler Design

Cc: P. Hunt
M. Lynch

Post-It™ brand fax transmittal memo 7671 # of pages = 1

To: <i>Teresa Heion</i>	From: <i>Dan Strabridge</i>
Co.	Co.
Dept.	Phone #
Fax #	Fax #

Mailing Address:
Post Office Box 16040
Worcester, MA 01615-0040

Shipping Address:
5 Nehemiah Street
Worcester, MA 01605

Telephone: (508) 852-7100
Fax: (508) 852-7340
www.dbriley.com

HILLSBOROUGH COUNTY

FLORIDA

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS

Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Jan Platt
Thomas Scott
Ed Turanchik



February 11, 1998

Deputy County Administrator
Patricia Bean

RECEIVED
County Administrators
John Hunzeker
Jimmie Keel

FEB 13 1998

**BUREAU OF
AIR REGULATION**

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

Re: Resource Recovery Facility Air Pollution Control Project
Draft Permit No. PSD-FL-121(B)

Dear Mr. Fancy:

Enclosed is the proof of publication, i.e., newspaper affidavit, for the "PUBLIC NOTICE OF INTENT TO ISSUE PERMIT MODIFICATIONS" which was published in The Tampa Tribune on Friday, February 6, 1998.

Should there be any questions regarding this submittal, please contact me at (813) 276-2909.

Sincerely,

Thomas G. Smith, Section Manager
Management & Environmental Services
Solid Waste Management Department

TGS/

Enclosure

xc: Al Linero, FDEP
Teresa Heron, FDEP
Dan Strobridge, CDM

EPA
NPS
JWD

M. Chumbler, Carlton Fields
J. Campbell, Hillsboro Co.
D. Elias, RTP

Post Office Box 1110 • Tampa, Florida 33601

An Affirmative Action/Equal Opportunity Employer

R. Mason, City Council, Tampa

PS Form 3800 April 1995

*ATTACH THIS FORM TO THE FRONT OF THE MAILPIECE, OR ON THE BACK IN SPACE PROVIDED PERMIT.
Write "Return Receipt Requested" on the mailpiece below the article number.
The Return Receipt will show to whom the article was delivered and the date delivered.

1. Addressee's Address
2. Restricted Delivery
Consult postmaster for fee.

3. Article Addressed to:
Daniel Klemm, CA
Hillsborough Co.
601 E. Kennedy
Tampa, FL 33602

4a. Article Number
P 265 659 378
4b. Service Type
 Registered Certified
 Express Mail Insured
 Return Receipt for Merchandise COD
7. Date of Delivery
JUL 09 1998

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)
[Signature]

Thank you for using Return Receipt Serv.

Return Receipt

P 265 659 378

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail. (See reverse)

Sent to	Daniel Klemm
Street & Number	Hillsborough Co
Post Office, State, & ZIP Code	Tampa FL
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	6-29-98

PS Form 3800 April 1995

0570261
PSD FI-121 B

THE TAMPA TRIBUNE
Published Daily
Tampa, Hillsborough County, Florida

State of Florida }
 County of Hillsborough } ss.

Before the undersigned authority personally appeared J. Rosenthal, who on oath says that she is Classified Billing Manager 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 _____

NOTICE OF APPLICATION

was published in said newspaper in the issues of _____

FEBRUARY 6, 1998

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 she has neither paid nor promised any person, this advertisement for publication in the said newspaper.

J. Rosenthal

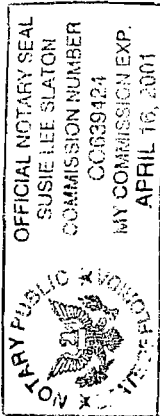
 9

Sworn to and subscribed before me, this _____ day
 of _____ FEBRUARY, A.D. 19⁹⁸

Personally Known _____ or Product Identification _____
 Type of Identification Produced _____

(SEAL)

Susie Lee Slaton



PUBLIC NOTICE OF INTENT
 TO ISSUE PERMIT
 MODIFICATION
 STATE OF FLORIDA
 DEPARTMENT OF
 ENVIRONMENTAL
 PROTECTION
 DRAFT Permit No.
 PSD-FL-121(B)

Hillsborough County Resource
 Recovery Facility
 Hillsborough County

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit modification to Hillsborough County to: replace and improve the air pollution control system; define process throughput parameters; increase amount of waste that can be burned on a short-term basis, and specify which materials can be burned at its resource recovery facility located at 350 Fairbank Road, Tampa, Hillsborough County, Florida. It was determined that an additional review for the Prevention of Significant Deterioration (PSD) is not applicable and a Best Available Control Technology determination was not required pursuant to Rule 62-212.400, and 410., F.A.C. The applicant's name and address are: Hillsborough County, 601 East Kennedy, Tampa, Florida 33602.

The purpose of the project is to comply with 40 CFR 60, Subpart Cb - Emission Guideline and Compliance Times for Municipal Waste Combustors That Are Constructed on or Before December 19, 1995. The Emission Guideline was developed pursuant to Section 129 (Solid Waste Combustion) of the Clean Air Act as amended in 1990. These requirements are incorporated in Department Rule 62-204.800(8), F.A.C.

The facility consists of three nominal 400 ton per day (TPD) mass burn furnaces, water-wall boilers, ash discharge systems, air pollution control equipment, and a single three-stage steam turbine with a 29 megawatt electrical generator. The proposed improvements to the air pollution control system consist of replacing the existing electrostatic precipitators with lime spray dryer absorbers and fabric filters. This will add acid gas control for sulfur dioxide and hydrogen chloride, improve particulate (PM/PM 10) collection efficiency, and enhance collection of heavy metals, including lead and cadmium. An activated carbon injection system will be installed for additional mercury control. Nitrogen oxides will be controlled by selective non-catalytic reduction. Combustion controls will be incorporated to minimize formation of dioxins and furans, volatile organic compounds, and carbon monoxide.

The original PSD permit contained annual testing requirements only for particulate matter. Specific limits and testing requirements are proposed for all previously mentioned pollutants. Continuous emission monitors will be installed for sulfur dioxide, nitrogen oxides, oxygen, carbon monoxide, and temperature at key points.

The units were originally permitted to utilize 'refuse such as garbage and trash' as defined in the Department's solid waste rules. The modified permit will specify the wastes as: solid waste including municipal solid waste (MSW) as defined at 40 CFR 60.51b and Section 403.704(5), F.S.; segregated wastes such as records and documents, non-hazardous contraband, clean wood and land clearing debris, packaging materials, clothing and fabric remnants and certain types of floor covering; segregated waste tires (not to exceed 3 percent of the total wastes received); other segregated wastes (not to exceed 5 percent of the total wastes received) such as construction and demolition debris, oil spill debris, expired or off-spec packaged or unpackaged consumable goods (e.g. pharmaceuticals), consumer

products, waste materials containing oil, used oil and filters and certain other wastes similar to MSW. The precise nature of the wastes is detailed in the draft permit package. By limiting the amount of segregated materials combusted at the facility, the Department has reasonable assurance that the overall composition of the wastes burned will be within the typical characteristics of MSW in terms of heating value, moisture, ash, and emissions characteristics.

Presently, the permitted waste throughput is 1200 TPD for the facility on an average annualized basis. The maximum allowable heat input rate is 165 mmBtu/hr at a daily waste throughput of 1,320 TPD (440 TPD per unit). The modified permit will, upon presentation of an engineering evaluation to the Department by the boiler manufacturer or operator, allow further increases of approximately 5 percent in short-term heat input, steam production, and waste throughput with no change in annual waste throughput limits.

The Department will issue the FINAL Permit Modification, in accordance with the conditions of the DRAFT Permit Modification unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed DRAFT Permit Modification Issuance action for a period of thirty (30) days from the date of publication of this Notice. Written comments should be provided to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit Modification, the Department shall issue a Revised DRAFT Permit Modification and require, if applicable, another Public Notice.

The Department will issue FINAL Permit Modification with the conditions of the DRAFT Permit Modification unless a timely petition for an administrative hearing is filed, pursuant to Sections 120.569

and 120.57 F.S. The procedures for petitioning for a hearing are set forth below. Mediation is not available for this action.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, telephone: 904/488-9370, fax: 904/487-4938. Petitions must be filed within fourteen days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 F.S. or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner, the applicants name and address, the Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the Department's action or proposed action addressed in this notice of intent.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file 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:

- Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida, 32301
Telephone: 904/488-1344
Fax: 904/922-6979
- Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619-8218
Telephone: 813/744-6100
Fax: 813/744-6084
- Hillsborough County Environmental Protection Commission
1900 Ninth Avenue
Tampa, Florida 33605
Telephone: 813/272-5960
Fax: 813/272-5157

The complete project file includes the Draft Permit Modification, the application and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, New Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 904/488-1344, for additional information.

HILLSBOROUGH COUNTY RECEIVED

FLORIDA

Office of the County Administrator
Daniel A. Kleman

FFR 13 1998

BUREAU OF
AIR REGULATION

Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimnie Keel

BOARD OF COUNTY COMMISSIONERS

Dottie Berger
Joe Chillura
Chris Harr
Jiru Nozman
Jan Platt
Thomas Scott
Ed Turanchik



February 11, 1998

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

Re: Resource Recovery Facility Air Pollution Control Project
Draft Permit No. PSD-FL-121(B)

Dear Mr. Fancy:

Enclosed is the proof of publication, i.e., newspaper affidavit, for the "PUBLIC NOTICE OF INTENT TO ISSUE PERMIT MODIFICATIONS" which was published in The Tampa Tribune on Friday, February 6, 1998.

Should there be any questions regarding this submittal, please contact me at (813) 276-2909.

Sincerely,



Thomas G. Smith, Section Manager
Management & Environmental Services
Solid Waste Management Department

TGS/

Enclosure

xc: Al Linero, FDEP
Teresa Heron, FDEP
Dan Strobridge, CDM

BEST AVAILABLE COPY

THE TAMPA TRIBUNE
Published Daily
Tampa, Hillsborough County, Florida

State of Florida }
County of Hillsborough } ss.

Before the undersigned authority personally appeared J. Rosenthal, who on oath says that she is Classified Billing Manager 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 _____

NOTICE OF APPLICATION

was published in said newspaper in the issues of _____

FEBRUARY 6, 1998

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 she has neither paid nor promised any person, this advertisement for publication in the said newspaper.

J. Rosenthal
9

Sworn to and subscribed before me, this _____ day
of _____ FEBRUARY, A.D. 1998

Personally Known _____ or Product Identification _____
Type of Identification Produced _____

(SEAL)

Susie Lee Slaton

PUBLIC NOTICE OF INTENT
TO ISSUE PERMIT
MODIFICATION
STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL
PROTECTION
rate is 165 mmBtu/hr at a
daily waste throughput of
1,320 TPD (440 TPD per unit).
The modified permit will, upon
presentation of an engi-
neering evaluation to the De-
partment by the boiler manu-
facturer or operator, allow
further increases of approx-
imately 10%.
to take with respect to the
Department's action or pro-
posed action addressed in this
notice of intent.
Because the administrative
hearing process is designed to
formulate final agency action,
the filing of a petition means
that the Department's final
action may be different from
the position taken by it in this
notice of intent. Persons
whose substantial interests
will be affected by any such
final decision of the Depart-
ment on the application have
the right to petition to become
a party to the proceeding, in
accordance with the require-
ments set forth above.
A complete project file 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:
Department of Environmental
Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida, 32301
Telephone: 904/488-1344
Fax: 904/922-6979
Department of Environmental
Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619-8218
Telephone: 813/744-6100
Fax: 813/744-6084
Hillsborough County Environ-
mental
Protection Commission
1900 Ninth Avenue
Tampa, Florida 33605
Telephone: 813/272-5960
Fax: 813/272-5157
The complete project file in-
cludes the Draft Permit Mod-
ification, the application and
the information submitted by
the responsible official, exclu-
sive of confidential records
under Section 403.111, F.S. In-
terested persons may contact
the Administrator, New Re-
source Review Section at 111
South Magnolia Drive, Suite 4,
Tallahassee, Florida 32301, or
call 904/488-1344, for addition-
al information.
9999 2/6/98

OFFICIAL NOTARY SEAL
SUSIE LEE SLATON
COMMISSION NUMBER
CC639424
MY COMMISSION EXP.
APRIL 16, 2001
NOTARY PUBLIC
STATE OF FLORIDA

Legals

**PUBLIC NOTICE OF INTENT
TO ISSUE PERMIT
MODIFICATION
STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL
PROTECTION
DRAFT Permit No.
PSD-FL-121(B)**

Hillsborough County Resource
Recovery Facility
Hillsborough County

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit modification to Hillsborough County for: replace and improve the air pollution control system; define process throughput parameters; increase amount of waste that can be burned on a short-term basis, and specify which materials can be burned at its resource recovery facility located at 350 Falkenburg Road, Tampa, Hillsborough County, Florida. It was determined that an additional review for the Prevention of Significant Deterioration (PSD) is not applicable and a Best Available Control Technology determination was not required pursuant to Rule 62-212.400, and 410, F.A.C. The applicant's name and address are: Hillsborough County, 601 East Kennedy, Tampa, Florida 33602.

The purpose of the project is to comply with 40 CFR 60, Subpart Cb - Emission Guideline and Compliance Times for Municipal Waste Combustors That Are Constructed on or Before December 19, 1995. The Emission Guideline was developed pursuant to Section 129 (Solid Waste Combustion) of the Clean Air Act as amended in 1990. These requirements are incorporated in Department Rule 62-204.800(8), F.A.C.

The facility consists of three nominal 400 ton per day (TPD) mass burn furnaces, water-wall boilers, ash discharge systems, air pollution control equipment, and a single three-stage steam turbine with a 29 megawatt electrical generator. The proposed improvements to the air pollution control system consist of relocating the existing electrostatic precipitators with lime spray dryer absorbers and fabric filters. This will add acid gas control for sulfur dioxide and hydrogen chloride, improve particulate (PM/PM 10) collection efficiency, and enhance collection of heavy metals, including lead and cadmium. An activated carbon injection system will be installed for additional mercury control. Nitrogen oxides will be controlled by selective non-catalytic reduction. Combustion controls will be incorporated to minimize formation of dioxins and furans, volatile organic compounds, and carbon monoxide.

The original PSD permit contained annual testing requirements only for particulate matter. Specific limits and testing requirements are proposed for all previously mentioned pollutants. Continuous

emission monitors will be installed for sulfur dioxide, nitrogen oxides, oxygen, carbon monoxide, and temperature at key points.

The units were originally permitted to utilize "refuse" such as garbage and trash as defined in the Department's solid waste rules. The modified permit will specify the wastes as: solid waste including municipal solid waste (MSW) as defined at 40 CFR 60.51b and Section 403.706(5), F.S.; segregated wastes such as records and documents, non-hazardous contraband, clean wood and land clearing debris, packaging materials, clothing and fabric remnants and certain types of floor covering; segregated waste tires (not to exceed 3 percent of the total wastes received); other segregated wastes (not to exceed 5 percent of the total wastes received) such as construction and demolition debris, oil spill debris, expired or off-spec packaged or unpackaged consumable goods (e.g. pharmaceuticals), consumer products, waste materials containing oil, used oil and filters and certain other wastes similar to MSW. The precise nature of the wastes is detailed in the draft permit package. By limiting the amount of segregated materials, combusted at the facility, the Department has reasonable assurance that the overall composition of the wastes burned will be within the typical characteristics of MSW in terms of heating value, moisture, ash, and emissions characteristics.

Presently, the permitted waste throughput is 1200 TPD for the facility on an average annualized basis. The maximum allowable heat input rate is 165 mmBtu/hr. at a daily waste throughput of 1,320 TPD (440 TPD per unit). The modified permit will, upon presentation of an engineering evaluation to the Department by the boiler manufacturer or operator, allow further increases of approximately 5 percent in short-term heat input, steam production, and waste throughput with no change in annual waste throughput limits.

The Department will issue the FINAL Permit Modification, in accordance with the conditions of the DRAFT Permit Modification unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed DRAFT Permit Modification issuance action for a period of thirty (30) days from the date of publication of this Notice. Written comments should be provided to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5503, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit Modification, the Department shall issue a Revised DRAFT Permit Modification and require, if applicable, another Public Notice.

The Department will issue FINAL Permit Modification with the conditions of the DRAFT Permit Modification unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569

Legals

and 120.57 F.S. The procedures for petitioning for a hearing are set forth below. Mediation is not available for this action.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, telephone: 904/488-9370, fax: 904/487-4938. Petitions must be filed within fourteen days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 F.S. or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner, the applicants name and address, the Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the Department's action or proposed action addressed in this notice of intent.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file 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:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida, 32301
Telephone: 904/488-1344
Fax: 904/922-6979
Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619-8218
Telephone: 813/744-6100
Fax: 813/744-6084
Hillsborough County Environmental
Protection Commission
1900 Ninth Avenue
Tampa, Florida 33605
Telephone: 813/772-5960



Department of Environmental Protection

DRAFT

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

PERMITTEE:

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

Authorized Representative:
Daniel A. Kleman
County Administrator

FID No.	0570261
PSD No.	PSD-FL-121 (B)
SIC No.	4953
PPS No.	83-19
Expires:	July 31, 2002 ? <i>Needed?</i>

IF so March, 2003

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
Directions:

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:

- (DATE) Notice of Intent published in [issue of Newspaper]
- 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 17, 1997, January 9, 13, and 14, 1998
- EPA's letters dated [Date(s)]
- Department of Interior's letters dated [Date(s)]

Project: Upgrading of the Air Pollution Control System
Facility ID No. 0570261
SIC: 4953

Hillsborough County
Resource Recovery Facility
Tampa, Florida

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 Blirstone 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 (HPCHC), 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. ~~[40 CFR 52.21 (r)(2)]~~ *This is not a formal PSD modification. It is a revision.*
- 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 Eb) and procedures as established by the recognized industry standards equipment manufacturer. 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

Project: Upgrading of the Air Pollution Control System
Facility ID No. 0570261
SIC: 4953

Hillsborough County
Resource Recovery Facility
Tampa, Florida

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

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)].

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

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) 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.

[Rule 62-204.800(8), F.A.C., 40 CFR 60.31b; 60.38b; 60.51b, and 60.58b(j)]
 [PSD-FL-121/PA 83-19 and Rule 62-4.030(3), F.A.C.]

^a (b) The maximum individual MWC throughput shall ^{4-hour average} 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 (115% of the nominal design rate capacity). The incinerators/boilers shall not be loaded in excess of their maximum operating capacity of ~~19.16 tons MSW per hour each~~, 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 (c) Combustion efficiency shall be calculated by: $\%CE = [1 / (1 + (CO/CO_2))] \times 100$, and shall be at least 99.5% for an 8-hour average.

← B.3 Load Level: *Unit load* means the steam load of the municipal waste combustor (MWC) measured as specified in 40 CFR 60.58b(i)(6). Each MWC unit shall not operate at

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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. [Rule 62-204.800(8), F.A.C., 40 CFR 60.31b; 60.38b; 60.51b; 60.53b(b); and 60.58b(i)(8)]

Higher loads are allowed for testing purposes as specified at 40 CFR 60.53b(b). (front half catch only)

B.4 Emission Control Equipment

Particulate Matter

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

Spray Dry Scrubber

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

Carbon Injection

The carbon injection rate must be ^{estimated} ~~calculated~~ 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 to exceed a maximum NOx emission rate of 205 ppmvd corrected to 7 percent O₂, 24-hour block arithmetic mean (midnight to midnight).

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

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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

B.6 Fuels

The primary fuel for the facility is municipal solid waste (MSW), including the items and materials that fit within the definition of MSW contained in either 40 CFR 60.51b or Section 403.706(5), Florida Statutes (1995).

B.6.1 Subject to the limitations contained in this permit, the authorized fuels for the facility also include the other solid wastes that are not MSW which are described below. However, the facility shall not burn:

- (a) those materials that are prohibited by state or federal law;
- (b) those materials that are prohibited by this permit;
- (c) lead acid batteries;
- (d) hazardous waste;
- (e) nuclear waste;
- (f) radioactive waste;
- (g) sewage sludge;
- (h) explosives.

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

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

B.6.3 The facility ^{owner/}operator shall prepare and maintain records concerning the ^{description} types 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} primarily or exclusively filled with a single item or ~~types~~ ^{homogeneous composition} 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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

(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.

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

- (a) Confidential, proprietary or special documents (including but not limited to business records, lottery tickets, event tickets, coupons and microfilm);
- (b) Contraband which is being destroyed at the request of appropriately authorized local, state or federal governmental agencies, provided that such material is not an explosive, a propellant, a hazardous waste, or otherwise prohibited at the facility. For the purposes of this section, contraband includes but is not limited to drugs, narcotics, fruits, vegetables, plants, counterfeit money, and counterfeit consumer goods;
- (c) Wood pallets, clean wood, and land clearing debris;
- (d) Packaging materials and containers;
- (e) Clothing, natural and synthetic fibers, fabric remnants, and similar debris, including but not limited to aprons and gloves; or
- (f) Rugs, carpets, and floor coverings, but not asbestos-containing materials or polyethylene or polyurethane vinyl floor coverings.

B.6.6 Subject to the conditions and limitations contained in this permit waste tires may be used as fuel at the facility. The total quantity of waste tires received as segregated loads and burned at the facility shall not exceed 3%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30 day average in accordance with specific condition No. B.25 below.

B.6.7 Subject to the conditions and limitations contained in this permit, the following other solid waste materials may be used as fuel at the facility (i.e. the following are authorized fuels that are non-MSW material). The total quantity of the following non-MSW material received as segregated loads and burned at the facility shall not exceed 5%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30 day average in accordance with specific condition No. B.25 below.

- (a) Construction and demolition debris.

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- (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/Malfunxions

- (a) The emission limitations for this facility shall apply at all times, except during periods of warmup, startup, shutdown, or malfunxions, 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 malfunxions, the owner/operator shall use best operational practices to minimize air-pollutant emissions.

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(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)]

EMISSION LIMITATIONS

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

POLLUTANT	EMISSION STANDARDS	LB/MMBtu	LB/HR	TON/YR
PM10 ⁽¹⁾ Particulate Matter	27 mg/dscm or 0.012 gr/dscf corrected to 7% O ₂ (front half only)	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 ⁽²⁾ Beryllium	1.48 ug/dscm corrected to 7% O ₂	1.27E-06	2.18E-04	6.56E-04 9.6 E-04
Pb Lead	0.49 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	0.288 0.087
SAM Sulfuric Acid Mist	To be demonstrated initially. Not to exceed 0.0072 gr/dscf corrected to 12% CO ₂			
SO ₂ ⁽⁵⁾ Sulfur Dioxide	29 ppmv 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..	143.9
HCl ⁽⁵⁾ Hydrochloric Acid	29 ppmv or 95% reduction corrected to 7% O ₂ (whichever is less stringent)	0.099 or 95% reduction..	17.00 or 95% reduction..	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 ppmv corrected to 7% O ₂	0.101	17.4	76.26
NO _x ⁽²⁾ Nitrogen Oxides	205 ppmv corrected to 7% O ₂	0.34	58.63	256
VOC ⁽²⁾ Volatile Organic Compounds	To be demonstrated during the initial performance test.			

L-NOTE PSD 121 removed this limitation, why is it being put back in?

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The maximum allowable emission rates are applicable to each MWC combustor unit. [Rules 62-4.030, and 62-296.416, F.A.C., 40 CFR 60.52b and 40 CFR 60.53b(b)]

Notes:

- (1) This limit for PM/PM₁₀ is more restrictive than the emission limit for PM in 40 CFR 60.43b
 - (2) The NO_x standard of 40 CFR 60.44b do not apply to these emissions units because this permit subject 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 61.52 (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 g/dscf corrected to 12% CO₂ or 0.2 lb/ton, whichever is more restrictive (PSD-FL-104)
 - (5) Emission limits in terms of lbs/MMBtu or lb/hr for those pollutants which
- 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.

have an emission standard expressed, in part by a percent removal efficiency, shall also be dictated by the percent removal provision.

Averaging Times

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

Abbreviations

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

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

are expected to approximately be per unit

Auxiliary Burners: Nitrogen oxides emission from each auxiliary burner shall not exceed 3.45 lb/hr and 15.1 ton/yr. 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) of 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 per 12 months or less (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

B.9 Stack Testing

Compliance tests [initial (I) and annual (A)] for the pollutants listed in Specific Condition No. B.8 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.

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in accordance with the requirements of 40CFR 60.58b Compliance and Performance Testing.

Testing of emissions shall be conducted ~~with the emissions unit operating at capacity and under the different permitted fuel scenarios as specified under Specific Condition No. B.6.~~

initial

A test protocol shall be submitted for approval to the SW District office at least ~~90~~ ³⁰ days prior to testing. The permittee shall obtain the test data necessary to determine if these units are capable of burning all proposed fuels without exceeding the allowable emission limits. [Rule 62-204.800(8), F.A.C. and Chapter 62-297, F.A.C.]

(front half catch only)

Method 5 Determination of Particulate Matter Emissions 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).

(we have CEM for this)

~~Method 10 Determination of Carbon Monoxide Emissions from Stationary Sources (I) and (A).~~

Method 13A Determination of Total Fluoride Emissions from Stationary Sources (I) and ~~(A).~~

or 13B

~~Method 18, Determination of Volatile Organic Concentrations (I).~~

25 or 25a

Method 23* Determination of Dioxin/furan concentration from Stationary Sources (I) and (A).

Method 26** Determination of HCl emissions (I) and (A).

or 26A

Method 29** Determination of ~~Beryllium, Lead, Cadmium, and Mercury~~ ^{Metals Emission} from Stationary Sources (I) and (A).***

* 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 60.386(b) and ^{with} ~~subject to~~ ^{notice to} ~~approval by~~ the Department, if the facility's dioxin/furan emissions do not exceed 15 ug/dscm corrected to 7% O₂ or less for all MWC units.

** HCl and mercury stack tests upstream and downstream of the control device (s) shall be conducted to calculate percent control.

Compliance tests

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

*** *Compliance with Beryllium and Florida emission limits shall be demonstrated during the initial compliance test and prior to renewal.*

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The Method 7 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.

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In addition to the three test runs conducted under normal operation, three compliance test runs shall be conducted annually under soot blowing conditions for particulate and VE. Each soot blowing test run shall be a representative of normal soot blowing operation. [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.] *listed in B.8*

B.12 Continuous Monitoring Compliance: Compliance with the emission limits for opacity, carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO₂) and the operational parameters (steam production, etc.) listed in Specific Condition No. B.8 shall be demonstrated by continuous emission monitoring systems (CEMS). [Rule 62-204.800(8), F.A.C. and 40 CFR 60.38 (40 CFR 60.58b)] *3*

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 ~~outcome~~ *output* of the monitor (in accordance with the ASME method described in 40 CFR, ~~Subpart Cb and Eb~~). Steam (or feedwater) flow shall be calculated in 4-hour block arithmetic averages. [Rule 62-204.800(8), F.A.C., 40 CFR 60.31b; 60.38b; 60.51b; 60.53b(b); and 60.58b(i)(6)] *60.58b(i)(6)*

B.14 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, 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 shall be used to determine the amount of solid waste charged during the preceding calendar month on an average daily basis. The MWC load level measurements or other operating data shall be used to determine the number of operating hours per MWC unit for each day during the preceding calendar month. [Rule 62-204.800(8), F.A.C., and ~~40 CFR 60.38b; 60.51b; 60.53b and 60.58b(j)~~ *40 CFR 60.53(a)* and refuse pit inventory]

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

Higher loads are allowed for testing purposes as specified at 40 CFR 60.53b (k)

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device in accordance with the requirements at 40 CFR ~~60.53b(c) and 60.58b(i)(7) and (9)~~^{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 and Eb~~. 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 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, and consumption of natural gas shall be ~~less than~~^{or less.} 10 percent of the total annual gross heat input. 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. ~~Similar monthly records of the total gross heat input (MSW and natural gas combined) to each unit shall be maintained based on the measured MWC load levels or other operating data.~~ 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 ~~consumption of~~^{consumption of} natural gas

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in each unit was ~~less than~~ ^{or less.} 10 percent of the total annual gross heat input. [Rule 62-4.070(3), F.A.C., and 40 CFR 60.44b(d)] *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 at maximum steady state design heat input capacity.*

(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.]

SCHEDULE OF COMPLIANCE

The compliance schedule for each unit is provided below.

- Increment 1: December 31, 1996 - applicable to units 1, 2 and 3.
 - Increment 2: December 31, 1997 - applicable to units 1, 2 and 3.
 - Increment 3: February 28, 1999 - applicable to the first unit. July 30, 1999 - applicable to the second unit. April 30, 2000 - applicable to the third unit.
- 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: September 30, 2000 - applicable to units 1, 2 and 3.
 - Increment 5: December 10, 2000 - applicable to units 1, 2 and 3.

Closure Agreement: 36 months after EPA approval of this plan 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.

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 and approval by FDEP for the following pollutants and operational parameters:

- Carbon Monoxide
- Nitrogen Oxides
- Opacity
- Sulfur Dioxide

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

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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

~~Temperature of the combustion zone~~ *not possible to do*

Carbon injection system operating parameters

~~Stacked lime utilization~~ *2 instrumentation is not reliable*

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 Southwest District Office for review ~~and~~ approval 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.]

Handwritten initials

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 60.5 b]

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;

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- (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 per unit in each 12 month period;
- (e) Results of all source tests or performance tests;
- (f) Amounts of ~~ammonia~~, activated carbon, or ~~other chemicals~~ used for NOx and mercury control;
- (g) Calibration logs for all instruments;
- (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.

CEMS sufficient for NOx control

B.21.2 Excess Emission Reports

B.21.1 Quarterly Reports:

The owner or operator shall submit excess emission reports for any calendar ^(c) quarter during which there are excess emissions from the facility pursuant to 40 CFR 60.7 ~~Subpart A~~. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report quarterly stating that no excess emissions occurred during the quarterly reporting period. The report shall include the following:

- (a) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors used, and the date and time of commencement and completion of each period of excess emissions [40 CFR 60.7(c)(1)].
- (b) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the furnace boiler system. The nature and cause of any malfunction (if known) and the corrective action taken or preventive measures adopted [40 CFR 60.7(c)(2)].

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(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~~(e)(2)~~^{(e)(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. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by FDEP and /or HCEPC [Rule 62-210.700(6), F.A.C.]. The FDEP and the HCEPC shall be notified within (1) 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 or the HCEPC may request a written summary report of the incident. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. [Rules 62-4.130 and 62-210.700(6), F.A.C.]

B. 21.2
Excess Emission
Requirements

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 60.59(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 for approval at least 60 days prior to construction of the sampling ports.

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- 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 condition B.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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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 [40 CFR 60.39b(4)(iii)(A)]. The owner or operator may request that the Department waive the requirements specified in 40 CFR 60.54(b)(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 [40 CFR 60.39b(4)(iii)(B)]. [40 CFR 60.39b(c)(4) and 40 CFR 60.54b(d)]

November 13, 1997

(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 60.54(f)]

b

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 Silo and Ash Conveyor 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. ~~In addition, all portions of the proposed facility (including the ash handling facility) which have the potential for fugitive emissions will be enclosed.~~ 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.

NOTE: Could be interpreted to include roads

unprocessed refuse storage

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

The ash/residue in the Ash Handling Building shall remain sufficiently moist to prevent dust during storage and handling operations.

- (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.

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 and ash handling building baghouse.*

(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 Building vent, ash conveyor system, and 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. ~~compliance testing for visible emissions shall be verified by annual tests following the date of completion of the initial stack test.~~ All notification requirements of 40 CFR Part 60 shall be satisfied.

C.3. Carbon and Lime Storage Silos, 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 an alternate standard of 5 percent opacity shall apply. ~~Annual Visible emission tests~~ shall be performed for each silo during filling operations, 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 would require the permittee to perform a particulate stack test.

and ash building baghouse using EPA method 5 (front-half catch only) and the ash handling baghouse

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

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
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. *or ash building bag house*

The duration of excess emissions from the lime silo, ~~or the~~ carbon silo, 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} ~~operation~~ of ~~this facility~~, *the construction authorized in this permit,* the permittee shall submit to the DEP Southwest District office an operational procedures manual that identifies and describes

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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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

EMISSION LIMITATIONS

- avoid accumulations of ash*
- 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 ~~keep free of visible dust~~. Speed limit signs shall be posted.
[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~~ *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~~ *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.]
- 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

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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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 [Rule 62-297.310(2) and (3), F.A.C.]

40 CFR 60.53b(b). See also specific conditions B.2, B.3, and B.13 of this permit.

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 60 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.

- G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
- G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
- (a) Have access to and copy and records that must be kept under the conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.
- Reasonable time may depend on the nature of the concern being investigated.
- G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
- (a) A description of and cause of non-compliance; and
 - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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

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

- G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.
- G.13 This permit also constitutes:
- (a) Determination of Best Available Control Technology ()
 - (b) Determination of Prevention of Significant Deterioration (); and
 - (c) Compliance with New Source Performance Standards (X).
- G.14 The permittee shall comply with the following:
- (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements;
 - 2. The person responsible for performing the sampling or measurements;
 - 3. The dates analyses were performed;
 - 4. The person responsible for performing the analyses;
 - 5. The analytical techniques or methods used; and
 - 6. The results of such analyses.
- G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

January 27, 1998

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Daniel A. Kleman
County Administrator
Hillsborough County
601 East Kennedy
Tampa, Florida 33602

Re: Resource Recovery Facility Air Pollution Control Project
Draft Permit No. PSD-FL-121(B)

Dear Mr. Kleman:

Enclosed is one copy of the Draft Modification to the Permit for the Prevention of Significant Deterioration of Air Quality (PSD Permit) for the Hillsborough County Resource Recovery facility located at 350 Falkenburg Road, Tampa, Hillsborough County, Florida 33619. The Department's Intent to Issue Permit Modification, the DRAFT Permit Modification, Technical Evaluation and Preliminary Determination, and the "PUBLIC NOTICE OF INTENT TO ISSUE PERMIT MODIFICATION" are also included.

The "PUBLIC NOTICE OF INTENT TO ISSUE PERMIT MODIFICATION" must be published within 30 (thirty) days of receipt of this letter. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A. A. Linero, P.E., Administrator, New Source Review Section at the above letterhead address. If you have any other questions, please contact Ms. Teresa Heron or Mr. Linero at 850/488-1344.

Sincerely,

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

CHF/th

Enclosures

In the Matter of an
Application for Permit by:

Hillsborough County
601 East Kennedy
Tampa, Florida 33602

DRAFT Permit No. PSD-FL-121(B)
Resource Recovery Facility
Hillsborough County

INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit modification (copy of DRAFT Permit modification attached) for the proposed project, detailed in the application specified above, for the reasons stated below.

The applicant, Hillsborough County, applied on September 16, 1997 to the Department for a modification of the Prevention of Significant Deterioration Permit (PSD Permit) originally issued in 1986 by the United States Environmental Protection Agency. The modification is to: replace and improve the air pollution control system to comply with the requirements of 40 CFR 60 Subpart Cb, Emission Guideline and Compliance Times for Municipal Waste Combustors That Are Constructed on or before December 19, 1995; specify which materials can be burned; and define process throughput parameters at the County's nominal 1200 ton per day Resource Recovery Facility located at 350 Falkenburg Road, Tampa, Florida 33619.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. The Department has determined that a PSD permit modification is required for the proposed work and other changes requested by the applicant.

The Department intends to issue this permit modification based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed "Public Notice of Intent to Issue PERMIT MODIFICATION". The notice shall be published one time only within 30 (thirty) days in the legal advertisement section of a newspaper of general circulation in the area affected. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 904/488-1344; Fax 904/ 922-6979) within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit pursuant to Rule 62-103.150 (6), F.A.C.

The Department will issue the FINAL Permit Modification, in accordance with the conditions of the enclosed DRAFT Permit Modification unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed DRAFT Permit issuance action for a period of 14 (fourteen) days from the date of publication of "PUBLIC NOTICE OF INTENT TO ISSUE PERMIT MODIFICATION." Written comments should be provided to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit Modification, the Department shall issue a Revised DRAFT Permit Modification and require, if applicable, another Public Notice.

is your RETURN ADDRESS completed on the reverse

- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

- Addressee's Address
 - Restricted Delivery
- Consult postmaster for fee.

3. Article Addressed to:
 Mr. Daniel A. Herman, CA
 Hillsborough County
 601 E. Kennedy
 Tampa, FL 33602

5. Received By: (Print Name)
 X *[Signature]*

6. Signature (Addressee or Agent)
 X *[Signature]*

4a. Article Number
 P 265 659 286

4b. Service Type
 Registered Certified
 Express Mail Insured
 Return Receipt for Merchandise COD

7. Date of Delivery
 FEB 19 1998

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1994

Domestic Return Receipt

Thank you for using Return Receipt Service

P 265 659 286

US Postal Service
Receipt for Certified Mail
 No Insurance Coverage Provided.
 Do not use for International Mail (See reverse)

Sent to	<i>Daniel Kennedy</i>
Street & Number	<i>Hillsboro Co.</i>
Post Office, State, & ZIP Code	<i>RR</i>
Postage	<i>Tampa, FL</i>
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	<i>1-28-98</i>

PS Form 3800 April 1995
PSD-FI-121(B)

The Department will issue the permit modification with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S. Mediation is not available for this action.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, telephone: 904/488-9730, fax: 904/487-4938. Petitions must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the action or proposed action addressed in this notice of intent.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.

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

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this INTENT TO ISSUE PERMIT MODIFICATION (including the PUBLIC NOTICE, and the DRAFT permit modification) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 1-28-98 to the person(s) listed:

- Daniel Kleman, County Administrator *
- Ronnie Mason, City Council Chairman, Tampa
- Brian Beals, EPA
- John Bunyak, NPS
- Douglas W. Fredericks, P.E.
- Jerry Campbell, HCEPC
- Bill Thomas, SWD
- Martha Chumbler, Carlton Fields
- Don Elias, RTP

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)

1-28-98
(Date)

PUBLIC NOTICE OF INTENT TO ISSUE PERMIT MODIFICATION

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DRAFT Permit No. PSD-FL-121 (B)
Hillsborough County Resource Recovery Facility
Hillsborough County

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit modification to Hillsborough County to: replace and improve the air pollution control system; define process throughput parameters; increase amount of waste that can be burned on a short-term basis, and specify which materials can be burned at its resource recovery facility located at 350 Falkenburg Road, Tampa, Hillsborough County, Florida. It was determined that an additional review for the Prevention of Significant Deterioration (PSD) is not applicable and a Best Available Control Technology determination was not required pursuant to Rule 62-212.400. and 410., F.A.C. The applicant's name and address are: Hillsborough County, 601 East Kennedy, Tampa, Florida 33602.

The purpose of the project is to comply with 40 CFR 60, Subpart Cb - Emission Guideline and Compliance Times for Municipal Waste Combustors That Are Constructed on or Before December 19, 1995. The Emission Guideline was developed pursuant to Section 129 (Solid Waste Combustion) of the Clean Air Act as amended in 1990. These requirements are incorporated in Department Rule 62-204.800(8), F.A.C.

The facility consists of three nominal 400 ton per day (TPD) mass burn furnaces, waterwall boilers, ash discharge systems, air pollution control equipment, and a single three-stage steam turbine with a 29 megawatt electrical generator. The proposed improvements to the air pollution control system consist of replacing the existing electrostatic precipitators with lime spray dryer absorbers and fabric filters. This will add acid gas control for sulfur dioxide and hydrogen chloride, improve particulate (PM/PM₁₀) collection efficiency, and enhance collection of heavy metals, including lead and cadmium. An activated carbon injection system will be installed for additional mercury control. Nitrogen oxides will be controlled by selective non-catalytic reduction. Combustion controls will be incorporated to minimize formation of dioxins and furans, volatile organic compounds, and carbon monoxide.

The original PSD permit contained annual testing requirements only for particulate matter. Specific limits and testing requirements are proposed for all previously mentioned pollutants. Continuous emission monitors will be installed for sulfur dioxide, nitrogen oxides, oxygen, carbon monoxide, and temperature at key points.

The units were originally permitted to utilize "refuse such as garbage and trash" as defined in the Department's solid waste rules. The modified permit will specify the wastes as: solid waste including municipal solid waste (MSW) as defined at 40 CFR 60.51b and Section 403.706(5), F.S.; segregated wastes such as records and documents, non-hazardous contraband, clean wood and land clearing debris, packaging materials, clothing and fabric remnants and certain types of floor covering; segregated waste tires (not to exceed 3 percent of the total wastes received); other segregated wastes (not to exceed 5 percent of the total wastes received) such as construction and demolition debris, oil spill debris, expired or off-spec packaged or unpackaged consumable goods (e.g. pharmaceuticals), consumer products, waste materials containing oil, used oil and filters and certain other wastes similar to MSW. The precise nature of the wastes is detailed in the draft permit package. By limiting the amount of segregated materials combusted at the facility, the Department has reasonable assurance that the overall composition of the wastes burned will be within the typical characteristics of MSW in terms of heating value, moisture, ash, and emissions characteristics.

Presently, the permitted waste throughput is 1200 TPD for the facility on an average annualized basis. The maximum allowable heat input rate is 165 mmBtu/hr at a daily waste throughput of 1,320 TPD (440 TPD per unit). The modified permit will, upon presentation of an engineering evaluation to the Department by the boiler manufacturer or operator, allow further increases of approximately 5 percent in short-term heat input, steam production, and waste throughput with no change in annual waste throughput limits.

The Department will issue the FINAL Permit Modification, in accordance with the conditions of the DRAFT Permit Modification unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed DRAFT Permit Modification issuance action for a period of thirty (30) days from the date of publication of this Notice. Written comments should be provided to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit Modification, the Department shall issue a Revised DRAFT Permit Modification and require, if applicable, another Public Notice.

The Department will issue FINAL Permit Modification with the conditions of the DRAFT Permit Modification unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S. The procedures for petitioning for a hearing are set forth below. Mediation is not available for this action.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, telephone: 904/488-9370, fax: 904/487-4938. Petitions must be filed within fourteen days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the Department's action or proposed action addressed in this notice of intent.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file 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:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida, 32301
Telephone: 904/488-1344
Fax: 904/922-6979

Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619-8218
Telephone: 813/744-6100
Fax: 813/744-6084

Hillsborough County Environmental
Protection Commission
1900 Ninth Avenue
Tampa, Florida 33605
Telephone: 813/272-5960
Fax: 813/272-5157

The complete project file includes the Draft Permit Modification, the application, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, New Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 904/488-1344, for additional information.

NOTICE TO BE PUBLISHED
IN THE NEWSPAPER

TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

HILLSBOROUGH COUNTY RESOURCE RECOVERY FACILITY
TAMPA, HILLSBOROUGH COUNTY, FLORIDA

Resource Recovery Facility
Air Pollution Control Project

PSD-FL-121(B)
Facility ID No. 0570261

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation

January 27, 1998

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

1. APPLICATION INFORMATION

1.1 Applicant Name and Address

Hillsborough County
601 E. Kennedy
Tampa, Florida 33602

1.2 Reviewing and Process Schedule:

09-16-97: Date of receipt of application
10-14-97: DEP completeness request
11-17-97: Application deemed complete/sufficient
01-14-98: Extension of 60-day limit to process site certification
application requiring PSD review
01-27-98: Issued Intent

2. FACILITY INFORMATION

2.1 Facility Location

The Hillsborough County Resource Recovery Facility is located at 350 Falkenburg Road in Tampa. This site is between 75 and 100 kilometers from the Chassahowitzka National Wilderness Area, a Class I PSD Area. The UTM coordinates of this facility are Zone 17, 368.20 km East and 3092.70 km North.

2.2 Standard Industrial Classification Codes (SIC)

Major Group No.	49	Electric, Gas and Sanitary Services
Industry Group No.	495	Sanitary Services
Industry Group No.	4953	Refuse Systems

2.3 Facility Category

This facility makes electricity by burning solid waste in three furnaces, recovering the heat as steam, and expanding it in a steam electrical generator. The solid waste burned is typically characterized as "refuse such as trash and garbage" or as municipal solid waste (MSW). The facility is permitted to burn up to 440 tons per day (400 TPD on an average annualized basis) in each of three units. Certain segregated wastes consisting of materials typically found in MSW are mixed into the waste while maintaining the overall characteristics of the waste within the typical ranges of heat and moisture content as well as emission characteristics. The electricity is sold to Tampa Electric Company.

The facility is classified as a major or Title V source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x) carbon monoxide (CO), or volatile organic compounds (VOC) exceed 100 tons per year (TPY). It is also a major source because emissions of air toxics, such as hydrogen chloride (HCl) or hydrogen fluoride (HF), exceed 10 TPY individually or 25 TPY in the aggregate.

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

The facility was issued a PSD permit, including a determination of Best Available Control Technology (BACT), by the United States Environmental Protection Agency (EPA) on July 7, 1986.

Per Table 62-212.400-2, modifications at existing major facilities resulting in "Significant Emission Rate" increases greater than: 100 TPY of CO; 40 TPY of NO_x, VOC, or SO₂; 25/15 TPY of PM/PM₁₀; 7 TPY of sulfuric acid mist (SAM); 0.1 TPY of mercury (Hg); 3 TPY of fluorides (F), or 0.6 TPY of lead (Pb) also require a PSD permit and a BACT determination.

3. PROCESS DESCRIPTION

The facility is a waste-to-energy installation employing mass burning of solid waste, heat recovery as superheated steam, and power generation in a steam electric cycle. Other than landfilling, this is the most common method of solid waste disposal in the United States. There are twelve such facilities in the State of Florida. Following is a description of the process (refer to Figures 1 and 2):

Waste is received via transfer, roll-off, or collection vehicles. Upon arrival, each vehicle is weighed at the scale house and the waste is categorized. Any unacceptable waste is diverted at this time. All acceptable waste is taken to the Refuse Receiving Building, where it is deposited onto the tipping floor or into the Refuse Storage Pit. The refuse is stored at this location until needed to charge the combustion units.

Charging of the combustion units is accomplished using overhead cranes equipped with "orange peel" grapples. These stack, mix, and relocate waste within the pit and transfer it into the feed hoppers serving each unit. The waste enters the three refuse-fired steam generators, each of which consists of an integrated mass-burn stoker furnace and waterwall boiler. Hydraulically operated feeders push the waste onto "stoker grates". The stoker grates are sloped downward and operate with a reverse-reciprocating action which agitates the burning refuse and moves it along the grates.

Combustion air is drawn from the refuse tipping area (assisting in odor control) and conveyed through the gas side of the air preheater and into the refuse-fired generators where the waste is combusted. Exhaust gases from the refuse-fired generators pass through an economizer unit and are ducted to the air pollution control system that presently consists of an electrostatic precipitator (ESP) but that will be replaced by the system shown in the diagrams. Treated gases are exhausted to the atmosphere through three individual flues within a single 220 foot stack. Bottom ash from the furnaces is removed, quenched and processed for metal recovery and disposal.

The superheated steam enters a single, three-stage turbine where it is expanded. The turbine powers a single 29 megawatt electric power generator. The electric power is introduced into

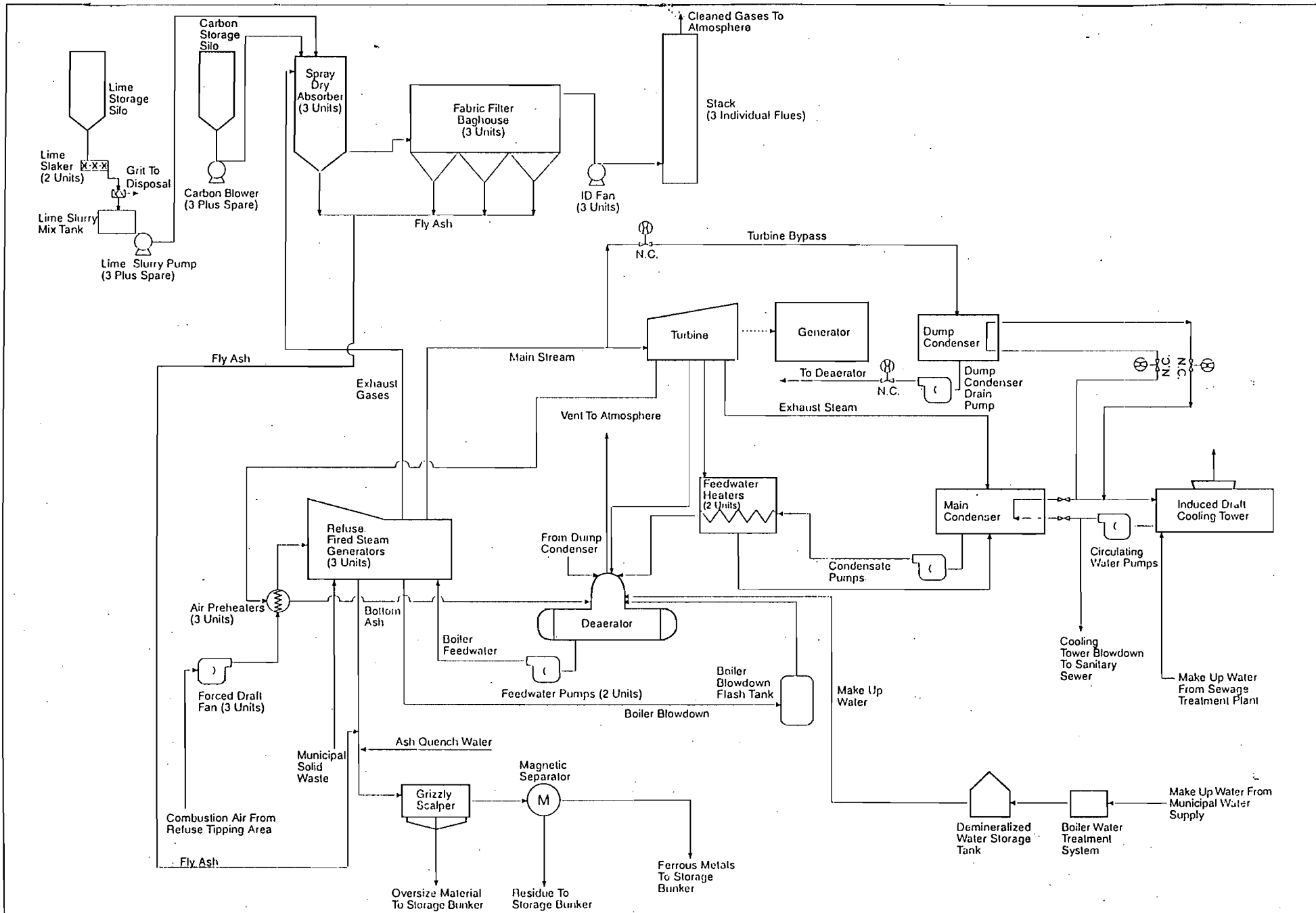
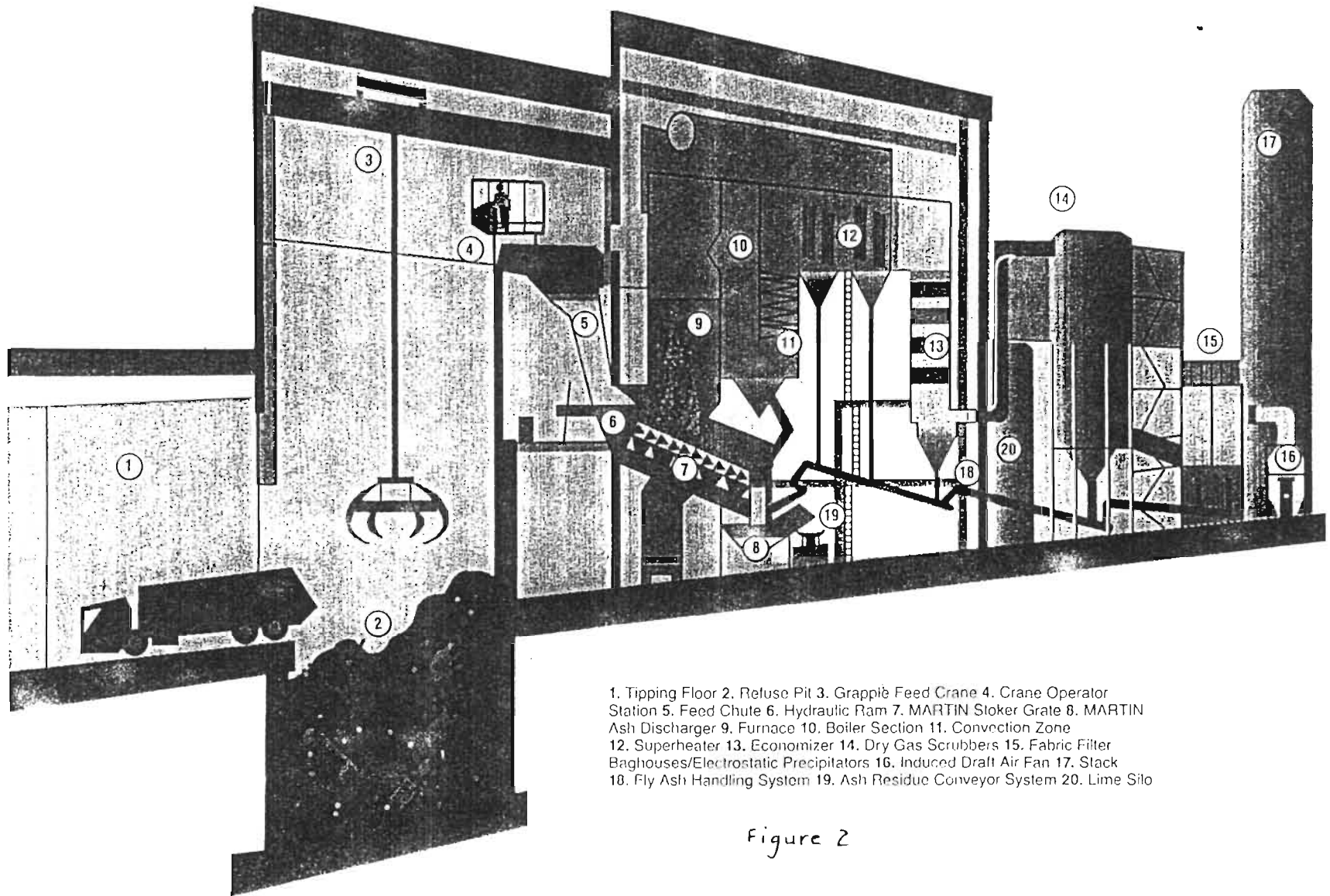


Figure 1
Hillsborough County Solid Waste Resource Recovery Facility
Overall Process Flow Diagram



1. Tipping Floor 2. Refuse Pit 3. Grappiè Feed Crane 4. Crane Operator Station 5. Feed Chute 6. Hydraulic Ram 7. MARTIN Stoker Grate 8. MARTIN Ash Discharger 9. Furnace 10. Boiler Section 11. Convection Zone 12. Superheater 13. Economizer 14. Dry Gas Scrubbers 15. Fabric Filter Baghouses/Electrostatic Precipitators 16. Induced Draft Air Fan 17. Stack 18. Fly Ash Handling System 19. Ash Residue Conveyor System 20. Lime Silo

Figure 2

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the electrical grid and is purchased by Tampa Electric Company. Exhaust steam from the turbine is condensed and the water is cooled in an evaporative cooling tower. Tower blowdown is sent to the sanitary sewer and make-up water to the tower is provided from a sewage treatment plant. Boiler make-up water is provided from the municipal water supply. It undergoes treatment including demineralization. It is transferred to the deaerator, which also receives water from the condensers, air preheaters, and feedwater heaters.* Boiler feedwater is provided from the deaerator.

4. PROJECT DESCRIPTION

The applicant described the project as “replacement of the air pollution control equipment.” The purpose of the project is to comply with 40CFR60, Subpart Cb - Emission Guideline and Compliance Times for Municipal Waste Combustors That Are Constructed on or Before December 19, 1995. The Emission Guideline for Municipal Waste Combustors (MWCs) was developed pursuant to Section 129 (Solid Waste Combustion) of the Clean Air Act as amended in 1990. These requirements are incorporated in Department Rule 62-204.800(8), F.A.C.

The existing ESPs will be replaced with the spray dryer absorbers, fabric filters, activated carbon injection system, and selective non-catalytic reduction system (SNCR). The arrangement is depicted in Figures 1 and 2. Combustion gases in the MWCs will be treated by the SNCR system (not shown) that involves injection of liquid ammonia (NH_3) or urea. Reaction between the NH_3 or urea and NO_x in the combustion gas exhaust results in formation of normal molecular nitrogen.

The gases are then contacted in a vessel with a slurry of sprayed lime (calcium hydroxide). Acid gases, including hydrogen fluoride (HF), SO_2 and HCl, are neutralized and absorbed into the spray. Activated carbon is also injected into the flue gas ahead of the absorbers for the adsorption of mercury. The spray is dried and conveyed by the hot exhaust gases to the fabric filter baghouses where particulate matter, including flyash and product from the absorbers, is removed. Additional pollutant removal occurs on the filter cake which builds up within the baghouses. Clean exhaust gases exit the stack. The flyash is conveyed to the bottom ash handling system for further handling.

The induced draft fans prior to the stack will be replaced to compensate for the additional pressure drop through the control equipment. Upgraded auxiliary fuel burners will be installed in the combustion zone of each furnace. The project provides for continuous emission monitors (CEMs) for SO_2 , NO_x , and CO. Additional process monitors to insure that the potential for dioxin/furan formation is minimized and that the pollution control equipment functions effectively will also be installed. These will monitor process and control equipment temperature, pressure drop, steam production, carbon injection rates, oxygen (O_2), etc.

5. ADDITIONAL REQUESTS

In addition to the physical changes described above, a number of revisions are requested which require modifications of the existing PSD Permit. These include:

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- Specifying steam flow as the main process throughput parameter to be monitored.
- Increasing the rated short-term capacity of each unit from 440 to 460 TPD, heat input from 165 to 172.5 million Btu per hour (mmBtu/hr), and setting steam flow at 102,000 pounds per hour (lb/hr).
- Providing for combustion of segregated waste streams and defining more precisely the types of wastes that may be burned.

5.1 Steam Flow

The first request is essentially to designate steam as the main throughput parameter on a short-term basis. This is the most precise and accurate parameter to monitor load and is easily determined. It is also consistent with both the most recent regulatory requirements and industry practice. However, because the plant was authorized and the furnaces are rated on a mass basis, it is still important to maintain some form of mass limit. This is most accurately accomplished by a long-term average based on the weight of actual material delivered to the facility. Short term throughput rates can be estimated from the short-term steam production and applicable heating values for the materials combusted.

5.2 Operating Window

The County essentially wishes to operate the plant within a so-called 115 percent (%) "operating window," normalized around the previous nominal capacity of 400 TPD at a waste heat content of 4,500 Btu per pound (Btu/lb). Because of the wide range in waste heat content, the County wants sufficient flexibility to burn more waste to achieve the desired steam production, particularly when waste heat content is low. This is a common and recognized industrial and regulatory practice. Typically only a 110% percent operating window is allowed, such as by the present permit. The County's request is represented by the following schedule of waste throughput and heat input and heat capacity:

MSW THROUGHPUT (TPD)	HEAT CAPACITY (Btu/lb)	HEAT INPUT (mmBtu/hr)
180	6000	90
240	6000	120
345	6000	172.5 ¹
240	4500	90
320	4500	120
400	4500	150
460	4500	172.5 ¹
284	3800	90
379	3800	120
460	3800	145.7

1. Equivalent to 101,700 lb/hr of steam at 1,379 Btu/lb and 68.3% boiler efficiency

The County will provide the Department with an updated engineering assessment (from Riley or Ogden-Martin's engineering group) of the maximum rated capacities of the units in terms of waste throughput, heat input and steam flow consistent with the above operating window.

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Until the analysis is provided, the present waste throughput and equivalent heat input and maximum steam limit representative of the present 110% window apply.

5.3 Wastes/Fuels

The units were originally permitted to utilize "refuse such as garbage and trash" as defined in the Department's solid waste rules. The County requests that the modified permit specify the wastes as solid waste including municipal solid waste (MSW) as defined at 40CFR60.51b and Section 403.706 (5), F.A.C. and certain segregated wastes, including:

- 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. Construction and demolition debris.
- E. Oil spill debris.
- F. Waste tires, provided that the waste tires do not exceed 3% of the facility's total fuel.
- G. 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 person care products cosmetics, foodstuffs, nutritional supplements, returned goods, and controlled substances.
- H. Consumer-packaged products intended for human or domesticated animal use of application but not consumption. Such items or materials include but are not limited to carpet cleaners, household or bathroom cleaners, polishes, waxes and detergents.
- I. Waste materials that are generated in the manufacture of items in categories G. or H., above and are functionally or commercially useless (expired, rejected or spent); or 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.
- J. Packaging materials and containers.
- K. Clothing, natural and synthetic fibers, fabric remnants, and similar debris, including but not limited to aprons and gloves.
- L. Rugs, carpets, and floor coverings, but not asbestos-containing materials or polyethylene or polyurethane vinyl floor coverings.
- M. 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.

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- N. Used oil and used oil filters.
- O. Waste materials generated by manufacturing, industrial, commercial or agricultural activities, provided that these items or materials are substantially similar to items or materials that are found routinely in MSW.
- P. 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.

6. PROJECTED EMISSIONS

6.1 Emission limits

The maximum allowable short-term emission limits for the facility before and after implementation of the project are as follows:

POLLUTANT	PERMITTED LIMIT	PROPOSED LIMIT
Particulate Matter (PM)	0.021 gr/dscf @ 12% CO ₂	0.012 gr/dscf @ 7% O ₂
Sulfur Dioxide (SO ₂)	0.17 gr/dscf @ 12% CO ₂ (24-hr) 0.45 gr/dscf @ 12% CO ₂ (3-hr)	29 ppmdv @ 7% O ₂ or 75% removal
Sulfuric Acid Mist (H ₂ SO ₄ or SAM)	none	none
Nitrogen Oxides (NO _x)	404 ppmdv @ 12% CO ₂ (24-hr)	205 ppmdv @ 7% O ₂ (24-hr)
Carbon Monoxide (CO)	0.093 gr/dscf @ 12% CO ₂	100 ppmdv @ 7% O ₂ (4-hr)
Volatile Organic Compounds (VOC)	0.01 gr/dscf @ 12% CO ₂	none - CO is surrogate
Lead (Pb)	0.00104 gr/dscf @ 12% CO ₂	440 ug/dscm @ 7% O ₂
Mercury (Hg)	2200 grams/day (facility)	70 ug/dscm @ 7% O ₂ or 85% removal
Cadmium (Cd)	None	40 ug/dscm @ 7% O ₂
Beryllium (Be)	0.00000068 gr/dscf @ 12% CO ₂	1.48 ug/dscm @ 7% O ₂
Hydrogen Chloride (HCl)	None	29 ppmdv @ 7% O ₂ or 95% removal
Hydrogen Fluoride (HF)	0.0031 gr/dscf @ 12% CO ₂	6.74 mg/dscm @ 7% O ₂
Dioxins/Furans	None	30 ng/dscm @ 7% O ₂
Ammonia (NH ₃)	None	30 ng/dscm @ 7% O ₂

- Original SAM limit in EPA permit PSD-FL-104 (1986) was 0.004 gr/dscf. County requested revision to 0.072 gr/dscf in permit PSD-FL-121 (1987). The limit was deleted.

6.2 Annual Emissions

Permitted and estimated past actual emissions in tons per year (TPY) compared with future potential emissions following implementation of the project for PSD regulated pollutants are as follows¹:

POLLUTANT	PERMITTED	ACTUAL ¹	FUTURE	CHANGE	PSD SIGN
Particulate Matter (PM)	92	24.7	53 ⁺ or 11 ⁺	28.3 ⁺ or -14 ⁺	25
Particulate Matter (PM ₁₀)	92	24.7	53 ⁺ or 11 ⁺	28.3 ⁺ or -14 ⁺	15
Sulfur Dioxide (SO ₂)	724	685	427	-258	40
Sulfuric Acid Mist (SAM)	none	284 ⁺ or 32 ⁺	11 ⁺	-273 ⁺ or -21 ⁺	7
Nitrogen oxides (NO _x)	1439	1115	762	-353	40
Carbon Monoxide (CO)	396	29	226 ⁺ or 80 ⁺	197 ⁺ or 51 ⁺	100
Volatile Organic Compounds (VOC)	43.8	281 ⁺ or 8 ⁺	10 ⁺	-271 ⁺ or 2 ⁺	40
Lead (Pb)	4.4	0.54	0.86	-0.32	0.6
Mercury (Hg)	0.88	0.44	0.14	-1.1	0.1
Beryllium (Be)	0.0029	0.00021	0.0029 ⁺	0.0027 ⁺ or 0 ⁺	0.0004
Fluoride (F)	13.2	7.4	13.1 ⁺ or 1 ⁺	5.7 ⁺ or -6.4 ⁺	3

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1. Past actual and future potential emissions are detailed in the Hillsborough County Solid Waste Energy Recovery Facility's application submitted on September 16, 1997 and additional information response received on November 17, 1997. Based on 8322 hours of operation.
2. Based on tests conducted in April, 1987 and reported as erroneous.
3. Based on tests conducted in June, 1987.
4. Based on requested future permitted emissions.
5. Based on future representative actual annual emissions. Estimated from facilities with similar controls.

A comparison of future potential emissions with past actual emissions indicates that the potential exists for PSD-significant increases of PM/PM₁₀, CO, and F. A comparison of estimated future representative actual annual emissions indicates there will not be PSD-significant increases for any pollutant.

7. RULE APPLICABILITY

Because the project is expected to reduce air emissions it would not normally be considered a modification under Chapters 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). However the applicant plans to increase the production rate by the expanded operating window and plans to burn a more varied slate of wastes, thus creating at least the potential for an emission increase of at least one air pollutant. Therefore the project must be assessed for permitting requirements and preconstruction review requirements. Because some of these changes, including the proposed emission limits, affect existing PSD permit conditions, a permit modification is required whether or not the project constitutes a facility or source modification.

The facility is located in an area (Hillsborough County) designated "unclassifiable" for SO₂, "maintenance" for Ozone (O₃), PM, and lead (Pb), and "attainment" for all the other criteria pollutants (Rule 62-204.360, F.A.C.).

The proposed project, without the additional requests or requested deletion of the VOC BACT limit, would not be subject to the PSD regulations under Rule 62-212.400(2)(a)2., F.A.C. A pollution control project that is added, replaced, or used at an existing electric utility steam generating unit and that meets the requirements of 40 CFR 52.21 (b) (2)(iii)(h) is not subject to the preconstruction review requirements of this rule.

Pursuant to 40 CFR 52.21 (b)(2)(iii)(h), "a physical change or change in the method of operation shall not include the addition, replacement or use of a pollution control project at an existing electric utility steam generating unit, unless the Administrator determines that such addition, replacement, or use renders the unit less environmentally beneficial, or except: (1) When the Administrator has reason to believe that the pollution control project would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of Title I, if any, and (2) The Administrator determines that the increase will cause or contribute to a violation of any national ambient air quality standard or PSD increment, or visibility limitation".

Despite the small production increase and more varied waste slate requested concurrently with the control project, actual emissions of PM, CO, F, VOC and SAM will probably decrease.

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However, a comparison of past actual to future potential emissions (refer to Section 6.2) indicates small, but significant increases with respect to PSD, of PM, CO, and F, which are partly due to the required comparison methodology. Because the three combustors and the single turbine and generator comprise an *electric utility steam generating unit* with a capacity greater than 25 megawatts, the Department can alternatively review PSD applicability by comparing past actual emissions with *representative future actual annual emissions*. Such comparisons indicate decreases or insignificant increases in all of these pollutants.

The main rules applicable to this project are 40CFR60, Subpart Cb - Emission Guideline and Compliance Times for Municipal Waste Combustors That Are Constructed on or Before December 19, 1995 (the Emission Guideline) and Rule 62-296.416, F.A.C., Waste-to-Energy Facilities. Physical or operational changes made to an existing unit primarily for the purpose of compliance with the Emission Guideline are not considered in determining whether the unit is a modified or reconstructed facility under 40CFR60, Subparts Ea or Eb. The latter subparts are Standards of Performance for MWCs on which construction commenced after December 20, 1989 and September 20, 1994, respectively. The Emission Guideline and the other Subparts are all adopted by reference in Rule 62-204.800(7) and (8), F.A.C.

This facility is not subject to the Maximum Achievable Control Technology (MACT) for Hazardous Air Pollutants (HAPs) requirements pursuant to Section 112(g) of the Clean Air Act since replacing the air pollution control equipment does not constitute reconstruction of a major source. The Emission Guideline under Subpart Cb, with which the facility will comply, was developed pursuant to Section 129 (Solid Waste Combustion) of the Clean Air Act as amended in 1990. It requires and achieves the same objectives as MACT for existing facilities.

This facility shall comply with all applicable provisions of the following regulations:

- 40 CFR 60 Subpart Cb Emissions Guidelines and Compliance Times for Existing Municipal Waste Combustors Constructed on or Before December 19, 1995.
- 40 CFR 51 Subpart P Protection of Visibility.
- 40 CFR 60, Subpart Db Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.
- 40 CFR 60, Subpart E Standards of Performance for Incinerators.
- 40 CFR 60, Subpart A General Provisions
- 40 CFR 61, Subpart C National Emission Standard for Beryllium
- 40 CFR 64 Compliance Assurance Monitoring
- 40 CFR 50 National Primary and Secondary Ambient Air Quality Standards

This facility is also subject to the applicable requirements related to used fuels and wastes given in 40CFR279 and 40CFR261 (July 1996 version), which are adopted by reference in Chapters 62-710 and 730, F.A.C.

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The emission units affected by this replacement shall comply with all applicable provisions of the Florida Administrative Code (including applicable portions of the Code of Federal Regulations) and, specifically, the following chapters and rules:

- Chapter 62-4 Permits
- Rule 62-204.220 Ambient Air Quality Protection
- Rule 62-204.240 Ambient Air Quality Standards
- Rule 62-204.260 Prevention of Significant Deterioration Increments
- Rule 62-204.360 Designation of Prevention of Significant Deterioration Areas
- Rule 62-204.800 Federal Regulations Adopted by Reference
- Rule 62-210.300 Permits Required
- Rule 62-210.350 Public Notice and Comments
- Rule 62-210.370 Reports
- Rule 62-210.550 Stack Height Policy
- Rule 62-210.650 Circumvention
- Rule 62-210.700 Excess Emissions
- Rule 62-210.900 Forms and Instructions
- Rule 62-212.300 General Preconstruction Review Requirements
- Rule 62-212.400 Prevention of Significant Deterioration
- Rule 62-212.410 Best Available Control Technology
- Rule 62-296.320 General Pollutant Emission Limiting Standards
- Rule 62-297.310 General Test Requirements
- Rule 62-297.400 EPA Methods Adopted by Reference
- Rule 62-297.401 EPA Test Procedures
- Rule 62-296.410(3) Specific Emission Limiting and Performance Standards Requirements for Incinerators
- Rule 62-296.416 Waste to Energy Facilities
- Rule 62-296.700 Reasonably Available Control Technology (RACT)
- Rule 62-297.520 EPA Performance Specifications
- Rule 62-297.570 Test Reports
- Chapter 62-256 Open Burning and Frost Protection Fires

8. CONTROL TECHNOLOGY ASSESSMENT

8.1 Particulate Matter (PM)

The fabric filter baghouses will replace the existing ESPs and will be designed to control particulate emission including trace heavy metals. These devices are specifically required by the Emission Guideline. These will also provide a measure of additional acid gas control as the flue gases pass through the unreacted lime captured on filter bags.

The proposed limit of 0.012 grains per dry standard cubic feet at 7 percent oxygen (gr/dscf @ 7% O₂) is lower than the presently permitted value of 0.021 gr/dscf @ 12% carbon dioxide (CO₂). The present limit is based on EPA's BACT determination of 1986. According to

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

actual data submitted by the County, the existing ESP has performed much better (0.0065 gr/dscf @ 12% CO₂) than required and even better than required by the Emissions Guideline. For that reason, a PSD-significant increase occurs (per Section 6.2) although permitted emissions will be reduced and the new control equipment will be superior to the old.

According to information presented by the County, the Pasco County facility, also operated by Ogden-Martin, achieves even lower emissions with the same type of fabric filters that will be installed at the Hillsborough County facility. Annual PM/PM₁₀ emissions at Ogden-Martin, Pasco county were only 3 TPY.

Since the Pasco County facility is rated at only 1050 TPY, equivalent emissions for the Hillsborough County facility would be approximately 3.5 TPY. Even if the County facility actually emits at three times the adjusted rate of the Ogden Pasco facility, future emissions will still decrease by 14 tons per year (see Section 6.2). Consequently, the Department has reasonable assurance that "*representative actual annual emissions*" will, in fact, decrease with respect to PSD. This type of comparison applies to electric steam generating units, which is a designation applicable to the County facility. The Department will not, therefore, require the County to take a lower emission limit (which would require additional cost to guarantee) than required by the guideline or the original BACT determination. Instead, the County will be required to make demonstrations that a PSD-significant increase did not occur by reporting future representative actual annual emissions.

8.2 Acid Gases

SO₂, HCl, sulfur trioxide (SO₃), sulfuric acid mist (SAM or H₂SO₄), and hydrogen fluoride (HF) are acid gases characteristic of municipal solid waste combustion. SO₂ is formed in the furnace when sulfur in the solid waste oxidizes during combustion. The spray dryer absorber together with the fabric filter system will be used to reduce SO₂ emissions by contacting the exhaust gases with an aerosol of slaked lime. This technology is a specific requirement of the Emission Guideline. The reaction will produce a dried, relatively free-flowing powder, consisting of unreacted lime, salts, and fly ash. The most prevalent salts will be calcium sulfite (CaSO₃), and calcium sulfate (CaSO₄). The absorber will also provide a measure of control for organics and volatile metal emissions by cooling off the flue gases.

HCl and HF are formed during the combustion of waste materials containing chlorinated compounds (typically plastics) and fluorinated compounds (e.g. Teflon and toothpaste). The same absorption system will be used to control emissions of these acid gases. The products are ultimately captured as particulate calcium chloride (CaCl₂), or calcium fluoride (CaF) in the fabric filter baghouses.

The Department expects SO₂ emissions to be substantially less than permitted based on the performance of other MWCs employing similar controls. The installation of the SO₂ CEMS will continuously record emissions data and insure that SO₂ emission limit will not be exceeded. The acid gas control equipment is capable of achieving at least the required 75 % removal efficiency for SO₂ and over 95% for HCl.

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Per Section 6.2, emissions of fluoride appear to increase significantly with respect to PSD based on a “past actual to future potential” comparison. Because the project will add acid gas control, which will control hydrogen fluoride (HF), the Department expects annual emissions of fluoride to decline rather than increase by a PSD-significant amount. Based on Department records, the 1050 TPD Ogden-Martin Pasco facility emits 0.26 TPY of F. Scaling this value up to that of the 1200 TPD County facility and multiplying by a safety factor of three results in a *future representative actual annual emission* estimate of 1 TPY for F. This still represents a substantial decrease in emissions with respect to PSD.

Therefore a lower limit than proposed by the County will not be imposed for the same reason as given above for the PM emissions. The original BACT limit for fluoride 0.0031 gr/dscf @ 12% CO₂ will be retained in the metric equivalent of 6.7 mg/dscm @ 7% O₂. Instead, the County will need to make demonstrations a PSD-significant increase did not occur by reporting future “representative actual annual emissions.”

The original permit contained a limit on sulfuric acid mist (SAM) with which the facility apparently failed to comply during testing performed in 1987. SAM is formed from further oxidation of SO₂ to sulfur trioxide (SO₃) and subsequent hydration to H₂SO₄. The spray dryer and fabric filter system will minimize emissions of SAM. Injection of ammonia or urea for NO_x control will further suppress SAM emissions and possibly interfere with their measurement.

SAM emissions from the similarly controlled 1200 TPD Ogden-Martin Lee County facility (same size as the Hillsborough County facility) were 3.7 TPY. Multiplying by a factor of three results in an estimate in representative actual annual emissions of 11 TPY for the County facility. This results in substantial decreases in SAM emissions. The Department has reasonable assurance that PSD is not triggered and will only require an initial test for SAM to demonstrate low emissions. The protocol and method must be submitted to the Department in advance for approval.

8.3 Nitrogen Oxides

Nitrogen oxides (NO_x) are produced in all combustion processes. There are two mechanisms by which NO_x are formed during combustion:

- Thermal NO_x are formed by high temperature oxidation of nitrogen in the combustion air.
- Fuel NO_x are formed by the oxidation of nitrogen in the fuel.

The selective non-catalytic reduction system (SNCR) is designed to provide a high degree of NO_x control while minimizing the amount of ammonia emissions (slip). The system will store, convey, and inject aqueous ammonia (NH₃) or urea into the first pass of each boiler immediately above the combustion zone. Emission data from other MWCs injecting NH₃ (or urea) into the first pass of the boiler indicate that NO_x emissions can be reduced to the Emission Guideline requirement of 205 parts per million by volume (ppmv) on a routine basis. The installation of the NO_x CEMS will insure that the NO_x emission limit will not be exceeded.

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The ammonia "slip" limit for this level of NO_x control is estimated by the County to be less than 50 ppm, corrected to 7 percent O₂. The limit will be incorporated into the permit at the request of the County. There is no rule specifically related to ammonia. However the limit will help assure that there will be less potential of forming ammoniated salts and, therefore, less probability of plume opacity problems. The County may actually need to further minimize the ammonia slip to maintain the permitted opacity requirement.

8.4 Carbon Monoxide (CO) and Volatile Organic Compounds (VOC)

CO and VOC are formed by the incomplete oxidation of carbon compounds in wastes and fuels. Some amount of CO is formed in all combustion processes in which carbon-containing fuel is burned. Compliance with the CO limit of 100 ppmv, corrected to 7 percent O₂ on a 4-hour block-average basis, will be determined by a CEM system.

Per Section 6.2, emissions of CO do not increase significantly based on a comparison of future representative actual annual emissions with past actual emissions. A similar analysis to that performed for PM, F, and SAM was performed for CO by evaluating emissions from similar Ogden-Martin facilities and scaling the results and then multiplying by three to fit the County facility. The Department will require the County to submit information in the future to show that emissions do not actually increase by more than 100 TPY.

The Emission Guideline does not require and the County has requested deletion of the original BACT VOC limit from the permit. According to Section 6.2, past actual emissions indicate that the unit initially did not achieve the VOC limit. A subsequent test indicated that the unit did comply with the determination. The Department's analysis indicates that representative actual annual emissions will decrease substantially. In fact the facility may not be a major facility for VOC in the future. The Department will maintain the limit in the permit and require at least one test to demonstrate compliance with the BACT determination. Thereafter, CO will be employed as a surrogate. This will insure that there will be no VOC emission increase due to burning a more varied slate of wastes. The pollution control project should be able to achieve at least the same level of VOC control as EPA determined was necessary for this facility in 1986.

8.5 Mercury (Hg)

Mercury is a trace metal found in solid waste. Its origin is attributable to many different waste materials. Within the temperature range of the combustion process for solid waste, mercury is found as a metallic vapor. The proposed activated carbon injection system will store, convey, and inject dry activated carbon into the flue gas stream immediately upstream of the spray dryer inlet or within the absorber chamber. This will further reduce potential mercury emissions. Emission data from other MWCs employing similar injection system in conjunction with spray dryer and fabric filters indicate that the Emission Guideline mercury outlet requirements of 70 micrograms per dry cubic meter (ug/dscm) or 85 percent removal are achievable on a routine basis. The carbon injection system will also help to minimize emissions of dioxins and furans.

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8.6 Lead (Pb), Cadmium (Cd), and Beryllium (Be)

Most trace metals found in solid waste are directly proportional to their content in the solid waste. Lead will liquefy during combustion. Due to its vapor pressure some volatilization will occur. Cooling in the spray dryer, condensation and solidification onto fly ash, and subsequent collection by the fabric filter system will occur. Some liquid lead will also become part of the bottom ash. The County banned disposal of small sealed lead acid batteries from the waste stream in 1987. Emissions of Pb are expected to decline further due to the proposed project.

Cd is present in both the combustible and non-combustible parts of the solid waste stream and is efficiently collected by the spray dryer and fabric filter system. The County also banned nickel-cadmium batteries from the waste stream in 1987. Emissions of Cd are also expected to decline further as a result of the project.

Beryllium can be present in trace quantities in both the combustible and non-combustible parts of the solid waste stream and will be efficiently collected in the fabric filter baghouses. Emission data in one set of three tests on one boiler at the facility has found no Be emissions at the detection limit of 5.3×10^{-8} grains per dry standard cubic foot (gr/dscf) corrected to 12 percent CO₂. This is an order of magnitude lower than the permitted limit of 6.8×10^{-7} gr/dscf @ 12% CO₂.

The present permitted emission limit is equivalent to about 25% of the allowable limit per 40CFR61, Subpart C - National Emission Standard for Beryllium. Based on the results of the previous testing and the installation of control equipment, the Department expects Be emissions to remain below PSD significant levels and probably below detectable levels. However, a comparison of past actual to future potential emissions still results in a PSD-significant increase in Be emissions. The County will need to make demonstrations a PSD-significant increase did not occur by reporting future "representative actual annual emissions."

Other trace metals are also controlled with the fabric filter system and compliance is verified by the PM standard. Fabric filter baghouses generally perform better than electrostatic precipitators in the removal of some of the non-PSD air pollutants.

8.7 MWC Organics

MWC organics are comprised of hazardous air pollutants known as dioxins and furans. These species are among the pollutants most specifically targeted by the Emission Guideline. There are characteristics of each part of the air pollution control system that minimize the potential for MWC organic formation or enhance their recovery.

Virtually all dioxins and furans organics are destroyed by high temperature combustion. Rapid quenching through the spray dryer system inhibits formation at intermediate temperatures. Removal of chlorides through the scrubbing of acid gases in the spray dryer system also reduces potential formation of dioxins and furans. Injection of activated carbon to control mercury will add yet another measure of dioxins and furans control.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

MWC organics can form within the particulate control equipment on fly ash, in the presence of excess oxygen, at temperatures above 450 degree Fahrenheit (F). Therefore, the Guideline requires operating the PM control device at temperatures which minimizes such formation. Most of what does form is removed by the fabric filter baghouse. Flue gas temperature will be monitored at the inlet of the PM control device. Compliance with maximum PM control device temperature requirements will be determined by a device to measure temperature on a continuous basis at the fabric filter inlet. Temperature will be calculated in a 4-hour block arithmetic averages.

Finally, the good combustion practices required to minimize CO emissions to comply with the Emission Guideline will further reduce the potential of dioxins and furans formation and MWC organics emissions. Continuous compliance monitoring for CO is a good surrogate for dioxins and furans which cannot be monitored continuously.

9. REASONABLE AVAILABLE CONTROL TECHNOLOGY EVALUATION (PM)

One of the requirements under the maintenance plan for the area is implementation of Reasonable Available Control Technology (RACT) pursuant to Rule 62-296.711, F.A.C.(c). The Department finds that the proposed opacity limit and EPA Method to determine compliance with this limit constitute RACT for particulate matter. The Emissions Guideline requirements for PM are at least as stringent as and therefore satisfy the RACT requirement for the combustion units.

Particulate emissions from the Lime Silo and Ash Conveyor System shall be limited as follows:

- Particulate emissions from the lime storage silos exhaust shall not exceed 0.015 grains per dry standard cubic foot (gr/dscf) based on the "front-half catch" during filling operations of the lime storage silo. Visible emissions shall not exceed 5% opacity.
- Particulate matter emissions from the activated carbon storage silo exhaust shall not exceed 0.015 gr/dscf (front-half catch) during filling operations of the activated carbon storage silo. Visible emissions shall not exceed 5% opacity.
- 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. The proposed emission limit of 5% opacity from ash handling operations and EPA Method 22 constitute RACT.
- The potential for dust generation by ash handling activities will be mitigated by quenching the ash prior to loading in ash transport trucks. In addition, all portions of the proposed facility (including the ash handling facility) which have the potential for fugitive emissions will be enclosed. 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

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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.

10. CONCLUSION

Based on the technical evaluation of the application and additional information submitted by Hillsborough County, the Department has made a preliminary determination that the proposed pollution control project will reduce emissions of air pollutants - particularly those considered to be hazardous air pollutants. The Department has reasonable assurance that the project will comply with all applicable state and federal air pollution regulations provided the allowable emissions limits are not exceeded and certain conditions are met. The general and specific conditions are listed in the attached draft conditions of approval.

For further details regarding this review, contact:

Teresa Heron, Review Engineer or
A. A. Linero, P.E. Administrator
New Source Review Section
Bureau of Air Regulation
850/488-1344



Department of Environmental Protection

DRAFT

Lawton Chiles
Governor

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

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.	83-19
Expires:	July 31, 2002

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

Directions:

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:

- (DATE) Notice of Intent published in [issue of Newspaper]
- 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 17, 1997, January 9, 13, and 14, 1998

EPA's letters dated [Date(s)]

Department of Interior's letters dated [Date(s)]

Project: Upgrading of the Air Pollution Control System
Facility ID No. 0570261
SIC: 4953

Hillsborough County
Resource Recovery Facility
Tampa, Florida

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 (HPCHC), 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. [40 CFR 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 Eb, and procedures as established by the equipment manufacturer. All operators (including supervisors) of air pollution control device shall be properly trained and certified in plan specific equipment. A list of all such certified personnel shall be submitted to the DEP Southwest District office. Department staff

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

SECTION II. EMISSION UNIT(S) GENERAL REQUIREMENTS

shall be given notice of any 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 62-210.100 (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 62-210.100, 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)].**

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION B. SPECIFIC 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

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) 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.

[Rule 62-204.800(8), F.A.C., 40 CFR 60.31b; 60.38b; 60.51b, and 60.58b(j)]
[PSD-FL-121/PA 83-19 and Rule 62-4.030(3), F.A.C.]

(b) 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 (115% of the nominal design rate capacity). The incinerators/boilers shall not be loaded in excess of their maximum operating capacity of 19.16 tons MSW per hour each, 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.

[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.]

(c) Combustion efficiency shall be calculated by: %CE= [1/1+(CO/CO₂)] 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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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.

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

Spray Dry Scrubber

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

Carbon Injection

The carbon injection rate must be calculated 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 to exceed a maximum NO_x emission rate of 205 ppmvd corrected to 7 percent O₂, 24-hour block arithmetic mean (midnight to midnight).

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

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

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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 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 operator shall prepare and maintain records concerning the types 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 primarily or exclusively filled with a single item or type of waste material.

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

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- (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 materials may be used as fuel at the facility:

- (a) Confidential, proprietary or special documents (including but not limited to business records, lottery tickets, event tickets, coupons and microfilm);
- (b) Contraband which is being destroyed at the request of appropriately authorized local, state or federal governmental agencies, provided that such material is not an explosive, a propellant, a hazardous waste, or otherwise prohibited at the facility. For the purposes of this section, contraband includes but is not limited to drugs, narcotics, fruits, vegetables, plants, counterfeit money, and counterfeit consumer goods;
- (c) Wood pallets, clean wood, and land clearing debris;
- (d) Packaging materials and containers;
- (e) Clothing, natural and synthetic fibers, fabric remnants, and similar debris, including but not limited to aprons and gloves; or
- (f) Rugs, carpets, and floor coverings, but not asbestos-containing materials or polyethylene or polyurethane vinyl floor coverings.

- B.6.6 Subject to the conditions and limitations contained in this permit waste tires may be used as fuel at the facility. The total quantity of waste tires received as segregated loads and burned at the facility shall not exceed 3%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30 day average in accordance with specific condition No. B.25 below.

- B.6.7 Subject to the conditions and limitations contained in this permit, the following other solid waste materials may be used as fuel at the facility (i.e. the following are authorized fuels that are non-MSW material). The total quantity of the following non-MSW material received as segregated loads and burned at the facility shall not exceed 5%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30 day average in accordance with specific condition No. B.25 below.

- (a) Construction and demolition debris.

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- (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 person 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.

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(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)]

EMISSION LIMITATIONS

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

POLLUTANT	EMISSION STANDARDS	LB/MMBtu	LB/HR	TON/YR
PM10 ⁽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	6.56E-04
Pb Lead	0.49 mg/dscm corrected to 7% O ₂	3.81E-04	0.065	0.288
Hg Mercury	70 ug/dscm or 85% reduction by weight corrected to 7% O ₂ (whichever is less stringent)	1.17E-04	0.020	0.288
SAM Sulfuric Acid Mist	To be demonstrated initially. Not to exceed 0.0072 gr/dscf corrected to 12% CO ₂			
SO ₂ Sulfur Dioxide	29 ppmvd or 75% reduction by weight or volume corrected to 7% O ₂ (whichever is less stringent)	0.190	32.86	143.9
HCl Hydrochloric Acid	29 ppmvd 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 ppmv corrected to 7% O ₂	0.101	17.4	76.26
NOx ⁽²⁾ Nitrogen Oxides	205 ppmv corrected to 7% O ₂	0.34	58.63	256
VOC ⁽³⁾ Volatile Organic Compounds	To be demonstrated during the initial performance test.			

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The maximum allowable emission rates are applicable to each MWC combustor unit. [Rules 62-4.030, and 62-296.416, F.A.C., 40 CFR 60.52b and 40 CFR 60.53b(b)]

Notes:

- (1) This limit for PM/PM₁₀ is more restrictive than the emission limit for PM in 40 CFR 60.43b
- (2) The NO_x standard of 40 CFR 60.44b do not apply to these emissions units because this permit subject 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 63.32 (a)(Subpart C). This limit is adjusted downward to produce no net increase in the annual maximum potential emission rate. Refer to Table 1.1 of the application submitted on September 16, 1997.
- (4) VOC emission limit: 0.01 gr/dscf corrected to 12 % CO₂ or 0.2 lb/ton, whichever is more restrictive (PSD-FL-104).

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

Averaging Times

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

Abbreviations

ug/dscm: Micrograms per dry standard cubic meter
 mg/dscm: Milligrams per dry standard cubic meter
 ppmvd: 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 each auxiliary burner shall not exceed 3.45 lb/hr and 15.1 ton/yr. 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) of 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 per 12 months or less (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**B.9 Stack Testing**

Compliance tests [initial (I) and annual (A)] for the pollutants listed in Specific Condition No. B.8 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.

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Testing of emissions shall be conducted with the emissions unit operating at capacity and under the different permitted fuel scenarios as specified under Specific Condition No. B.6. A test protocol shall be submitted for approval to the SW District office at least 90 days prior to testing. The permittee shall obtain the test data necessary to determine if these units are capable of burning all proposed fuels without exceeding the allowable emission limits. [Rule 62-204.800(8), F.A.C. and Chapter 62-297, F.A.C.]

- Method 5** Determination of Particulate Matter Emissions 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 10** Determination of Carbon Monoxide Emissions from Stationary Sources (I) and (A).
- Method 13A** Determination of Total Fluoride Emissions from Stationary Sources (I) and (A).
- or 13B**
- Method 18** Determination of Volatile Organic Concentrations (I).
- or 25**
- Method 23*** Determination of Dioxin/furan concentration from Stationary Sources (I) and (A).
- Method 26**** Determination of HCl emissions (I) and (A).
- or 26A**
- Method 29**** Determination of Beryllium, Lead, Cadmium, and Mercury from Stationary Sources (I) and (A).

* 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 60.386(b) and subject to prior approval by the Department, if the facility's dioxin/furan emissions do not exceed 15 ug/dscm corrected to 7% O₂ or less for all MWC units.

** HCl and mercury stack tests upstream and downstream of the control device (s) shall be conducted to calculate percent control.

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

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In addition to the three test runs conducted under normal operation, three compliance test runs shall be conducted annually under soot blowing conditions for particulate and VE. Each soot blowing test run shall be a representative of normal soot blowing operation. [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 Continuous Monitoring Compliance: Compliance with the emission limits for opacity, carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO₂) and the operational parameters (steam production, etc.) listed in Specific Condition No. B.8 shall be demonstrated by continuous emission monitoring systems (CEMS). [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 outcome of the monitor (in accordance with the ASME method described in 40 CFR, Subpart Cb and Eb). Steam (or feedwater) flow shall be calculated in 4-hour block arithmetic averages. [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 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 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 shall be used to determine the amount of solid waste charged during the preceding calendar month on an average daily basis. The MWC load level measurements or other operating data shall be used to determine the number of operating hours per MWC unit for each day during the preceding calendar month. [Rule 62-204.800(8), F.A.C., and 40 CFR 60.38b; 60.51b, 60.53b and 60.58b(j)]
- 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

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device in accordance with the requirements at 40 CFR 60, Subparts Cb (Eb). 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, Subparts Cb and Eb. 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 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, and consumption of natural gas shall be less than 10 percent of the total annual gross heat input. 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. Similar monthly records of the total gross heat input (MSW and natural gas combined) to each unit shall be maintained based on the measured MWC load levels or other operating data. 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 consumption of natural gas

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in each unit was less than 10 percent of the total annual gross heat input. [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.]

SCHEDULE OF COMPLIANCE

The compliance schedule for each unit is provided below.

Increment 1: December 31, 1996 - applicable to units 1, 2 and 3.

Increment 2: December 31, 1997 - applicable to units 1, 2 and 3.

Increment 3: February 28, 1999 - applicable to the first unit. July 30, 1999 - applicable to the second unit. April 30, 2000 - applicable to the third unit.

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: September 30, 2000 - applicable to units 1, 2 and 3.

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

Closure Agreement: 36 months after EPA approval of this plan 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.

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 and approval by FDEP for the following pollutants and operational parameters:

Carbon Monoxide

Nitrogen Oxides

Opacity

Sulfur Dioxide

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

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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

Temperature of the combustion zone

Carbon injection system operating parameters

Slaked lime utilization

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 Southwest District Office for review and approval 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.]**

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 60.5 b]**

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;

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- (c) Records on daily solid waste charging rates and hours of operation derived from monthly truck scale data;
- (d) Amount of natural gas burned per unit in each 12 month period;
- (e) Results of all source tests or performance tests;
- (f) Amounts of ammonia, activated carbon, or other chemicals used for NOx and mercury control;
- (g) Calibration logs for all instruments;
- (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.

B.21 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 Subpart A. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report quarterly stating that no excess emissions occurred during the quarterly reporting period. The report shall include the following:

- (a) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors used, and the date and time of commencement and completion of each period of excess emissions [40 CFR 60.7(c)(1)].
- (b) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the furnace boiler system. The nature and cause of any malfunction (if known) and the corrective action taken or preventive measure adopted [40 CFR 60.7(c)(2)].

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- (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(c)(3)).
- (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.. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by FDEP and /or HCEPC [Rule 62-210.700(6), F.A.C.]. The FDEP and the HCEPC shall be notified within (1) 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 or the HCEPC may request a written summary report of the incident. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. **[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 60.59(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 for approval at least 60 days prior to construction of the sampling ports.

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- 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 condition B.6, 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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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 [40 CFR 60.39b(4)(iii)(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 [40 CFR 60.39b(4)(iii)(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 60.54(f)]

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 Silo and Ash Conveyor 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. In addition, all portions of the proposed facility (including the ash handling facility) which have the potential for fugitive emissions will be enclosed. 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.

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

The ash/residue in the Ash Handling Building shall remain sufficiently moist to prevent dust during storage and handling operations.

- (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.

COMPLIANCE AND PERFORMANCE TESTING**C.2 Fugitives Emissions Compliance:**

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 Building vent, ash conveyor system, and the lime and carbon silos shall be conducted within 180 days of completion of construction and initial operation and annually thereafter, compliance testing for visible emissions shall be verified by annual tests following the date of completion of the initial stack test. All notification requirements of 40 CFR Part 60 shall be satisfied.

- C.3. Carbon and Lime Storage Silos 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 an alternate standard of 5 percent opacity shall apply. Annual visible emission test shall be performed for each silo during filling operations 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 would require the permittee to perform a particulate stack test.

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
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 or the carbon silo 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 operation of this facility, the permittee shall submit to the DEP Southwest District office an operational procedures manual that identifies and describes

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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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 keep free of visible dust. Speed limit signs shall be posted.
[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.]
- 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

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

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

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.

[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.

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

- G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
- G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
- (a) Have access to and copy and records that must be kept under the conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.
- Reasonable time may depend on the nature of the concern being investigated.
- G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
- (a) A description of and cause of non-compliance; and
 - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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

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

- G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.
- G.13 This permit also constitutes:
- (a) Determination of Best Available Control Technology ()
 - (b) Determination of Prevention of Significant Deterioration (); and
 - (c) Compliance with New Source Performance Standards (X).
- G.14 The permittee shall comply with the following:
- (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements;
 - 2. The person responsible for performing the sampling or measurements;
 - 3. The dates analyses were performed;
 - 4. The person responsible for performing the analyses;
 - 5. The analytical techniques or methods used; and
 - 6. The results of such analyses.
- G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

THE TAMPA TRIBUNE
Published Daily
Tampa, Hillsborough County, Florida

State of Florida }
 County of Hillsborough } ss.

Before the undersigned authority personally appeared J. Rosenthal, who on oath says that she is Classified Billing Manager 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 _____

NOTICE OF APPLICATION

was published in said newspaper in the issues of _____

FEBRUARY 6, 1998

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 she has neither paid nor promised any person, this advertisement for publication in the said newspaper.

J. Rosenthal

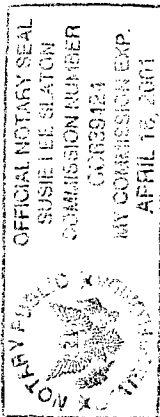
 9

Sworn to and subscribed before me, this _____ day
 of _____ FEBRUARY, A.D. 1998

Personally Known _____ or Product Identification _____
 Type of Identification Produced _____

(SEAL)

Susie Lee Slaton



PUBLIC NOTICE OF INTENT
 TO ISSUE PERMIT
 MODIFICATION
 STATE OF FLORIDA
 DEPARTMENT OF
 ENVIRONMENTAL
 PROTECTION
 DRAFT Permit No.
 PSD-FL-121(B)

Hillsborough County Resource
 Recovery Facility
 Hillsborough County

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit modification to Hillsborough County to: replace and improve the air pollution control system; define process throughput parameters; increase amount of waste that can be burned on a short-term basis, and specify which materials can be burned at its resource recovery facility located at 350 Falkenburg Road, Tampa, Hillsborough County, Florida. It was determined that an additional review for the Prevention of Significant Deterioration (PSD) is not applicable and a Best Available Control Technology determination was not required pursuant to Rule 62-212.400, and 410, F.A.C. The applicant's name and address are: Hillsborough County, 601 East Kennedy, Tampa, Florida 33602.

The purpose of the project is to comply with 40 CFR 60, Subpart Cb - Emission Guideline and Compliance Times for Municipal Waste Combustors That Are Constructed on or Before December 19, 1995. The Emission Guideline was developed pursuant to Section 129 (Solid Waste Combustion) of the Clean Air Act as amended in 1990. These requirements are incorporated in Department Rule 62-204.800(8), F.A.C.

The facility consists of three nominal 400 ton per day (TPD) mass burn furnaces, water-wall boilers, ash discharge systems, air pollution control equipment, and a single three-stage steam turbine with a 29 megawatt electrical generator. The proposed improvements to the air pollution control system consist of replacing the existing electrostatic precipitators with lime spray dryer absorbers and fabric filters. This will add acid gas control for sulfur dioxide and hydrogen chloride, improve particulate (PM/PM 10) collection efficiency, and enhance collection of heavy metals, including lead and cadmium. An activated carbon injection system will be installed for additional mercury control. Nitrogen oxides will be controlled by selective non-catalytic reduction. Combustion controls will be incorporated to minimize formation of dioxins and furans, volatile organic compounds, and carbon monoxide.

The original PSD permit contained annual testing requirements only for particulate matter. Specific limits and testing requirements are proposed for all previously mentioned pollutants. Continuous emission monitors will be installed for sulfur dioxide, nitrogen oxides, oxygen, carbon

The units were originally permitted to utilize 'refus' such as garbage and trash' as defined in the Department's solid waste rules. The modified permit will specify the wastes as: solid waste including municipal solid waste (MSW) as defined at 40 CFR 60.51b and Section 403.706(5) F.S.; segregated wastes such as records and documents, clean wood and land clearing debris, packaging material, clothing and fabric remnants, and certain types of floor covering; segregated waste tires (not to exceed 3 percent of total wastes received); other segregated wastes (not to exceed 5 percent of the total wastes received) such as construction and demolition debris, oil spill debris, expired off-spec packaged or unpackaged consumable goods (e.g. pharmaceuticals), consum

products, waste materials containing oil, used oil and filters and certain other wastes similar to MSW. The precise nature of the wastes is detailed in the draft permit package. By limiting the amount of segregated materials combusted at the facility, the Department has reasonable assurance that the overall composition of the wastes burned will be within the typical characteristics of MSW in terms of heating value, moisture, ash, and emissions characteristics.

Presently, the permitted waste throughout is 1200 TPD for the facility on an average annualized basis. The maximum allowable heat input rate is 165 mmBtu/hr of a daily waste throughout of 1,320 TPD (440 TPD per unit). The modified permit will, upon presentation of an engineering evaluation to the Department by the boiler manufacturer or operator, allow further increases of approximately 5 percent in short-term heat input, steam production, and waste throughput with no change in annual waste throughput limits.

The Department will issue the FINAL Permit Modification, in accordance with the conditions of the DRAFT Permit Modification unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed DRAFT Permit Modification issuance action for a period of thirty (30) days from the date of publication of this Notice. Written comments should be provided to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit Modification, the Department shall issue a Revised DRAFT Permit Modification and require, if applicable, another Public Notice.

The Department will issue FINAL Permit Modification with the conditions of the DRAFT Permit Modification unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569

and 120.57 F.S. The procedures for petitioning for a hearing are set forth below. Mediation is not available for this action.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, telephone: 904/488-9370, fax: 904/487-4938. Petitions must be filed within fourteen days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 F.S. or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the Department's action or proposed action addressed in this notice of intent.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file 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:

Department of Environmental Protection

Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida, 32301
Telephone: 904/488-1344
Fax: 904/922-6979

Department of Environmental Protection

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619-8218
Telephone: 813/744-6100
Fax: 813/744-6084

Hillsborough County Environmental

Protection Commission
1900 Ninth Avenue
Tampa, Florida 33605
Telephone: 813/272-5960
Fax: 813/272-5157

The complete project file includes the Draft Permit Modification, the application and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, New Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 904/488-1344, for additional information.

Memorandum

Florida Department of Environmental Protection

TO: Clair Fancy *CF* 1/27
THRU: Al Linero *AL* 1/27
FROM: Teresa Heron *TH*
DATE: January 27, 1998
SUBJECT: Hillsborough County Resource Recovery Facility
Air Pollution Control Equipment Retrofit

Attached is a draft 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. The smaller Tampa McKay facility may have to accept one of the alternatives because it does not qualify as a steam generating unit and also wants an expanded operating window. I informed both applicants of the possible ramifications well over one year ago.

I recommend your approval and signature.

AAL/th

Attachments



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

P.E. Certification Statement

Permittee:

DEP File No. PSD-FL-121(B)

Hillsborough County
Resource Recovery Facility
Tampa, Hillsborough County

Project type:

Project to replace existing air pollution control equipment consisting of electrostatic precipitators, at a nominal 1200 TPD resource recovery facility, with new equipment consisting of selective non-catalytic reduction, activated carbon injection, lime spray dryer absorbers and fabric filters. An increase in short-term waste throughput and steam production was allowed which required a PSD applicability determination. A determination was made that PSD does not apply because "representative actual annual emissions" at a steam generating unit (three combustors together with one steam turbine and one generator producing more than 25 megawatts) will be reduced. The types of waste which can be burned at the facility were further defined and clarified.

I HEREBY CERTIFY that the engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).

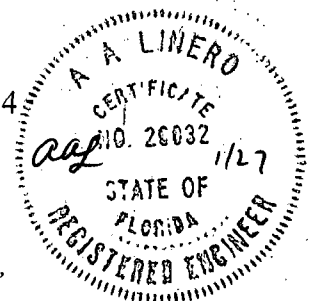
1/27/98

A. A. Linero, P.E.

Date

Registration Number: 26032

Department of Environmental Protection
Bureau of Air Regulation
New Source Review Section
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Phone (850) 921-9523
Fax (850) 922-6979



"Protect, Conserve and Manage Florida's Environment and Natural Resources"

CARLTON FIELDS

ATTORNEYS AT LAW

215 SOUTH MONROE STREET, SUITE 500
TALLAHASSEE, FLORIDA 32301-1866
TEL (904) 224-1585 FAX (904) 222-0398

MAILING ADDRESS:
POST OFFICE DRAWER 190
TALLAHASSEE, FL 32302-0190

January 13, 1998

Al Linero
Department of Environmental
Protection
2600 Blair Stone Road, MS. 5505
Tallahassee, Florida 32399-2400

**RE: Hillsborough County Resource Recovery Facility
PA 83-19 & PSD-FL-121(B)**

Dr. Mr. Linero:

On behalf Hillsborough County, we agree to a fourteen-day tolling of the time period within which the Florida Department of Environmental Protection must take proposed agency action on the pending application referenced above. The tolling period shall commence on Wednesday, January 14, 1998, and shall expire on January 28, 1998.

If you have any questions or would like to discuss regarding agreement, please do not hesitate to call.

Sincerely,



Martha Harrell Chumbler

cc: Hamilton Oven/DEP
Teresa Heron/DEP
Thomas Smith/Hillsborough County
Daniel Strobridge/CDM
Don Elias/RTP

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JAN 14 1998

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AIR REGULATION**



Camp Dresser & McKee Inc.

consulting
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construction
operations

1715 North Westshore Boulevard, Suite 875
Tampa, Florida 33607
Tel: 813 281-2900 Fax: 813 281-8787

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AIR REGULATION**

January 13, 1998

Ms. Teresa Heron, P.E.
Engineer, New Source Review Section
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Hillsborough County Operating Window

Dear Ms. Heron:

You have requested that CDM provide you reasonable assurance that increasing the operating window to allow a heat input rate of up to 172.5 MM Btu/hr will not result in an increase in future particulate matter (PM) emissions over current actual particulate matter emissions.

The following is provided:

Table 1, attached, compares existing actual particulate matter stack test data for the Hillsborough County Facility, which has an ESP, with stack test data for the Pasco County Facility, which has a Spray Dyer/Fabric Filter. The Pasco County Facility, with air pollution control equipment similar to that proposed for the Hillsborough County Facility, produces particulate matter stack concentrations that are less than one-third of the Hillsborough County Facility's concentrations. Put another way, the Pasco County Facility stack test data suggest that an actual emissions reduction of about 71 percent could be reasonably expected from the air pollution equipment upgrade proposed for the Hillsborough County Facility. Table 2 makes an even more dramatic comparison with the new Lee County Facility, which also has a Spray Dryer/Fabric Filter. While only the acceptance test data for the Lee County Facility are available, it suggests that up to a 91 percent reduction in actual particulate matter emissions could occur after the air pollution control upgrade.

Although this is not a rigorous analysis, these comparisons show that actual particulate matter emissions from the Hillsborough County Facility could drop by approximately 65 to 90 percent after the air pollution control equipment upgrade. Substantial actual emissions decreases can still be expected, therefore, even after an increase in the permitted heat input from 165 MM Btu/hr to 172.5 MM Btu/hr, a 4.5 percent increase. Based on this data, it is CDM's opinion that it is reasonable to expect that future particulate matter emissions will be less than existing particulate matter emissions under the proposed maximum heat input (172.5 MM Btu/hr).

Ms. Teresa Heron, P.E.

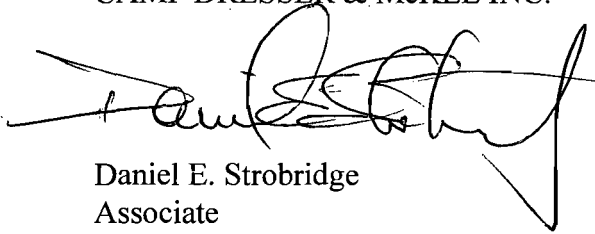
January 13, 1998

Page 2

If you have any questions in this regard, do not hesitate to contract us.

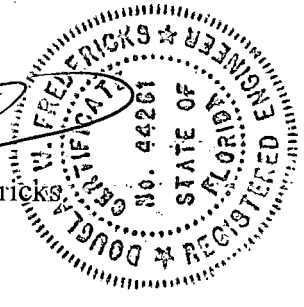
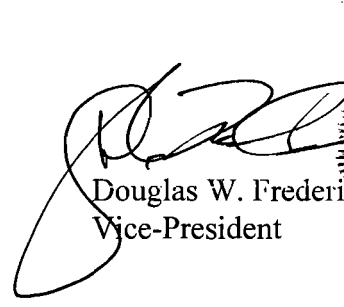
Sincerely,

CAMP DRESSER & McKEE INC.



Daniel E. Strobridge
Associate

c: Tom Smith



Douglas W. Fredericks
Vice-President

TABLE 1

**HILLSBOROUGH COUNTY SOLID WASTE ENERGY RECOVERY FACILITY
STACK TEST DATA COMPARISONS
Particulate Matter (in gr/dscf @ 12% CO2)**

Year	Hillsborough County SWERF (400-tpd Unit; ESP)				Pasco County SWRRF (300-tpd Unit; Spray Dryer / Fabric Filter)			
	Unit 1	Unit 2	Unit 3	Facility	Unit 1	Unit 2	Unit 3	Facility
1987	0.005	0.006	0.003	0.005	---	---	---	---
1988	0.0043	0.0059	0.0058	0.0053	---	---	---	---
1989	0.0040	0.0050	0.0038	0.0043	---	---	---	---
1990	0.0186	0.0125	0.0159	0.0157	---	---	---	---
1991	0.0077	0.0085	0.0075	0.0079	0.0004	0.0002	0.0016	0.00073
1992	0.0127	0.0038	0.0064	0.0076	0.0016	0.0043	0.0021	0.00267
1993	0.00334	0.00721	0.00781	0.00612	0.00228	0.00229	0.00266	0.00241
1994	0.00657	0.00477	0.00564	0.00566	0.00165	0.00148	0.00147	0.00153
1995	0.00522	0.00571	0.00518	0.00537	0.00233	0.00193	0.002	0.00209
1996	0.0020	0.0023	0.0023	0.0022	0.00063	0.0014	0.00062	0.00088
1997	---	---	---	---	0.004	0.0024	0.0022	0.00287
Average	0.0069	0.0062	0.0063	0.0065	0.0018	0.0020	0.0018	0.0019
Permit Limit				0.021				0.015

TABLE 2

**HILLSBOROUGH COUNTY SOLID WASTE ENERGY RECOVERY FACILITY
STACK TEST DATA COMPARISONS
Particulate Matter (in gr/dscf @ 7% O₂)¹**

Year	Hillsborough County SWERF (400-tpd Unit; ESP)				Lee County SWRRF (600-tpd Unit; Spray Dryer / FF)		
	Unit 1	Unit 2	Unit 3	Facility	Unit 1	Unit 2	Facility
1987	0.005	0.007	0.003	0.005	---	---	---
1988	0.0047	0.0065	0.0063	0.0058	---	---	---
1989	0.0044	0.0055	0.0042	0.0047	---	---	---
1990	0.0203	0.0137	0.0174	0.0171	---	---	---
1991	0.0084	0.0093	0.0082	0.0086	---	---	---
1992	0.0139	0.0042	0.0070	0.0083	---	---	---
1993	0.00365	0.00789	0.00854	0.00669	---	---	---
1994	0.00719	0.00522	0.00617	0.00619	0.0006	0.0007	0.00065
1995	0.00571	0.00625	0.00567	0.00587	---	---	---
1996	0.0022	0.0025	0.0025	0.0024	---	---	---
Average	0.0076	0.0067	0.0069	0.0071	0.0006	0.0007	0.0007
Permit Limit				0.023			0.010

Note: ¹ Hillsborough County stack test data and emission limit reported as gr/dscf @ 12% CO₂. They were converted to gr/dscf @ 7% based on actual flue gas concentrations of 9.745% CO₂ and 10.58% O₂, from BURN model output.



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January 9, 1998

Ms. Teresa Heron P.E.
Engineer, New Source Review Section
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Hillsborough County Retrofit Steam Calculation

Dear Ms. Heron:

Transmitted, herewith, are the steam calculations for the Hillsborough County WTE Facility. Two steaming rates are provided together with the boiler design basis. As indicated, the boilers, as installed, are designed for a heat rate input of 159.9 MM Btu/hr which represents the combined heat release from the solid fuel (150 MM Btu/hr) and 9.9 MM Btu/hr from the combustion air preheaters. The normal operation steam flow set point is for approximately 98,000 lbs/hr (per boiler), representing 110% of the existing permit value.

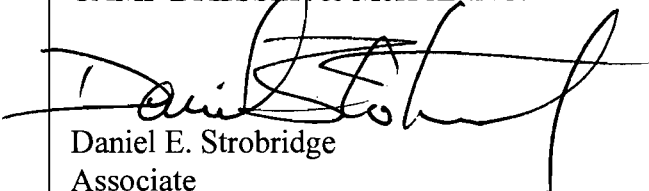
Our requested heat input load is 107.9% of boiler design or 172.5 MM Btu/hr. This is equivalent to a steam flow of approximately 102,000 lbs/hr.

I will be forwarding to you our revised proposed "acceptable fuels" definition within the next day or so.

If you have you any questions or comments, do not hesitate to call me.

Sincerely,

CAMP DRESSER & McKEE INC.



Daniel E. Strobridge
Associate

c: Thomas Smith, Hillsborough County
Martha Chumbler, Carlton Fields
Don Elias, RTP

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BOILER HEAT LOAD CALCULATION

The following explanation illustrates how the Heat Input Rate can be calculated using Steam Flow as a surrogate measurement

HEAT OUTPUT

The Heat Output is calculated based upon the measured steam flow, temperature, & pressure along with the Feedwater pressure. Using thermodynamic steam tables, the energy (enthalpy) in the steam & feedwater can be found based upon their temperature & pressure. The difference between the enthalpy of the steam & feedwater is the amount of energy necessary to create that pound of steam.

The Heat Output of the boiler is the rate of steam production (flow) multiplied by the energy required to produce a lb of that steam or:

$$\text{Heat Output} = (\text{Steam Flow}) \times (\text{Steam Enthalpy} - \text{Feedwater Enthalpy}) \times \left(\frac{\text{MMBtu}}{1,000,000 \text{ Btu}} \right)$$

where: *Heat Output* is measured in MMBtu/hr
Steam Flow is measured in lbs/hr
Enthalpy is measured in Btu/lb

HEAT INPUT

Once the Heat Output is determined, the design boiler efficiency can be used to determine the Heat Input. Efficiency is a measure of the effectiveness of a piece of equipment (*in this case a boiler*) in performing its designed function (*in this case converting energy in the fuel into an alternate form of energy in the high pressure steam*). The design boiler of the Hillsborough boilers is 68.26% meaning 68.26% of the energy entering the boiler as fuel is converted to steam energy.

This formula would be:

$$\text{Boiler Efficiency} = \frac{\text{Heat Output}}{\text{Heat Input}}$$

where: *Heat Input and Heat Output* is measured in MMBtu/hr
Boiler Efficiency is a dimension less quantity in decimal form 68.26% is 0.6826

The equation can also be written as:

$$\text{Heat Input} = \frac{\text{Heat Output}}{\text{Boiler Efficiency}}$$

BOILER DESIGN BASIS

Using the following assumptions, an example of this calculation would be:

Assuming: Steam Flow of 94,270 lbs/hr
Steam Enthalpy = 1378.86 Btu/lb
Feedwater Enthalpy = 220.82 Btu/lb
Boiler Efficiency = 68.26%

$$\text{Heat Output} = \left(94,270 \frac{\text{lbs}}{\text{hour}} \right) \times \left(1378.86 \frac{\text{Btu}}{\text{lb}} - 220.82 \frac{\text{Btu}}{\text{lb}} \right) \times \left(\frac{\text{MMBtu}}{1,000,000 \text{ Btu}} \right) = 109.17 \frac{\text{MMBtu}}{\text{hr}}$$

$$\text{Heat Input} = \left(\frac{109.17 \frac{\text{MMBtu}}{\text{hr}}}{0.6826} \right) = 159.9 \frac{\text{MMBtu}}{\text{hr}}$$

DERIVATION

Using the previous calculation methodology & basic algebra, it is possible to derive a method of calculating what steam flow would be associated with a given Heat Input.

The results of this derivation is:

$$\text{Steam Flow} = \left(\frac{\text{Heat Input} \times \text{Efficiency}}{(\text{Steam Enthalpy} - \text{Feedwater Enthalpy}) \times \frac{\text{MMBtu}}{1,000,000\text{Btu}}} \right)$$

110% OF EXISTING PERMIT

For: Heat Input = 165 MMBtu
Steam Enthalpy = 1378.86 Btu/lb
Feedwater Enthalpy = 220.82 Btu/lb
Boiler Efficiency = 68.26%

$$\text{Steam Flow} = \left(\frac{165 \frac{\text{MMBtu}}{\text{hr}} \times 0.6826}{\left(1378.86 \frac{\text{Btu}}{\text{lb}} - 220.82 \frac{\text{Btu}}{\text{lb}} \right) \times \frac{\text{MMBtu}}{1,000,000 \text{ Btu}}} \right) = 97,355 \frac{\text{lbs}}{\text{hr}}$$

107.9% OF BOILER DESIGN

(115% OF EXISTING PERMIT)

For: Heat Input = 172.5 MMBtu
Steam Enthalpy = 1378.86 Btu/lb
Feedwater Enthalpy = 220.82 Btu/lb
Boiler Efficiency = 68.26%

$$\text{Steam Flow} = \left(\frac{172.5 \frac{\text{MMBtu}}{\text{hr}} \times 0.6826}{\left(1378.86 \frac{\text{Btu}}{\text{lb}} - 220.82 \frac{\text{Btu}}{\text{lb}} \right) \times \frac{\text{MMBtu}}{1,000,000 \text{ Btu}}} \right) = 101,679 \frac{\text{lbs}}{\text{hr}}$$

Memorandum

Florida Department of
Environmental Protection

TO: John Brown
Larry George
Pat Comer
Mike Hewett
Mike Harley

THRU: Al Linero

FROM: Teresa Heron T.H.

DATE: November 22, 1996

SUBJECT: Hillsborough County Resource Recovery Facility
City of Tampa's Mc Kay Bay Resource Recovery Facility
MSW-EG definitions and MSW-EG requirements

If you have any comments on these requests, please let us know at your earliest convenience.
These requests were received on November 20, 1996.

Al:
I gave a hard copy of all the letters
E-mailed to Jerry Kessel
and D. Campbell
↓
a memo (copy to you)

I will be reading at home the Eb

Date: 11/25/96 3:51:05 PM
From: Michael Hewett TAL
Subject: Hillsborough County RRF
To: Teresa Heron TAL

Teresa,

I have reviewed the information you sent to me on November 22 concerning the Hillsborough County and City of Tampa resource recovery facilities. I do not have any comments concerning their proposed VE limit for fugitive ash and minor PM sources except to say that what they are requesting seems reasonable given EPA's new standards.

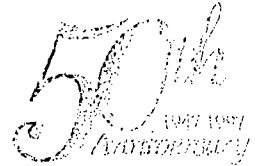
As for the definition of MSW and how it should be applied, this is an issue we are currently working on with the Pasco County RRF. In a recent meeting, representatives of Pasco County and Ogden Martin met with DEP to discuss broadening the permit condition that limits what they can burn. We told them that we would make a determination concerning which definition of MSW should apply and what segregated wastes fall under the definition of MSW in a few months. Clair said that he would assign this task to one of the permitting engineers in his bureau. I believe this is basically the request that Hillsborough and Tampa are making.



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November 11, 1997

Mr. Hamilton (Buck) Oven, P.E.
Power Plant Siting
Florida Department of Environmental Protection
Twin Towers Office Building
MS 48
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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NOV 17 1997

**BUREAU OF
AIR REGULATION**

Subject: Hillsborough County Resource Recovery Facility PA 83-19 and PSD-FL-121(B)

Dear Mr. Oven:

The following letter contains Hillsborough County's responses to the Department's and Hillsborough County Environmental Protection Commission's (HCEPC) request for additional information. The questions are in italics and are followed by the County's responses.

The following were questions/comments posed by DEP:

POLLUTANT INFORMATION

- Table 1-1 provides a comparison of existing permitted and proposed emission limits. Please submit actual emissions (TPY for a two years period) of all pollutants pursuant to Rule 62-212.400(2)(e) F.A.C., for each of the boilers that is representative of the normal operation of each unit prior to the retrofit project.*

Response: We have only limited test data with which to characterize existing actual emissions. The Facility's current air permit (see Appendix A of Volume II) requires an initial compliance test for PM, SO₂, NO_x, CO, VOC, H₂SO₄, fluorides, mercury and beryllium, and subsequent annual testing for PM only. NO_x testing was conducted in 1994 (for Units 2 and 3 only). Mercury testing was added to the PM testing in 1994, 1995 and 1996. Therefore, except for PM, mercury, and one NO_x test, the most recent available data is from the 1987 acceptance tests. The 1987 Acceptance Test data is shown in Appendix E of Volume II for your reference. All of the available test data is summarized in Exhibit 1, attached. The Exhibit also expresses the available data as tons per year for a two-year period (or one year if only one stack test was conducted). Because this is an air pollution control equipment retrofit, and no other changes are being made to the Facility, future actual emissions will be less than the existing actual emissions shown in Exhibit 1.

The rule cited in the request above, Rule 62-212.400 (2) (e) F.A.C., is a reference to calculation of net emissions increases for a PSD applicability determination. We believe that

Mr. Hamilton Owen
November 11, 1997
Page 2

this project qualifies for the Pollution Control Project Exemption in Rule 62-212.400 (2) (a) 2., and, therefore, should not be subject to a PSD applicability determination. This exemption applies to a "pollution control project that is being added, replaced, or used at an existing electric utility steam generating unit . . ." The Hillsborough County Facility is an existing steam generating unit producing electricity. Because it has been permitted under the Power Plant Siting Act, it should be subject to this electric utility exemption.

The U.S. EPA has also issued guidance to states to exempt certain air pollution control projects in other source categories (besides electric utility steam generating units) from the NSR/PSD requirements (John S. Seitz, Director, Office of Air Quality Planning and Standards, Memorandum to EPA Regional Air Division Directors on the Subject of Pollution Control Projects and New Source Review (NSR) Applicability, July 1, 1994). The Hillsborough County Solid Waste Energy Recovery Facility Air Pollution Control Equipment Retrofit project meets all the criteria in the guidance memo for exemption:

- the project is limited to the installation of conventional or innovative air pollution control equipment;
- the purpose of the project is the reduction of air pollutants subject to regulation under the Clean Air Act at an existing major source;
- the project is, on balance, environmentally beneficial; and
- the project will not cause or contribute to a violation of a NAAQS, PSD increment, or adversely impact an AQRV in a Class I Area (see Section 6.0, Volume II of the permit application).

Because this project is an air pollution control project meeting the criteria for NSR exemption, we would like to request that existing actual emissions information not be the basis for an applicability determination.

2. *Are the emissions from the auxiliary burners included in the total emission from the facility?*

Response: Yes. The auxiliary burner emissions are included in the total emissions for the Facility, even though they are not explicitly broken out in the emissions calculations. This is because the EG emissions limits are flue gas pollutant concentrations that are limiting no matter what fuel is burned in the units (except during start-up, shut-down, or malfunction). The EG apply to all the flue gases going past the air pollution control equipment and out the stack, which would be the fate of the auxiliary burner gases. In calculating the maximum potential to emit in Table 1-1 of Volume II of the permit application, we assumed that the Facility would be emitting at EG levels 100 percent of the time, 24 hours a day, 365 days a

Mr. Hamilton Owen
November 11, 1997
Page 3

year. This is a conservative upper bound for all emissions from the stack, including auxiliary burner emissions.

3. *Calculate pollutant emissions at all levels of the operations window proposed (lb/MMBtu, lb/hr, lb/ton and ton/yr).*

Response: All of the information requested is presented in Exhibit 2 except emissions expressed as lb/ton. As Cynthia Hibbard discussed with Teresa Heron on October 24, 1997, emissions are directly proportional to the feed rate of combustible material to each MWC unit. The combustible fraction of each ton of solid waste, which is proportional to its energy content, varies substantially from ton to ton. For this reason, Ms. Heron agreed that lb/ton was not as representative a descriptor of emissions as the other measures you have requested.

The information in Exhibit 2 has been derived from Volume II, Table 6-1, which shows all operating window cases evaluated in the screening modeling and the heat release for each case, Table 6-3, which shows emissions and flue gas parameters for all of these cases, and Table 6-8, which shows the pollutant-specific emission rates for the Facility as a whole. Please note that everywhere in the permit application where pollutant-specific emission rates are reported, they are for all three units at the **worst-case** operating condition, which is Case No. 3 (see Figure 6-4 and Table 6-1, Vol. II).

4. *Does this RRF expect to receive MSW from other counties?*

Response: Presently, more waste is generated in Hillsborough County than can be processed by Hillsborough County's Facility. The expectation is that out-of-County waste will not be processed, however, Hillsborough County wishes to reserve its option to process out-of-County waste if and when doing so makes sense.

5. *Describe, if any, Hillsborough County's recycling program (source separation, composting, waste reduction, etc.). Are household batteries and lead-acid batteries removed from the waste stream?*

Response: Hillsborough County has a very aggressive recycling program. Curbside recycling is provided by the County's three franchised haulers and it is available to all residential route customers. Materials collected include: newspaper, corrugated paper, brown paper bags, mixed office paper, junk mail, magazines, telephone books, glass, aluminum, plastic (resins 1 and 2) and steel containers, and yard waste. Hillsborough County conducts a public education program which encourages residents to take spent Nickel-Cadmium (Ni-Cd) batteries back to the place of purchase. Small Sealed Lead Acid (SSLA) and Ni-Cd batteries are expressly prohibited from disposal in the County's solid waste system. Hillsborough County provides collection centers for these as well as for used motor oil. Other household batteries are no longer part of the recycling program because these no longer contain

Mr. Hamilton Owen

November 11, 1997

Page 4

mercury. Exhibit 3 contains additional information about Hillsborough County's recycling program.

Please note that the Emission Guidelines (EG) do not include any recycling program requirements to comply with the EG and Hillsborough County does not believe that the availability or performance of a recycling program should be considered as a condition to approving its application to amend its Power Plant Site Certification. As such, Hillsborough County, pursuant to 62-4.055(4) F.A.C., requests that the Department process its application without regard to the information contained in this response to question number 5.

6. *Indicate which of the wastes specified in the application are already burned at this facility. Provide annual tonnage of waste processed by this facility over the last five years along with any heat content determination that have been made for the waste burned.*

Response: Hillsborough County believes that all of the waste materials specified in the County's application are currently received and processed at the Facility as part of the County's normal solid waste stream. The proposed specification is offered simply to clarify and more precisely define allowable fuels and the manner in which they are handled. The overall waste throughput quantities are not expected to change. The fuel quantity and quality will generally normalize around past throughput quantities and fuel quality. Hillsborough County presently operates a solid waste profile program whereby all non-residential solid waste generators are required to provide a characterization of their solid wastes. The purpose of this program is to assure the proper management of all solid wastes generated within Hillsborough County. A copy of the County's Solid Waste Profile Form is included as Exhibit 4.

The quantities of waste processed at the Facility over the past five years (year ending September 30) together with the annual average heating value (Btu/lb) are summarized below:

<u>Year</u>	<u>Tons Processed</u>	<u>Annual Avg. HHV</u>
1997	401,368	5,019
1996	422,343	4,856
1995	422,005	4,861
1994	418,423	4,845
1993	418,854	4,863

Please note that monthly average solid waste heating values range from a low of 4,300 to a high of 5,239 Btu/lb over the five-year period shown above.

Mr. Hamilton Oven
November 11, 1997
Page 5

7. Pursuant to Rules 62-4.070(3), F.A.C., please provide reasonable assurance that the burning of the proposed wastes as specified on page 2-17 and 2-18 will not contravene Department rules or contribute to an exceedance of the E.G. standards for Municipal Solid Waste Facilities (40 CFR 60, Subpart Cb). Include all assumptions, reference materials and calculations (i.e., test data or emission estimates from other RRFs burning these types of wastes, quantity of the properties specified waste products to be burned, percentage of heat input from each waste fuel analysis, etc.). How will the proposed specification of the fuels affect overall waste throughput quantities?

Response: The overall waste throughput quantities will not be affected by the proposed acceptable fuels specification. The proposed language is simply a more precise definition of the existing permit language of "garbage such as refuse and trash." Hillsborough County does not believe that it is requesting any additional waste streams at the Facility beyond the existing definition. Hillsborough County does not plan to implement any less restrictive acceptance criteria at the Facility nor is it requesting any greater flexibility in the allowable waste streams. Since there will be no change in the allowable fuels at the Facility, the concentration of the pollutants at the inlet to the APC system should not change as a result of this permitting process. Further, it should be understood that the proposed APC system is designed to accommodate a reasonably wide range in inlet pollutant concentrations and still meet permit limitations through adjustments to the lime and ammonia or urea feed rate based upon CEM feedback and frequency of cleaning (pulsing) the fabric filters.

CONTROL EQUIPMENT

8. The detailed description of the air pollution control equipment was not submitted. Provide additional information, including engineering design specification sheets, for the proposed control technology. What are the manufacturer's guarantees of efficiency of the control equipment, etc? Please include for each baghouse, as a minimum, the following information:

- Design emission rate for particulate matter (before and after proposed controls).

Response: Two boiler operating conditions were used as basis for the APC equipment design. The expected condition:

Flue Gas Flow	265,587 lb/hr flue gas
Economizer Outlet Temp.	450°F - 525°F
Economizer Outlet Flue Gas Flow Rate	104,829 ACFM - 113,469 ACFM

The Boiler Design Condition:

Flue Gas Flow	305,152 lb/hr flue gas
---------------	------------------------

Mr. Hamilton Oven
November 11, 1997
Page 6

Economizer Outlet Temp.	450°F - 525°F
Economizer Outlet Flue Gas Flow Rate	120,743 ACFM - 130,694 ACFM

For the **expected operating condition** the particulate loading is as follows:

Inlet to SDA	1,132 lb/hr or 3.44 gr/dscf @7% O ₂
Outlet of SDA	1,318 lb/hr or 4.00 gr/dscf @7% O ₂
FF Outlet	4 lb/hr or 0.012 gr/dscf @7% O ₂

For the **design operating condition** the particulate loading is as follows:

Inlet to SDA	1,477 lb/hr or 3.91 gr/dscf @7% O ₂
Outlet of SDA	2,950 lb/hr or 7.81 gr/dscf @7% O ₂
FF Outlet	5 lb/hr or 0.012 gr/dscf @7% O ₂

- *Baghouse operation temperature (F) range?*

Response: Operating range is 270°F - 525°F with 525°F being the maximum continuous temperature.

- *Number of separate baghouses?*

Response: Each MWC will have one dedicated baghouse.

- *Number of isolated compartments per baghouse?*

Response: Each baghouse will have 6 modules.

- *Design criteria for air to cloth ratio or range of acceptable ratio?*

Response: The range in gross air/cloth (A/C) ratio is 2.3 - 2.7. This corresponds to an A/C net, net ratio range of 3.5 - 4.1, respectively.

- *Cloth description?*

Response: Woven fiberglass with an acid resistant finish with a fabric weight of either 16 or 22 ounces per square yard or other suitable materials.

- *Type of bag cleaning under consideration and subsequent cleaning controls?*

Mr. Hamilton Owen

November 11, 1997

Page 7

Response: The baghouse shall use pulse jet cleaning. The baghouse will be automatically cleaned to control to a pressure drop set point or on a periodic basis as determined by the operator. The operator may also manually initiate a cleaning cycle.

■ *Strategy for detecting and replacing faulty bags?*

Response: Each MWC will be equipped with a continuous opacity monitor (COM) which will be monitored by the control room operator. During the baghouse cleaning cycle the COM will indicate any compartment that has a faulty bag by showing a small opacity spike. Compartments that indicate a faulty bag will be inspected and the bag replaced.

■ *Description of ash handling and disposal system?*

Response: No changes to the ash handling system other than that the fly ash from the baghouse and residue from the spray dryer instead of from the ESP will be conveyed via screw conveyors to the boiler ash quench tank where it will mix with the quenched bottom ash. The mixed ash will then be dewatered as it exits the ash discharger onto the existing main ash conveyor and conveyed to the ash/residue handling building in the same manner as is presently employed.

■ *Nature and terms of performance guarantee?*

The full-service vendor will provide a guarantee to meet all pollutants for which APC equipment is supplied throughout the term of the service agreement with the County. Under such a guarantee, any fine or other regulatory action is the responsibility of the vendor as well as any repairs needed to meet the permit conditions. The full-service vendor will receive warranties and guaranteed performance from the APC equipment vendor for specific emissions which do not include CO, Dioxin/Furans, NO_x, heavy metals, or ammonia.

If the above information cannot be submitted as requested, the proposed permit would be conditioned on submittal of detailed design specifications prior to commencement of construction.

9. *How are odors controlled at this facility? Describe any complaints (if any) on the existing facility and how improvements for odor control will be addressed?*

Response: Neither the County or the Facility have received any odor complaints over the ten-year operating history of the WTE plant. Odors are controlled by pulling combustion air from vents located above the refuse storage pit. The requested permit modification has no effect upon the operation of the tipping floor and ventilation system which control odors.

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MONITORING EQUIPMENT AND MONITORING LOCATIONS

10. *Provide information concerning emission monitoring equipment and monitoring locations.*

Response: Section 3.4.6, page 3-6, Volume II of the County's application explains that continuous emission monitors (CEMs) for SO₂, NO_x, CO, and O₂ will be installed after the fabric filter (FF) outlet of each combustion unit. These will be installed in the vertical duct between the FF and induced draft fan. SO₂ and O₂ CEMs will be installed at the economizer outlet, prior to the Spray Dry Absorber inlet, to allow calculation of SO₂ removal efficiency. A continuous opacity monitor (COM) will be installed after the FF outlet on each unit.

Flue gas samples will be taken continuously at the economizer/boiler outlet for SO₂ and O₂ and after the FF outlet for SO₂, NO_x, CO, and O₂. The sample lines will be connected to a climate controlled CEM trailer. The CEM trailer will contain the sample preparation equipment and analyzers. Data collected from the CEM analyzers will be transmitted to the Facility's main control room and collected with data loggers.

At this time, a CEMS vendor(s) has not been selected and, therefore, the specific brand names of the analyzers and CEMS cannot be provided. The exact location within the ductwork where the CEMS will be located has not yet been designed. The County is willing to submit this information to the Department when it becomes available.

11. *Provide the make and model number along with the specification sheets and operation and maintenance manuals for all combustors, recorders, scrubbers, baghouses and CEMs for recording opacity, oxygen, carbon monoxide, NO_x, SO₂.*

Response: We question the Department's need for this information, all of which other than that for the combustors is not available at this time. Environmental Elements Corporation has been selected to supply the SDA and FF. The County is willing to submit this information to the Department when it becomes available.

AIR PERMIT APPLICATION FORM AND APPENDICES

12. *Appendix B: On page B-6, shouldn't the 29 moles SO₂ refer to HCL instead of SO₂? On page B-9, shouldn't the 205 moles of CO refer to NO_x instead?*

Response: You are correct. Corrected pages are attached as Exhibit 5.

13. *Appendix C: Flow rate discrepancies exist between the existing and future nominal flow rates used. Why is the difference in data? Show calculation of nominal data.*

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Response: The Appendix C BURN runs show calculated flow rates for an existing single unit at the nominal load of 400 tpd at 4,500 Btu/lb as:

- 96,382.0 acfm, at an exit temperature of 473.7 degrees F, and moisture content of 10.24%
- 34,687.0 dry standard cfm, corrected to 7% O₂

The flow rates for the same unit firing the same waste at nominal load after the air pollution control retrofit is:

- 82,428.6 acfm, at an exit temperature of 288.7 degrees F, and moisture content of 14.93%
- 34,674.1 dry standard cfm, corrected to 7% O₂

The difference in the flow rates at actual stack conditions is primarily due to the addition of the scrubber as part of the air pollution control equipment retrofit. The scrubber cools the flue gases considerably (by 185 degrees). The cooler, more dense gases take up less volume, and therefore would be measured as having a lower flow rate.

When the flow rates are corrected to dry standard conditions and 7% O₂, they are virtually identical, as they should be. The very small difference (less than 0.04 percent) is due to rounding of calculations at differing points in the BURN program itself.

14. *Section III Part 7a-1. The maximum dry standard flow rate listed is 53189 dscfm. However, is not the same flow used in the BURN model output. Please update this page. Show calculations.*

The BURN model output in Appendix C shows a flow rate for a single retrofitted unit burning 345 tpd of waste at 6,000 Btu/lb (our worst case) to be: 39,490.0 dry standard cfm **corrected to 7% O₂**. It also shows a flow rate for the same case of 43,078.9 dry standard cfm **corrected to 12% CO₂**. The ELSA forms ask for flow expressed as dry standard cfm, but without correction to either 7% O₂ or 12% CO₂. Therefore, the value reported is the uncorrected dscfm. Although the uncorrected dscfm is not in the BURN output, it can be derived as follows:

1. Actual O₂ concentration in flue gases: 10.58% (by volume, dry) from BURN
2. O₂ concentration in ambient air: 20.9% (by volume, dry)
3. Convert flow rate in dscfm corrected to 7% O₂ to flow rate in dscfm at actual O₂ concentration:

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$$39,490.0 \text{ dscfm} \frac{(20.9\% - 7\% \text{ O}_2)}{@ 7\% \text{ O}_2} = 53,189 \text{ dscfm} \frac{(20.9\% - 10.58\% \text{ O}_2)}{@ \text{ actual O}_2}$$

The value of 53,189 dscfm at actual stack conditions is what was reported on the forms.

15. *What is the rationale of using emission data from 1987? The information provided in Appendix E referred to tests conducted in 1987.*

Response: As explained in the response to Question No. 1, above, the only available test data for the Facility for SO₂, VOC, H₂SO₄, fluorides and beryllium is from the 1987 acceptance test, demonstrating compliance with the Facility's Power Plant Site Certification conditions. The permit conditions contained in the Facility's Site Certification and PSD permit do not require the Facility to test annually for pollutants other than PM. Consequently, the 1987 emissions data was used as representative of all emissions.

The following were questions/comments posed by HCEPC:

1. *In Volume II, page 2-17 HCSWD requested an expanded definition of municipal solid waste (MSW) authorized to be burned at the facility. The permit, when issued, should contain a strict definition of materials authorized for combustion. Some of the wastes proposed by the applicant constitute industrial waste and segregated wastes. We feel strongly that this definition must not be too broad.*

Response: See response to DEP question number 7. With regard to segregated wastes, EPA clearly recognizes single-item waste streams as being in the realm of Municipal Solid Waste. In Section IV part A. of the preamble to the E.G., EPA states that "*Municipal Solid Waste is defined as either a mixture or single-item (emphasis added) waste stream of household, commercial, and/or institutional discards. This would include materials such as paper, yard waste, plastics, leather, rubber glass, metals and other combustible and noncombustible materials*". The preamble goes on to state "*The final MSW definition does not include used motor oil; sewage sludge; wood pallets; construction; renovation; and demolition wastes(including but not limited to railroad ties and telephone poles); clean wood; industrial process or manufacturing wastes; medical waste; or motor vehicles. Although these wastes are not MSW, they can be intermixed with MSW and can be combusted in MSW plants. The regulations do not prohibit their combustion.*" (emphasis added).

2. *HCSWRF seems to meet the definition of "incinerator" used in 40 CFR 61 Subpart C, the Beryllium NESHP. Therefore, this NESHP would be applicable to them.*

Response: Hillsborough County agrees. Page 2-10 of Volume II of the County's application states that the County's Facility is subject to the NESHP Subpart C and has proposed a

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Beryllium emission limitation which is more restrictive than the emission limit under NESHAP Subpart C.

- The "Proposed Permit Emission Limit" column has the superscript "7" _____ of the pollutant emission limits. The note that goes along with the number "7" implies the emission limit compliance date is revised to the year 2002. The August 1997 Federal Register does revise the limit and compliance date, but only for lead, sulfur dioxide, and hydrogen chloride (and the limit for nitrogen oxides, but not the date). The compliance date of December 19, 2000 remains in effect for the other emission limits specified in Subpart Cb. Note: According to the construction schedule proposed showing acceptance testing in September - October 2000, HCSWRF should be able to comply with the dates.*

Response: Hillsborough County is proposing to meet all EG limitations as revised by the August 1997 Federal Register, as of the year 2000 (no later than December 19, 2000) including the limitation for NO_x which is slightly less restrictive than the original EG published in December, 1995.

- HCSWRF is also asking to use Method 22 for testing for the fugitive emissions from ash handling rather than Method 9. This really refers to uncontrolled emissions and Method 22 may not be appropriate.*

Response: EPA is very clear that Method 22 is appropriate to use to detect visible emissions from ash handling facilities. Appendix A to the Emission Guidelines contains frequently asked questions and their answers. Page A-12 clarifies that it is fugitive ash emissions that are being monitored.

- Finally, HCSWRF is also asking to reassure the amount of waste combusted based on steam flow versus actual tonnage, an issue that has been contentious in the past. We oppose this since there is not good correlation to heat input and fuel input.*

Response: We find this comment curious since EPC went on record in a memorandum dated July 25, 1994, from Mr. Jerry Campbell of HCEPC to Ms. Teresa Heron of FDEP indicating that with regard to a surrogate means of monitoring the amount of waste burned, HCEPC "was receptive to the request to use steam flow..." That same memorandum goes on to acknowledge that "EPA has proposed to usesteam flows in their proposed NSPS."

EPA has in fact recognized using steam or feedwater flows as the most appropriate means by which to measure/monitor MWC load. 40 CFR Part 60.58b(i)6 states "...to determine compliance with load level requirements under Section 60.53b(b). (i) 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

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kilograms per hour on a continuous basis; and record the output of the monitor. Steam (or feedwater) flow shall be calculated in 4-hour block arithmetic averages"

Hillsborough County's request to use steamflow to monitor combustor load is consistent with the requirements of the EG.

6. *Provide complete design calculations for pollution control equipment. These should include component sizes, feed rates, flow rates, reaction rates, assumptions, and references to support parameters used.*

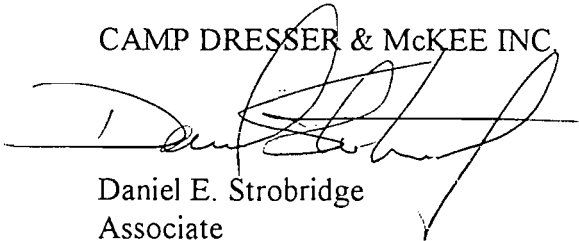
Response: See response to DEP question no. 8. Hillsborough County would be pleased to provide HCEPC a complete copy of Environmental Elements Corporation's (the APC vendor) proposal if necessary.

7. *In the letter from Al Linero to Mayor Greco, City of Tampa, regarding the McKay Bay Facility and dated October 14, 1997, Numbers 1, 5, and 7 are applicable to this project.*

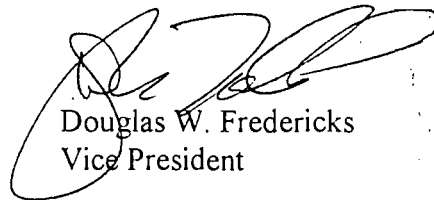
Response: These have been addressed above. If you have any question or comment, do not hesitate to call me.

Sincerely,

CAMP DRESSER & MCKEE INC



Daniel E. Strobridge
Associate



Douglas W. Fredericks
Vice President

- c: Teresa Heron, DEP
Jerry Campbell, HCEPC
Steve Palmer, DEP
Thomas Smith, HCSWMD
Don Elias, RTP
Martha Chumbler, Carlton Fields

SWD
File

EXHIBIT 1

**HILLSBOROUGH COUNTY SOLID WASTE ENERGY RECOVERY FACILITY
STACK TEST DATA SUMMARY
Particulate Matter (in lb/hr)**

		Year of Stack Test									
		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Unit 1	Run 1	1.40	1.53	0.97	5.56	2.9	4.50	0.59	1.79	1.43	0.391
	Run 2	1.59	1.53	1.43	4.19	3.2	3.61	1.05	1.94	1.54	0.894
	Run 3	1.31	1.53	1.25	6.10	2.9	3.77	1.38	2.64	1.91	0.805
Unit 2	Run 1	2.25	1.70	1.72	3.02	2.4	1.44	2.35	1.21	1.25	0.834
	Run 2	1.54	3.05	1.54	2.83	1.9	1.25	2.43	1.55	1.73	0.727
	Run 3	1.52	1.24	1.68	4.61	1.9	0.872	1.97	1.61	1.57	0.81
Unit 3	Run 1	1.29	1.88	1.59	4.74	2.0	2.0	2.37	1.53	1.67	0.788
	Run 2	0.52	2.17	1.01	4.07	1.8	1.55	2.19	2.38	1.46	0.794
	Run 3	1.06	1.96	1.26	4.44	2.0	2.31	2.75	1.64	1.78	0.867
Test Series Averages:											
	Unit 1	1.43	1.53	1.22	5.28	3.0	3.96	1.01	2.12	1.63	0.70
	Unit 2	1.77	2.00	1.65	3.49	2.1	1.19	2.25	1.46	1.52	0.79
	Unit 3	0.96	2.00	1.29	4.42	1.9	1.96	2.44	1.85	1.64	0.82
Facility Total:		4.16	5.53	4.15	13.19	7.0	7.10	5.69	5.43	4.78	2.30

Annual Facility availability:	95.0%	
Highest two years of Facility stack test data:	lb/hr	Estimated ton/year
	13.19	54.87
	7.10	29.56

Statistics	Individual Run Results			Test Series Averages		
	lb/hr/run	lb/hr	ton/year	b/hr/serie	lb/hr	ton/year
Overall Average	1.98	5.93	24.69	1.98	5.93	24.69
Standard Deviation	1.12	—	—	1.08	—	—
Average + 2SD	4.22	12.66	52.66	4.14	12.42	51.68

**HILLSBOROUGH COUNTY SOLID WASTE
ENERGY RECOVERY FACILITY
STACK TEST DATA SUMMARY
SO₂ (in lb/hr)**

		Year of Stack Test 1987
Unit 1	Run 1	75.4
	Run 2	45.6
	Run 3	43.7
Unit 2	Run 1	NA
	Run 2	NA
	Run 3	NA
Unit 3	Run 1	NA
	Run 2	NA
	Run 3	NA
Test Series Averages:		
	Unit 1	54.9
	Unit 2	NA
	Unit 3	NA
Facility Total:		164.7 (single unit times 3)

Annual Facility availability:	95.0%	
Highest two years of Facility stack test data:	lb/hr	Estimated ton/year
	164.7	685.3
	NA	NA

Statistics	Individual Run Results		
	lb/hr/run	lb/hr	Equiv. Facility Total ton/year
Overall Average	54.9	164.7	685.3
Standard Deviation	17.8	--	--
Average + 2SD	90.5	271.4	1129.2

**HILLSBOROUGH COUNTY SOLID WASTE
ENERGY RECOVERY FACILITY
STACK TEST DATA SUMMARY
NOx (in lb/hr)**

		Year of Stack Test	
		1987	1994
Unit 1	Run 1	93.8	NA
	Run 2	88.6	NA
	Run 3	80.7	NA
Unit 2	Run 1	81.5	97.5
	Run 2	89.8	100.6
	Run 3	85.5	93.2
Unit 3	Run 1	81.7	89.1
	Run 2	79.8	93.4
	Run 3	89.6	95.5
Test Series Averages:			
	Unit 1	87.7	NA
	Unit 2	85.6	97.1
	Unit 3	83.7	92.7
Facility Total:		169.3	284.7
		(adjusted for 3 units)	

Annual Facility availability:	95.0%	
Highest two years of Facility stack test data:	lb/hr	Estimated ton/year
	284.7	1184.4
	169.3	704.5

Statistics	Individual Run Results			Test Series Averages		
	lb/hr/run	Equiv. Facility Total		lb/hr/serie	Equiv. Facility Total	
		lb/hr	ton/year		lb/hr	ton/year
Overall Average	89.4	268.1	1115.4	89.4	268.1	1115.4
Standard Deviation	6.5	---	---	5.5	---	---
Average + 2SD	102.3	306.8	1276.6	100.3	300.9	1252.0

**HILLSBOROUGH COUNTY SOLID WASTE
 ENERGY RECOVERY FACILITY
 STACK TEST DATA SUMMARY**
 Lead (in lb/hr)

		Year of Stack Test 1987
Unit 1	Run 1	0.064
	Run 2	0.007
	Run 3	0.058
Unit 2	Run 1	NA
	Run 2	NA
	Run 3	NA
Unit 3	Run 1	NA
	Run 2	NA
	Run 3	NA
Test Series Averages:		
	Unit 1	0.043
	Unit 2	NA
	Unit 3	NA
Facility Total:		0.129 (single unit times 3)

Annual Facility availability:	95.0%	
Highest two years of Facility stack test data:	lb/hr	Estimated ton/year
	0.129	0.54
	NA	NA

Statistics	Individual Run Results		
	lb/hr/run	Equiv. Facility Total lb/hr ton/year	
Overall Average	0.043	0.129	0.54
Standard Deviation	0.031	---	---
Average + 2SD	0.106	0.317	1.32

**HILLSBOROUGH COUNTY SOLID WASTE
ENERGY RECOVERY FACILITY
STACK TEST DATA SUMMARY
Fluorides (in lb/hr)**

		Year of Stack Test 1987
Unit 1	Run 1	0.496
	Run 2	0.533
	Run 3	0.752
Unit 2	Run 1	NA
	Run 2	NA
	Run 3	NA
Unit 3	Run 1	NA
	Run 2	NA
	Run 3	NA
Test Series Averages:		
	Unit 1	0.594
	Unit 2	NA
	Unit 3	NA
Facility Total:		1.781 (single unit times 3)

Annual Facility availability:	95.0%	
Highest two years of Facility stack test data:	lb/hr	Estimated ton/year
	1.781	7.41
	NA	NA

Statistics	Individual Run Results		
	lb/hr/run	lb/hr	ton/year
Overall Average	0.594	1.781	7.41
Standard Deviation	0.138	---	---
Average + 2SD	0.870	2.611	10.87

**HILLSBOROUGH COUNTY SOLID WASTE
ENERGY RECOVERY FACILITY
STACK TEST DATA SUMMARY
Sulfuric Acid Mist (in lb/hr)**

		Year of Stack Test 1987
Unit 1	Run 1	28.4
	Run 2	20.4
	Run 3	19.4
Unit 2	Run 1	NA
	Run 2	NA
	Run 3	NA
Unit 3	Run 1	NA
	Run 2	NA
	Run 3	NA
Test Series Averages:		
	Unit 1	22.73
	Unit 2	NA
	Unit 3	NA
Facility Total:		68.20 (single unit times 3)

Annual Facility availability:	95.0%	
Highest two years of Facility stack test data:	lb/hr	Estimated ton/year
	68.20	283.8
	NA	NA

Statistics	Individual Run Results		
	lb/hr/run	lb/hr	ton/year
Overall Average	22.73	68.20	283.78
Standard Deviation	4.93	---	---
Average + 2SD	32.60	97.80	406.93

**HILLSBOROUGH COUNTY SOLID WASTE
ENERGY RECOVERY FACILITY
STACK TEST DATA SUMMARY
Mercury (in lb/hr)**

		Year of Stack Test			
		1987	1994	1995	1996
Unit 1	Run 1	0.193	0.0244	0.0250	0.04424
	Run 2	0.070	0.0181	0.0223	0.02204
	Run 3	0.064	0.0193	0.0209	0.03295
Unit 2	Run 1	NA	0.0307	0.0127	0.03917
	Run 2	NA	0.0139	0.0405	0.03002
	Run 3	NA	0.0216	0.0252	0.03409
Unit 3	Run 1	NA	0.0158	0.0157	0.0459
	Run 2	NA	0.0428	0.0223	0.03976
	Run 3	NA	0.0190	0.0205	0.02297
Test Series Averages:					
	Unit 1	0.109	0.0206	0.0227	0.0331
	Unit 2	NA	0.0221	0.0261	0.0344
	Unit 3	NA	0.0259	0.0195	0.0362
Facility Total:					
		0.327	0.0685	0.0684	0.1037
		(single unit times 3)			

Annual Facility availability:	95.0%	
Highest two years of Facility stack test data:	lb/hr	Estimated ton/year
	0.327	1.359
	0.104	0.432

Statistics	Individual Run Results			Test Series Averages		
	lb/hr/run	Equiv. Facility Total		lb/hr/serie	Equiv. Facility Total	
		lb/hr	ton/year		lb/hr	ton/year
Overall Average	0.035	0.105	0.436	0.035	0.105	0.436
Standard Deviation	0.033	—	—	0.027	—	—
Average + 2SD	0.101	0.302	1.257	0.088	0.265	1.101

**HILLSBOROUGH COUNTY SOLID WASTE
ENERGY RECOVERY FACILITY
STACK TEST DATA SUMMARY
CO (in lb/hr)**

		Year of Stack Test
		1987
Unit 1	Run 1	2.36
	Run 2	2.84
	Run 3	2.06
Unit 2	Run 1	3.35
	Run 2	2.71
	Run 3	2.85
Unit 3	Run 1	1.66
	Run 2	1.65
	Run 3	1.69
Test Series Averages:		
	Unit 1	2.42
	Unit 2	2.97
	Unit 3	1.67
Facility Total:		7.06

Annual Facility availability:	95.0%	
Highest two years of Facility stack test data:	lb/hr	Estimated ton/year
	7.06	29.4
	NA	NA

Statistics	Individual Run Results			Test Series Averages		
	lb/hr/run	Equiv. Facility Total		b/hr/serie	Equiv. Facility Total	
		lb/hr	ton/year		lb/hr	ton/year
Overall Average	2.35	7.06	29.4	2.35	7.06	29.4
Standard Deviation	0.62	---	---	0.65	---	---
Average + 2SD	3.60	10.79	44.9	3.66	10.98	45.7

**HILLSBOROUGH COUNTY SOLID WASTE
ENERGY RECOVERY FACILITY
STACK TEST DATA SUMMARY
VOC (in lb/hr)**

		Year of Stack Test 1987
Unit 1	Run 1	21.4
	Run 2	16.6
	Run 3	18.1
Unit 2	Run 1	33.8
	Run 2	17.3
	Run 3	15.2
Unit 3	Run 1	5.7
	Run 2	28.9
	Run 3	45.8
Test Series Averages:		
	Unit 1	18.70
	Unit 2	22.10
	Unit 3	26.80
Facility Total:		67.60

*Based on April, 1987
0.06 gr/dscf vs 0.01 gr/dscf
Test in June, 1987 → 0.0017*

Annual Facility availability:	95.0%	
Highest two years of Facility stack test data:	lb/hr	Estimated ton/year
	67.60	281.3
	NA	NA

Statistics	Individual Run Results			Test Series Averages		
	lb/hr/run	Equiv. Facility Total lb/hr	ton/year	b/hr/serie	Equiv. Facility Total lb/hr	ton/year
Overall Average	22.53	67.60	281.3	22.53	67.60	281.3
Standard Deviation	11.88	---	---	4.07	---	---
Average + 2SD	46.30	138.89	577.9	30.67	92.00	382.8

**HILLSBOROUGH COUNTY SOLID WASTE
ENERGY RECOVERY FACILITY
STACK TEST DATA SUMMARY
Beryllium (in lb/hr)**

		Year of Stack Test 1987	
Unit 1	Run 1	<	1.65E-05
	Run 2	<	1.65E-05
	Run 3	<	1.65E-05
Unit 2	Run 1		NA
	Run 2		NA
	Run 3		NA
Unit 3	Run 1		NA
	Run 2		NA
	Run 3		NA
Test Series Averages:			
	Unit 1	<	1.65E-05
	Unit 2		NA
	Unit 3		NA
Facility Total:		<	4.95E-05 (single unit times 3)

Annual Facility availability:	95.0%	
Highest two years of Facility stack test data:	lb/hr	Estimated ton/year
	4.95E-05	2.06E-04
	NA	NA

Statistics	Individual Run Results		
	lb/hr/run		Equiv. Facility Total lb/hr ton/year
Overall Average	1.65E-05	<	4.95E-05 2.06E-04
Standard Deviation	0.00E+00		--- ---
Average + 2SD	1.65E-05	<	4.95E-05 2.06E-04

**HILLSBOROUGH COUNTY SOLID WASTE
ENERGY RECOVERY FACILITY
STACK TEST DATA SUMMARY**

Total Dioxins and Furans (PCDD/PCDF) (in lb/hr)

		Year of Stack Test 1994
Unit 1	Run 1	2.83E-05
	Run 2	2.21E-05
	Run 3	2.16E-05
Unit 2	Run 1	NA
	Run 2	NA
	Run 3	NA
Unit 3	Run 1	NA
	Run 2	NA
	Run 3	NA
Test Series Averages:		
	Unit 1	2.40E-05
	Unit 2	NA
	Unit 3	NA
Facility Total:		7.20E-05 (single unit times 3)

Annual Facility availability:	95.0%						
Highest two years of Facility stack test data:	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>lb/hr</th> <th>Estimated ton/year</th> </tr> </thead> <tbody> <tr> <td>7.20E-05</td> <td>3.00E-04</td> </tr> <tr> <td>NA</td> <td>NA</td> </tr> </tbody> </table>	lb/hr	Estimated ton/year	7.20E-05	3.00E-04	NA	NA
lb/hr	Estimated ton/year						
7.20E-05	3.00E-04						
NA	NA						

Statistics	Individual Run Results		
	lb/hr/run	Equiv. Facility Total lb/hr ton/year	
Overall Average	2.40E-05	7.20E-05	3.00E-04
Standard Deviation	3.75E-06	---	---
Average + 2SD	3.15E-05	9.45E-05	3.93E-04

**HILLSBOROUGH COUNTY SOLID WASTE ENERGY RECOVERY FACILITY
 STACK TEST DATA SUMMARY
 Facility Totals for All Pollutants (tons/year)**

	Highest 2 Years 1st High 2nd High		Statistics		
			Overall Average	Average + 2 Std. Dev.	
				Individual Runs	Test Series Averages
PM	54.9	29.6	24.7	52.7	51.7
SO ₂	685.3	NA	685.3	1129.2	NA
NO _x	1184.4	704.5	1115.4	1276.6	1252.0
Lead	0.54	NA	0.54	1.32	NA
Fluorides	7.41	NA	7.41	10.9	NA
Sulfuric Acid Mist	283.8	NA	283.8	406.9	NA
Mercury	1.36	0.43	0.44	1.26	1.10
CO	29.4	NA	29.4	44.9	45.7
VOC	281.3	NA	281.3	577.9	382.8
Beryllium	2.06E-04	NA	2.06E-04	2.06E-04	NA
PCDD/PCDF	3.00E-04	NA	3.00E-04	3.93E-04	NA

Note: Test data was collected as lb/hr. Ton/yr is based on 95% availability, or about 8322 hours of operation per year.

EXHIBIT 2

Table 1										
Calculated Future Potential Sulfur Dioxide Emission Rates										
Hillsborough County Solid Waste Energy Recovery Facility										
	Cases (Percent of Nominal Load / Waste Heat Content in Btu/lb)									
	Case #3	Case #7	Nominal	Case #10	Case #2	Case #5	Case #9	Case #1	Case #4	Case #8
	115%	115%	100%	97%	80%	80%	80%	60%	60%	60%
	6,000 Btu/lb	4,500 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb
Parameters										
Stack Gas Flow (dscfm @ 7% O2) per unit	39490.0	39875.3	34674.1	33351.4	27469.6	27739.3	27469.6	20599.0	20804.5	20605.4
Normalized Emission Rate (g/s)	1.14	1.15	1.00	0.96	0.79	0.80	0.79	0.59	0.60	0.59
Heat Release (3 units) (MMBtu/hr)	517.5	517.5	450.0	437.0	360.0	360.0	360.0	270.0	270.0	270.0
Waste Throughput (3 units) (tpd)	1035.0	1380.0	1200	1380.0	720.0	960.0	1136.8	540.0	720.0	852.6
SO2 Emission Rates (3 units)										
g/s	12.30	12.42	10.80	10.38	8.55	8.64	8.55	6.41	6.48	6.42
lb/MMBtu	0.189	0.190	0.190	0.189	0.189	0.190	0.189	0.189	0.190	0.189
lb/hr	97.6	98.6	85.7	82.4	67.9	68.6	67.9	50.9	51.4	50.9
ton/yr	427.5	431.7	375.4	361.1	297.4	300.3	297.4	223.0	225.2	223.1

NOx

Table 2
Calculated Future Potential Nitrogen Oxide Emission Rates
Hillsborough County Solid Waste Energy Recovery Facility

	Cases (Percent of Nominal Load / Waste Heat Content in Btu/lb)									
	Case #3	Case #7	Nominal	Case #10	Case #2	Case #5	Case #9	Case #1	Case #4	Case #8
	115%	115%	100%	97%	80%	80%	80%	60%	60%	60%
	6,000 Btu/lb	4,500 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb
Parameters										
Stack Gas Flow (dscfm @ 7% O2) per unit	39490.0	39875.3	34674.1	33351.4	27469.6	27739.3	27469.6	20599.0	20804.5	20605.4
Normalized Emission Rate (g/s)	1.14	1.15	1.00	0.96	0.79	0.80	0.79	0.59	0.60	0.59
Heat Release (3 units) (MMBtu/hr)	517.5	517.5	450.0	437.0	360.0	360.0	360.0	270.0	270.0	270.0
Waste Throughput (3 units) (tpd)	1035.0	1380.0	1200	1380.0	720.0	960.0	1136.8	540.0	720.0	852.6
NOx Emission Rates (3 units)										
g/s	21.94	22.15	19.26	18.53	15.26	15.41	15.26	11.44	11.56	11.45
lb/MMBtu	0.337	0.340	0.340	0.337	0.337	0.340	0.337	0.336	0.340	0.337
lb/hr	174.2	175.9	152.9	147.1	121.1	122.3	121.1	90.8	91.7	90.9
ton/yr	762.8	770.2	669.8	644.2	530.6	535.8	530.6	397.9	401.9	398.0

Table 3										
Calculated Future Potential Carbon Monoxide Emission Rates										
Hillsborough County Solid Waste Energy Recovery Facility										
	Cases (Percent of Nominal Load / Waste Heat Content in Btu/lb)									
	Case #3	Case #7	Nominal	Case #10	Case #2	Case #5	Case #9	Case #1	Case #4	Case #8
	115%	115%	100%	97%	80%	80%	80%	60%	60%	60%
	6,000 Btu/lb	4,500 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb
Parameters										
Stack Gas Flow (dscfm @ 7% O ₂) per unit	39490.0	39875.3	34674.1	33351.4	27469.6	27739.3	27469.6	20599.0	20804.5	20605.4
Normalized Emission Rate (g/s)	1.14	1.15	1.00	0.96	0.79	0.80	0.79	0.59	0.60	0.59
Heat Release (3 units) (MMBtu/hr)	517.5	517.5	450.0	437.0	360.0	360.0	360.0	270.0	270.0	270.0
Waste Throughput (3 units) (tpd)	1035.0	1380.0	1200	1380.0	720.0	960.0	1136.8	540.0	720.0	852.6
CO Emission Rates (3 units)										
g/s	6.52	6.58	5.72	5.50	4.53	4.58	4.53	3.40	3.43	3.40
lb/MMBtu	0.100	0.101	0.101	0.100	0.100	0.101	0.100	0.100	0.101	0.100
lb/hr	51.7	52.2	45.4	43.7	36.0	36.3	36.0	27.0	27.2	27.0
ton/yr	226.6	228.8	198.9	191.3	157.6	159.1	157.6	118.2	119.4	118.2

Table 4										
Calculated Future Potential Particulate Matter Less Than 10 Microns Emission Rates										
Hillsborough County Solid Waste Energy Recovery Facility										
	Cases (Percent of Nominal Load / Waste Heat Content in Btu/lb)									
	Case #3	Case #7	Nominal	Case #10	Case #2	Case #5	Case #9	Case #1	Case #4	Case #8
	115%	115%	100%	97%	80%	80%	80%	60%	60%	60%
	6,000 Btu/lb	4,500 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb
Parameters										
Stack Gas Flow (dscfm @ 7% O2) per unit	39490.0	39875.3	34674.1	33351.4	27469.6	27739.3	27469.6	20599.0	20804.5	20605.4
Normalized Emission Rate (g/s)	1.14	1.15	1.00	0.96	0.79	0.80	0.79	0.59	0.60	0.59
Heat Release (3 units) (MMBtu/hr)	517.5	517.5	450.0	437.0	360.0	360.0	360.0	270.0	270.0	270.0
Waste Throughput (3 units) (tpd)	1035.0	1380.0	1200	1380.0	720.0	960.0	1136.8	540.0	720.0	852.6
PM10 Emission Rates (3 units)										
g/s	1.54	1.55	1.35	1.30	1.07	1.08	1.07	0.80	0.81	0.80
lb/MMBtu	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024
lb/hr	12.2	12.3	10.7	10.3	8.5	8.6	8.5	6.4	6.4	6.4
ton/yr	53.4	53.9	46.9	45.1	37.1	37.5	37.1	27.9	28.1	27.9

Table 5
Calculated Future Potential Dioxin/Furan Emission Rates
Hillsborough County Solid Waste Energy Recovery Facility

	Cases (Percent of Nominal Load / Waste Heat Content in Btu/lb)									
	Case #3	Case #7	Nominal	Case #10	Case #2	Case #5	Case #9	Case #1	Case #4	Case #8
	115%	115%	100%	97%	80%	80%	80%	60%	60%	60%
	6,000 Btu/lb	4,500 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb
Parameters										
Stack Gas Flow (dscfm @ 7% O2) per unit	39490.0	39875.3	34674.1	33351.4	27469.6	27739.3	27469.6	20599.0	20804.5	20605.4
Normalized Emission Rate (g/s)	1.14	1.15	1.00	0.96	0.79	0.80	0.79	0.59	0.60	0.59
Heat Release (3 units) (MMBtu/hr)	517.5	517.5	450.0	437.0	360.0	360.0	360.0	270.0	270.0	270.0
Waste Throughput (3 units) (tpd)	1035.0	1380.0	1200	1380.0	720.0	960.0	1136.8	540.0	720.0	852.6
PCDD/PCDF Emission Rates (3 units)										
g/s	1.68E-06	1.69E-06	1.47E-06	1.42E-06	1.17E-06	1.18E-06	1.17E-06	8.75E-07	8.84E-07	8.75E-07
lb/MMBtu	2.57E-08	2.60E-08	2.60E-08	2.57E-08	2.57E-08	2.60E-08	2.57E-08	2.57E-08	2.60E-08	2.57E-08
lb/hr	1.33E-05	1.34E-05	1.17E-05	1.12E-05	9.26E-06	9.35E-06	9.26E-06	6.95E-06	7.02E-06	6.95E-06
ton/yr	5.83E-05	5.89E-05	5.12E-05	4.93E-05	4.06E-05	4.10E-05	4.06E-05	3.04E-05	3.07E-05	3.04E-05

Table 6										
Calculated Future Potential Mercury Emission Rates										
Hillsborough County Solid Waste Energy Recovery Facility										
	Cases (Percent of Nominal Load / Waste Heat Content in Btu/lb)									
	Case #3	Case #7	Nominal	Case #10	Case #2	Case #5	Case #9	Case #1	Case #4	Case #8
	115%	115%	100%	97%	80%	80%	80%	60%	60%	60%
	6,000 Btu/lb	4,500 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb
Parameters										
Stack Gas Flow (dscfm @ 7% O2) per unit	39490.0	39875.3	34674.1	33351.4	27469.6	27739.3	27469.6	20599.0	20804.5	20605.4
Normalized Emission Rate (g/s)	1.14	1.15	1.00	0.96	0.79	0.80	0.79	0.59	0.60	0.59
Heat Release (3 units) (MMBtu/hr)	517.5	517.5	450.0	437.0	360.0	360.0	360.0	270.0	270.0	270.0
Waste Throughput (3 units) (tpd)	1035.0	1380.0	1200	1380.0	720.0	960.0	1136.8	540.0	720.0	852.6
Hg Emission Rates (3 units)										
g/s	7.55E-03	7.62E-03	6.63E-03	6.38E-03	5.25E-03	5.30E-03	5.25E-03	3.94E-03	3.98E-03	3.94E-03
lb/MMBtu	1.16E-04	1.17E-04	1.17E-04	1.16E-04	1.16E-04	1.17E-04	1.16E-04	1.16E-04	1.17E-04	1.16E-04
lb/hr	5.99E-02	6.05E-02	5.26E-02	5.06E-02	4.17E-02	4.21E-02	4.17E-02	3.13E-02	3.16E-02	3.13E-02
ton/yr	2.63E-01	2.65E-01	2.30E-01	2.22E-01	1.83E-01	1.84E-01	1.83E-01	1.37E-01	1.38E-01	1.37E-01

Table 7										
Calculated Future Potential Cadmium Emission Rates										
Hillsborough County Solid Waste Energy Recovery Facility										
	Cases (Percent of Nominal Load / Waste Heat Content in Btu/lb)									
	Case #3	Case #7	Nominal	Case #10	Case #2	Case #5	Case #9	Case #1	Case #4	Case #8
	115%	115%	100%	97%	80%	80%	80%	60%	60%	60%
	6,000 Btu/lb	4,500 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb
Parameters										
Stack Gas Flow (dscfm @ 7% O2) per unit	39490.0	39875.3	34674.1	33351.4	27469.6	27739.3	27469.6	20599.0	20804.5	20605.4
Normalized Emission Rate (g/s)	1.14	1.15	1.00	0.96	0.79	0.80	0.79	0.59	0.60	0.59
Heat Release (3 units) (MMBtu/hr)	517.5	517.5	450.0	437.0	360.0	360.0	360.0	270.0	270.0	270.0
Waste Throughput (3 units) (tpd)	1035.0	1380.0	1200	1380.0	720.0	960.0	1136.8	540.0	720.0	852.6
Cd Emission Rates (3 units)										
g/s	0.0022	0.0023	0.0020	0.0019	0.0016	0.0016	0.0016	0.0012	0.0012	0.0012
lb/MMBtu	3.43E-05	3.47E-05	3.47E-05	3.43E-05	3.43E-05	3.47E-05	3.43E-05	3.43E-05	3.47E-05	3.43E-05
lb/hr	0.018	0.018	0.016	0.015	0.012	0.012	0.012	0.009	0.009	0.009
ton/yr	0.078	0.079	0.068	0.066	0.054	0.055	0.054	0.041	0.041	0.041

Table 8										
Calculated Future Potential Lead Emission Rates										
Hillsborough County Solid Waste Energy Recovery Facility										
	Cases (Percent of Nominal Load / Waste Heat Content in Btu/lb)									
	Case #3	Case #7	Nominal	Case #10	Case #2	Case #5	Case #9	Case #1	Case #4	Case #8
	115%	115%	100%	97%	80%	80%	80%	60%	60%	60%
	6,000 Btu/lb	4,500 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb
Parameters										
Stack Gas Flow (dscfm @ 7% O2) per unit	39490.0	39875.3	34674.1	33351.4	27469.6	27739.3	27469.6	20599.0	20804.5	20605.4
Normalized Emission Rate (g/s)	1.14	1.15	1.00	0.96	0.79	0.80	0.79	0.59	0.60	0.59
Heat Release (3 units) (MMBtu/hr)	517.5	517.5	450.0	437.0	360.0	360.0	360.0	270.0	270.0	270.0
Waste Throughput (3 units) (tpd)	1035.0	1380.0	1200	1380.0	720.0	960.0	1136.8	540.0	720.0	852.6
Pb Emission Rates (3 units)										
g/s	0.0246	0.0248	0.0216	0.0208	0.0171	0.0173	0.0171	0.0128	0.0130	0.0128
lb/MMBtu	3.77E-04	3.81E-04	3.81E-04	3.77E-04	3.77E-04	3.81E-04	3.77E-04	3.77E-04	3.81E-04	3.77E-04
lb/hr	0.195	0.197	0.171	0.165	0.136	0.137	0.136	0.102	0.103	0.102
ton/yr	0.855	0.864	0.751	0.722	0.595	0.601	0.595	0.446	0.451	0.446

Table 9
Calculated Future Potential Hydrogen Chloride Emission Rates
Hillsborough County Solid Waste Energy Recovery Facility

	Cases (Percent of Nominal Load / Waste Heat Content in Btu/lb)									
	Case #3	Case #7	Nominal	Case #10	Case #2	Case #5	Case #9	Case #1	Case #4	Case #8
	115%	115%	100%	97%	80%	80%	80%	60%	60%	60%
	6,000 Btu/lb	4,500 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb
Parameters										
Stack Gas Flow (dscfm @ 7% O2) per unit	39490.0	39875.3	34674.1	33351.4	27469.6	27739.3	27469.6	20599.0	20804.5	20605.4
Normalized Emission Rate (g/s)	1.14	1.15	1.00	0.96	0.79	0.80	0.79	0.59	0.60	0.59
Heat Release (3 units) (MMBtu/hr)	517.5	517.5	450.0	437.0	360.0	360.0	360.0	270.0	270.0	270.0
Waste Throughput (3 units) (tpd)	1035.0	1380.0	1200	1380.0	720.0	960.0	1136.8	540.0	720.0	852.6
HCl Emission Rates (3 units)										
g/s	6.36	6.42	5.59	5.37	4.42	4.47	4.42	3.32	3.35	3.32
lb/MMBtu	0.098	0.099	0.099	0.098	0.098	0.099	0.098	0.098	0.099	0.098
lb/hr	50.5	51.0	44.3	42.6	35.1	35.5	35.1	26.3	26.6	26.3
ton/yr	221.2	223.3	194.2	186.8	153.8	155.4	153.8	115.4	116.5	115.4

Table 10
Calculated Future Potential Hydrogen Fluoride Emission Rates
Hillsborough County Solid Waste Energy Recovery Facility

	Cases (Percent of Nominal Load / Waste Heat Content in Btu/lb)									
	Case #3	Case #7	Nominal	Case #10	Case #2	Case #5	Case #9	Case #1	Case #4	Case #8
	115%	115%	100%	97%	80%	80%	80%	60%	60%	60%
	6,000 Btu/lb	4,500 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb
Parameters										
Stack Gas Flow (dscfm @ 7% O2) per unit	39490.0	39875.3	34674.1	33351.4	27469.6	27739.3	27469.6	20599.0	20804.5	20605.4
Normalized Emission Rate (g/s)	1.14	1.15	1.00	0.96	0.79	0.80	0.79	0.59	0.60	0.59
Heat Release (3 units) (MMBtu/hr)	517.5	517.5	450.0	437.0	360.0	360.0	360.0	270.0	270.0	270.0
Waste Throughput (3 units) (tpd)	1035.0	1380.0	1200	1380.0	720.0	960.0	1136.8	540.0	720.0	852.6
HF Emission Rates (3 units)										
g/s	0.38	0.38	0.33	0.32	0.26	0.27	0.26	0.20	0.20	0.20
lb/MMBtu	0.0058	0.0059	0.0059	0.0058	0.0058	0.0059	0.0058	0.0058	0.0059	0.0058
lb/hr	3.0	3.0	2.6	2.5	2.1	2.1	2.1	1.6	1.6	1.6
ton/yr	13.1	13.3	11.5	11.1	9.1	9.2	9.1	6.9	6.9	6.9

Table 11

Calculated Future Potential Beryllium Emission Rates

Hillsborough County Solid Waste Energy Recovery Facility

	Cases (Percent of Nominal Load / Waste Heat Content in Btu/lb)									
	Case #3	Case #7	Nominal	Case #10	Case #2	Case #5	Case #9	Case #1	Case #4	Case #8
	115%	115%	100%	97%	80%	80%	80%	60%	60%	60%
	6,000 Btu/lb	4,500 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb
Parameters										
Stack Gas Flow (dscfm @ 7% O ₂) per unit	39490.0	39875.3	34674.1	33351.4	27469.6	27739.3	27469.6	20599.0	20804.5	20605.4
Normalized Emission Rate (g/s)	1.14	1.15	1.00	0.96	0.79	0.80	0.79	0.59	0.60	0.59
Heat Release (3 units) (MMBtu/hr)	517.5	517.5	450.0	437.0	360.0	360.0	360.0	270.0	270.0	270.0
Waste Throughput (3 units) (tpd)	1035.0	1380.0	1200	1380.0	720.0	960.0	1136.8	540.0	720.0	852.6
Be Emission Rates (3 units)										
g/s	8.19E-05	8.27E-05	7.19E-05	6.92E-05	5.70E-05	5.75E-05	5.70E-05	4.27E-05	4.31E-05	4.27E-05
lb/MMBtu	1.26E-06	1.27E-06	1.27E-06	1.26E-06	1.26E-06	1.27E-06	1.26E-06	1.26E-06	1.27E-06	1.26E-06
lb/hr	6.50E-04	6.56E-04	5.71E-04	5.49E-04	4.52E-04	4.57E-04	4.52E-04	3.39E-04	3.43E-04	3.39E-04
ton/yr	2.85E-03	2.88E-03	2.50E-03	2.40E-03	1.98E-03	2.00E-03	1.98E-03	1.49E-03	1.50E-03	1.49E-03

Table 12
Calculated Future Potential Ammonia Emission Rates
Hillsborough County Solid Waste Energy Recovery Facility

	Cases (Percent of Nominal Load / Waste Heat Content in Btu/lb)									
	Case #3	Case #7	Nominal	Case #10	Case #2	Case #5	Case #9	Case #1	Case #4	Case #8
	115%	115%	100%	97%	80%	80%	80%	60%	60%	60%
	6,000 Btu/lb	4,500 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb	6,000 Btu/lb	4,500 Btu/lb	3,800 Btu/lb
Parameters										
Stack Gas Flow (dscfm @ 7% O2) per unit	39490.0	39875.3	34674.1	33351.4	27469.6	27739.3	27469.6	20599.0	20804.5	20605.4
Normalized Emission Rate (g/s)	1.14	1.15	1.00	0.96	0.79	0.80	0.79	0.59	0.60	0.59
Heat Release (3 units) (MMBtu/hr)	517.5	517.5	450.0	437.0	360.0	360.0	360.0	270.0	270.0	270.0
Waste Throughput (3 units) (tpd)	1035.0	1380.0	1200	1380.0	720.0	960.0	1136.8	540.0	720.0	852.6
NH3 Emission Rates (3 units)										
g/s	1.98	2.00	1.74	1.67	1.38	1.39	1.38	1.03	1.04	1.03
lb/MMBtu	0.030	0.031	0.031	0.030	0.030	0.031	0.030	0.030	0.031	0.030
lb/hr	15.7	15.9	13.8	13.3	10.9	11.1	10.9	8.2	8.3	8.2
ton/yr	68.9	69.6	60.5	58.2	48.0	48.4	48.0	36.0	36.3	36.0

EXHIBIT 3

1997



'Home Safe Home'

HILLSBOROUGH COUNTY
HOUSEHOLD CHEMICAL COLLECTIONS

OPEN 9 A.M. TO 3 P.M. AT THESE LOCATIONS
ONLY ON THE DATES LISTED:

Town 'n Country Collection Site

9805 Sheldon Road (North Road Maintenance Unit)
Town 'n Country

Saturday, February 15
Saturday, April 12
Saturday, June 14

Saturday, August 16
Saturday, October 18
Saturday, December 13

Apollo Beach Collection Site

626 Golf & Sea Blvd. (beside the Fire Station)

Saturday, January 11
Saturday, March 15
Saturday, May 17

Saturday, July 12
Saturday, September 13
Saturday, November 15

Materials accepted include, but are not limited to:

Paints & Solvents, automotive products, household cleaners, pool chemicals,
household batteries, lawn & garden supplies and other potentially toxic substances
commonly found around the home & garden.

Materials not accepted include, but are not limited to:

Explosives, flares, radioactive material and bio-medical material.

**ABSOLUTELY NO COMMERCIAL WASTE ACCEPTED
AND HOUSEHOLD MATERIAL MAY BE LIMITED**

HILLSBOROUGH COUNTY SOLID WASTE MANAGEMENT DEPARTMENT
(813) 272-5680

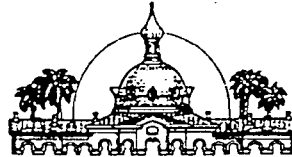
HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Daniel A. Kleman

BOARD OF COUNTY COMMISSIONERS

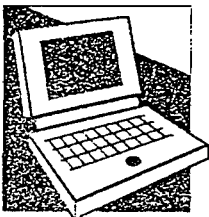
Dottie Berger
Joe Chillura
Chris Hart
Jim Norman
Jan Platt
Thomas Scott
Ed Turanchik



Deputy County Administrator
Patricia Bean

Assistant County Administrators
Edwin Hunzeker
Jimmie Keel

N O T I C E



Computers and computer equipment have been declared hazardous waste and it is not permissible for businesses to dispose of this type of waste with their municipal solid waste.

At present, homeowners are exempt from this restriction.

Computers can be recycled and there are several recyclers in the county who will buy, charge a collection fee or take the computers at no cost.

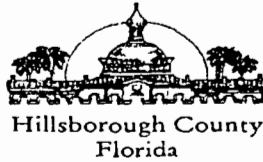
The names and phone numbers of some computer/computer equipment recyclers are listed below:

BAYTRONICS	237-0863
CREATIVE RECYCLING SYSTEMS	621-2319
F & M BAY ELECTRONICS CO.	621-8870
GLOBAL INVESTMENT COMPANY	620-1507

The names of these companies were obtained from the GTE yellow pages. Should you have any questions or require additional information, contact the Florida Department of Environmental Protection at 1-904-488-0300.

Solid Waste Management Department

Post Office Box 1110 • Tampa, Florida 33601
An Affirmative Action/Equal Opportunity Employer



Battery Ban

for

Rechargeable Nickel-Cadmium (Nicad) & Small Sealed Lead Acid (SSLA) Batteries

Effective March 7, 1997 rechargeable NICAD and SSLA batteries are banned from the waste stream!! The cadmium and lead contained in these batteries are toxic heavy metals. Everyone must take care to either recycle or properly dispose of these batteries when they are no longer usable.

Rechargeable batteries are most often found in:

- ✓ Cellular phones
- ✓ Portable electronics
- ✓ Laptop computers
- ✓ Video games
- ✓ Camcorders
- ✓ Drills
- ✓ Video recorders
- ✓ Portable power tools
- ✓ Portable medical equipment
- ✓ Toys
- ✓ Pagers
- ✓ Radios
- ✓ Flashlights

BOTH NICADS AND SSLAS COME IN A VARIETY OF SHAPES AND SIZES.

Look for the words "Cd.", "Ni-Cd" or "Nickel Cadmium" to identify NICADS.



Look for the words "Pb" or "Lead Acid" to identify SSLAs.



Both types of batteries usually have the word "rechargeable" and a recycling symbol somewhere on the battery.

TO RECYCLE RECHARGEABLE BATTERIES

Call 1-800- BATTERY (for NICADs) and 1-800-365-7777 (for SSLAs)

OR

Bring batteries to Hillsborough County's monthly Household Chemical Collections
Call 272-5680 for scheduled dates and times

Some RADIO SHACK, CIRCUIT CITY & WAL-MART stores also accept these batteries for recycling

Hillsborough County
Solid Waste Management Department

Hillsborough County Provides Two Recycling Bins to Make Separation Easy and Efficient...

GREEN BIN - Some Glass, Plastic & Aluminum Products

- **Plastic Bottles and Jugs — Resin Types 1 & 2**
If the item has a neck or a screw-on cap, it is probably a No. 1 or 2. Look for the symbol on the bottom of the item. Examples of acceptable plastic items include bottles for soda, water, juice, detergent, bleach and fabric softeners and plastic jugs for kitty litter.
No plastic bags.
- **Glass Bottles and Jars - all colors**
- **Steel (Tin) and Aluminum Cans**
Remove and discard lids, rinse all containers and crush plastic bottles and aluminum cans for easier storage.
No pie tins or foil wrap.

BLUE BIN - Paper Products

- **Newspaper and Newspaper Inserts**
May be in a brown paper bag or placed directly in the bin.
Remove plastic bags.
- **Magazines, Catalogs & Telephone Books**
- **Corrugated Cardboard Shipping Boxes**
Flatten and cut into sections of 3' x 3' or less. Place next to or in the bin.
No glossy or waxed cardboard, cereal or shoe boxes, soda, water or beer pack holders or pizza boxes. We are unable to accept these items.
- **Brown Paper Bags**
- **Mixed Office Paper**
Includes computer and fax paper.
- **Junk Mail**
Remove any plastic wrapping or non-paper items before placing in the bin.



Place bins at the curb by
6:00 A.M. on collection day!

NOTE: Household Batteries Will No Longer be Accepted in Recycling Bins.

Most household batteries (aka: Dry Cell) can now be disposed of with your normal household garbage. Rechargeable NICAD and SSLA batteries are banned from the waste stream and **CANNOT** be disposed of with your normal household garbage.

**Hillsborough County's
recycling program.**

It's easy!

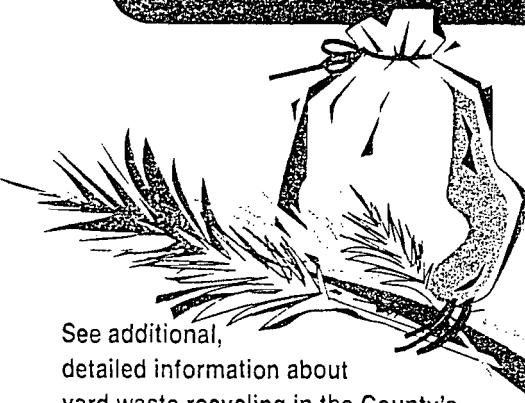
How to Place Yard Waste at Curbside for Pick-Up

Yard waste set out for collection cannot exceed two cubic yards each week, which equals approximately twelve 30-gallon containers. Yard waste other than grass clippings and leaves can also be boxed, bundled or neatly stacked in uniform lengths not to exceed 50 lbs. Also, be sure it is not more than four feet in length and six inches in diameter.

Did You Know That Yard Waste Can Also be Recycled?

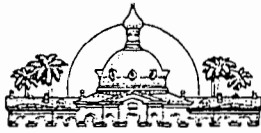
There are four ways that yard waste can be reused, recycled or reduced:

1. Proper plant selection
2. Use it for mulch.
3. Don't bag clippings.
4. Compost.



See additional,
detailed information about
yard waste recycling in the County's
Yard Waste to Garden Treasure brochure.

EXHIBIT 4



**Hillsborough County Solid Waste Management Department
COUNTYWIDE SOLID WASTE PROFILE FORM**

SWMD 09909

PLEASE RETURN FORM TO:

Hillsborough County Solid Waste Management Department
P.O. BOX 1110
TAMPA, FL 33601-1110
ATTN: Management and Environmental Services Section

COUNTY USE ONLY	
Approved _____	Rejected _____
Disposal Facility _____	
Expiration Date _____	
Special Instructions _____	
Reviewed By _____	

PART A. GENERAL INFORMATION

- Business Name _____
- SIC Code _____
- Type of Business _____
- Business Location _____
(Street) (City) (State) (Zip Code)
- Directions to Facility _____
- Technical Contact Person _____ 7. Phone _____
- Collector's Name (Hauler) _____ 9. Phone/Fax _____
- Generator's Mailing Address _____

PART B. What is the general nature of your waste (Check all that apply):

- | | |
|---|---|
| 1. <input type="checkbox"/> Agricultural/Nursery Retail | 5. <input type="checkbox"/> Medical/Veterinary/Pharmaceutical |
| 2. <input type="checkbox"/> Automotive Service | 6. <input type="checkbox"/> Photo Film Processing |
| 3. <input type="checkbox"/> Dry Cleaning/Laundry Establishments | 7. <input type="checkbox"/> Retail/Office |
| 4. <input type="checkbox"/> Industrial Process/Manufacturing | 8. <input type="checkbox"/> Other _____
(Describe) |

PART C. SOLID WASTE CHARACTERIZATION: (Please complete a separate form for each type of waste.)

- Name of Waste _____
- Current Method of Disposal _____
- Frequency of Disposal _____
- Quantity Generated _____ Per Week _____ Month _____ Year _____
- Physical State _____ Solid _____ Liquid _____ Semi-Solid _____ Other (Describe) _____
- Empty Container Types _____ How Many? (Per Week, Month, Year) _____
- Is this a RCRA or D.O.T. hazardous material? (As defined in USEPA 40 CFR PART 260.10) _____ YES _____ NO
- Are there any Free Liquids present? _____ YES _____ NO

PART D. SAMPLING CRITERIA

Some industrial/commercial wastes require analytical testing data to determine if they are acceptable for disposal in the Solid Waste Management System. The Hillsborough County Solid Waste Management Department (HCSWMD) may require additional information on your waste stream. (Please see instruction sheet.) The HCSWMD reserves the right to require additional analysis of waste prior to, or subsequent to acceptance for disposal.

- Indicate current method used to determine the physical and chemical composition of the waste.
_____ TCLP _____ OTHER (Describe): _____
- A copy of current test results are to be submitted with this form. Attached? Yes _____ No _____

PART E. GENERATOR CERTIFICATION By signing this form, generator certifies that, unless clearly stated above:

- This waste is not hazardous waste (as defined by the USEPA 40 CFR Part 260.10) Federal Regulation or other State and Local Regulations.
- This waste does not contain any levels of Polychlorinated Biphenols (PCBs).
- This waste does not contain any infectious, biomedical, or biohazardous waste materials.
- This waste does not contain any soil (dirt) material.
- This form contains a true and accurate description of the waste material to be disposed.
- All relevant information regarding known or suspect hazards in possession of the generator has been disclosed.

NOTE: Should any changes occur in the character of the solid waste, the generator shall immediately notify the Hillsborough County Solid Waste Management Department.

7. _____ Signature
8. _____ Title

EXHIBIT 5

2. Calculate HCl emission rate for the unit.

$$\frac{29 \text{ moles HCl}}{1 \times 10^6 \text{ moles}} \frac{(41.6 \text{ moles})}{\text{dscm}} \frac{(36.46 \text{ g})}{\text{mole}} \frac{(1 \times 10^6 \mu\text{g})}{\text{g}} = 43,985.3 \frac{\mu\text{g}}{\text{dscm}}$$

$$43,985.3 \frac{\mu\text{g}}{\text{dscm}} \frac{(1 \text{ g})}{1 \times 10^6 \mu\text{g}} \frac{(18.639 \text{ dscm})}{\text{sec}} = 0.820 \text{ g/sec}$$

3. Calculate HCl emission rate for Facility.

$$0.820 \text{ g/s/unit} (3 \text{ units}) = 2.460 \text{ g/s}$$

$$2.460 \frac{\text{g}}{\text{sec}} \frac{(1 \text{ ton})}{907,185 \text{ g}} \frac{(60 \text{ sec})}{\text{min}} \frac{(60 \text{ min})}{\text{hour}} \frac{(24 \text{ hours})}{\text{day}} \frac{(365 \text{ days})}{\text{year}} = 85.5 \text{ tons/year}$$

Basis: 1,500 parts per million on a dry volume basis corrected to 7 percent oxygen
(ppmdv @ 7% O₂)

1. Apply 95 percent control efficiency.

$$\begin{array}{ccc} 1,500 \text{ ppmdv HCl} & (100\% - 95\%) & = 75 \text{ ppmdv HCl} \\ \text{@ 7\% O}_2 & & \text{@ 7\% O}_2 \\ \text{uncontrolled} & & \text{controlled} \end{array}$$

2. Calculate HCl emission rate for the unit.

$$\frac{75 \text{ moles HCl}}{1 \times 10^6 \text{ moles}} \frac{(41.6 \text{ moles})}{\text{dscm}} \frac{(36.46 \text{ g})}{\text{mole}} \frac{(1 \times 10^6 \mu\text{g})}{\text{g}} = 113,755.2 \frac{\mu\text{g}}{\text{dscm}}$$

$$113,755.2 \frac{\mu\text{g}}{\text{dscm}} \frac{(1 \text{ g})}{1 \times 10^6 \mu\text{g}} \frac{(18.639 \text{ dscm})}{\text{sec}} = 2.120 \text{ g/sec}$$

3. Calculate HCl emission rate for Facility.

$$2.120 \text{ g/s/unit} (3 \text{ units}) = 6.361 \text{ g/s}$$

$$6.361 \frac{\text{g}}{\text{sec}} \frac{(1 \text{ ton})}{907,185 \text{ g}} \frac{(60 \text{ sec})}{\text{min}} \frac{(60 \text{ min})}{\text{hour}} \frac{(24 \text{ hours})}{\text{day}} \frac{(365 \text{ days})}{\text{year}} = 221.1 \text{ tons/year}$$

Because HCl emission rates based on the percent removal efficiency approach result in higher calculated values, the HCl emission rate of 6.36 g/s was used in the worst-case dispersion modeling and compliance demonstrations for the Facility.

1. Dry volumetric flow rate for the Retrofit unit, as calculated by BURN:

39,490.0 dry standard cubic feet per minute corrected to 7 percent oxygen (dscfm @ 7% O₂)

$$39,490.0 \frac{\text{dscf}}{\text{min}} \left(\frac{1 \text{ dscm}}{35.31 \text{ dscf}} \right) \left(\frac{1 \text{ min}}{60 \text{ sec}} \right) = 18.639 \text{ dscm/sec}$$

2. Calculate NO_x emission rate (as NO₂) for the Retrofit unit.

$$\frac{205 \text{ moles NO}_x}{1 \times 10^6 \text{ moles}} \left(\frac{41.6 \text{ moles}}{\text{dscm}} \right) \left(\frac{46.01 \text{ g}}{\text{mole}} \right) \left(\frac{1 \times 10^6 \mu\text{g}}{\text{g}} \right) = 392,373.3 \frac{\mu\text{g}}{\text{dscm}}$$

$$392,373.3 \frac{\mu\text{g}}{\text{dscm}} \left(\frac{1 \text{ g}}{1 \times 10^6 \mu\text{g}} \right) \left(\frac{18.639 \text{ dscm}}{\text{sec}} \right) = 7.313 \text{ g/sec}$$

3. Calculate NO_x emission rate for Retrofit Facility.

$$7.313 \text{ g/s/unit} (3 \text{ units}) = 21.94 \text{ g/s}$$

$$21.94 \frac{\text{g}}{\text{sec}} \left(\frac{1 \text{ ton}}{907,185 \text{ g}} \right) \left(\frac{60 \text{ sec}}{\text{min}} \right) \left(\frac{60 \text{ min}}{\text{hour}} \right) \left(\frac{24 \text{ hours}}{\text{day}} \right) \left(\frac{365 \text{ days}}{\text{year}} \right) = 762.7 \text{ tons/year}$$

B.6 MWC Metals

Mercury

Mercury (Hg) is made a metallic vapor at the combustion temperatures for municipal solid waste. The activated carbon injection system will adsorb mercury onto the carbon. In addition, the SDA will reduce flue gas temperatures, encouraging mercury condensation onto particulate matter. The downstream FF will then effectively remove particulate matter and carbon particles containing mercury. This system will control Hg emissions to meet the state and EG limits: 70 micrograms per dry standard cubic meter (μg/dscm), or reduce emissions by 85 percent, whichever is less stringent (corrected to 7% O₂), both over a 3-hour arithmetic mean, as determined by annual stack tests using EPA Method 29.

The maximum inlet concentration was estimated from stack test data for the Tampa McKay Bay Refuse to Energy Facility, which is in Hillsborough County. The uncontrolled inlet Hg concentration of 900 μg/dscm (corrected to 7% O₂, dry basis) is the highest single-unit one-hour average stack test result of 875.7 μg/dscm, rounded up, from the October 1996 test series. The control system will reduce this inlet concentration by 85 percent to achieve an outlet Hg concentration of 135 μg/dscm (@ 7% O₂) or less.

COMMISSION

DOTTIE BERGER
JOE CHILLURA
CHRIS HART
JIM NORMAN
JAN PLATT
THOMAS SCOTT
ED TURANCHIK

EXECUTIVE DIRECTOR

ROGER P. STEWART



ADMINISTRATIVE OFFICES, LEGAL &
WATER MANAGEMENT DIVISION
1900 - 9TH AVENUE
TAMPA, FLORIDA 33605
TELEPHONE (813) 272-5960
FAX (813) 272-5157

AIR MANAGEMENT DIVISION
TELEPHONE (813) 272-5530

WASTE MANAGEMENT DIVISION
TELEPHONE (813) 272-5788

WETLANDS MANAGEMENT DIVISION
TELEPHONE (813) 272-7104

**ENVIRONMENTAL PROTECTION COMMISSION
of Hillsborough County**

FAX Transmittal Sheet

DATE: 10/15/97

TO: Theresa Herron

FAX Phone: auto Voice Phone: 2781344^{SC}

TOTAL NUMBER OF PAGES INCLUDING THIS COVER PAGE: 3

EPC FAX Transmission Line: (813) 272-5605
For retransmission or any FAX problems, call: (813) 272-5530

FROM: Rick Kirby
(Circle applicable section below)

Air Division

-Enforcement

-Engineering

-Support Operations

SPECIAL INSTRUCTIONS: Hills Co Solid Waste Recovery

COMMISSION

DOTTIE BERGER
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TELEPHONE (813) 272-5530

WASTE MANAGEMENT DIVISION
TELEPHONE (813) 272-5788

WETLANDS MANAGEMENT DIVISION
TELEPHONE (813) 272-7104

MEMORANDUM**DATE:** October 15, 1997**TO:** Theresa Herron**FROM:** *RK* Richard C. Kirby, IV, P.E.**THROUGH:** - Jerry Campbell, P.E.**SUBJECT:** Hillsborough County Solid Waste Recovery Facility
(HCSWRF) Application for Air Pollution Control Equipment
Retrofit

The EPC Air Management Division Engineering staff has reviewed the referenced application package prepared by Camp Dresser and McKee. We would like to offer the following comments.

1. In Volume II, page 2-17 HCSWRF requested an expanded definition of municipal solid waste (MSW) authorized to be burned at the facility. The permit, when issued, should contain a strict definition of materials authorized for combustion. Some of the wastes proposed by the applicant constitute industrial waste and segregated wastes. We feel strongly that this definition must not be too broad.
2. HCSWRF seems to meet the definition of "incinerator" used in 40 CFR 61 Subpart C, the Beryllium NESHAP. Therefore, this NESHAP would be applicable to them.
3. The "Proposed Permit Emission Limit" column has the superscript "7" behind nine of the pollutant emission limits. The note that goes along with the number "7" implies the emission limit compliance date is revised to the year 2002. The August 1997 Federal Register does revise the limit and compliance date, but only for lead, sulfur dioxide, and hydrogen chloride (and the limit for nitrogen oxides, but not the date). The compliance date of December 19, 2000 remains in effect for the other emission limits specified in subpart Cb. Note: According to the construction schedule proposed showing acceptance testing in September - October 2000, HCSWRF should be able to comply with the dates.



Theresa Herron
October 15, 1997
Page 2

4. HCSWRF is also asking to use Method 22 for testing for the fugitive emissions from ash handling rather than Method 9. This really refers to uncontrolled emissions and Method 22 may not be appropriate.
5. Finally, HCSWRF is also asking to measure the amount of waste combusted based on steam flow versus actual tonnage, an issue that has been contentious in the past. We oppose this since there is no good correlation to heat input and fuel input.
6. Provide complete design calculations for pollution control equipment. These should include component sizes, feed rates, flow rates, reaction rates, assumptions, and references to support parameters used.
7. In the letter from Al Linero to Mayor Greco, City of Tampa, regarding the McKay Bay Facility and dated October 14, 1997, Numbers 1, 5, and 7 are applicable to this project.

cag

TO: Hamilton B. Oven
Power Plant Siting Coordinator

THROUGH: Al Linero
Bureau of Air Regulation

FROM: Teresa Heron
Bureau of Air Regulation

DATE: October 14, 1997

SUBJECT: Hillsborough County Resource Recovery Facility
PA 82-19 and PSD-FL-121 (B)

The following information is needed in order to continue processing this application:

POLLUTANT INFORMATION

1. Table 1-1 provides a comparison of existing permitted and proposed emission limits. Please submit actual emissions (TPY for a two years period) of all pollutants pursuant to Rule 62-212.400 (2) (e) F.A.C., for each of the boilers that is representative of the normal operation of each unit prior to the retrofit project.
2. Are the emissions from the auxiliary burners included in the total emission from the facility?
3. Calculate pollutant emissions at all level of the operating window proposed (lb/MMBtu, lb/hr, lb/ton and ton/yr).

WASTE COMBUSTION

4. Does this RRF expect to receive MSW from other counties?
5. Describe, if any, Hillsborough County's recycling program (source separation, composting, waste reduction, etc). Are household batteries and lead-acid batteries removed from the waste stream?
6. Indicate which of the wastes specified in the application are already burned at this facility. Provide annual tonnage of waste processed by this facility over the last five years along with any heat content determination that have been made for the waste burned.
7. Pursuant to Rules 62-4.070 (3), F.A.C., please provide reasonable assurance that the burning of the proposed wastes as specified on page 2-17 and 2-18 will not contravene Department rules or contribute to an exceedance of the E.G. standards for Municipal Solid Waste Facilities (40 CFR 60, Subpart Cb). Include all assumptions, reference materials and calculations (i.e., test data or emission estimates from other RRFs burning these types of wastes, quantity of the proposed specified waste products to be burned percentage of heat input from each waste, fuel analysis, etc.). How will the proposed specification of fuels affect overall waste throughput quantities? We may submit some additional questions regarding wastes and fuels following review by the Department solid waste staff.

CONTROL EQUIPMENT

8. The detailed description of the air pollution control equipment was not submitted. Provide additional information, including engineering design specification sheets, for the proposed control technology. What are the manufacturer's guarantees of efficiency of the control equipment, etc.? Please include for each baghouse, as a minimum, the following information:
- Design emission rate for particulate matter (before and after proposed controls)
 - Baghouse operation temperature (F) range
 - Number of separate baghouses
 - Number of isolated compartments per baghouses
 - Design criteria for air to cloth ratio or range of acceptable ratios
 - Cloth description
 - Type of bag cleaning under consideration and subsequent cleaning controls
 - Strategy for detecting and replacing faulty bags
 - Description of ash handling and disposal system
 - Nature and terms of performance guarantee

If the above information cannot be submitted as requested, the proposed permit would be conditioned on submittal of detailed design specifications prior to commencement of construction.

9. How are odors controlled at this facility? Describe any complaints (if any) on the existing facility and how improvements for odor control will be addressed .

MONITORING EQUIPMENT AND MONITORING LOCATIONS

10. Provide information concerning emission monitoring equipment and monitoring locations.
11. Provide the make and model number along with the specification sheets and operation and maintenance manuals for all combustors, recorders, scrubbers, baghouses and CEMs for recording opacity, oxygen, carbon monoxide, NO_x and SO₂.

AIR PERMIT APPLICATION FORM AND APPENDICES

12. Appendix B: On page B-6, shouldn't the 29 moles SO₂ refer to HCl instead of SO₂? On page B-9, shouldn't the 205 moles of CO refer to NO_x instead?
13. Appendix C: Flow rate discrepancies exist between the existing and future nominal flow rates used. Why is the difference in data? Show calculation of nominal data.
14. Section III Part 7a-1. The maximum dry standard flow rate listed is 53189 dscfm. However, is not the same flow used in the BURN model output. Please update this page. Show calculations.
15. What is the rationale for using emission data from 1987? The information provided in Appendix E referred to tests conducted in 1987.

Tuesday, March 25, 1997
1:30 p.m.

Bill Cabin	RTP Env. Assoc.	908-968-9600
Tim Porter	Whe Laboratories	603 929-3375
Cher Fancy	FDEP	904 488 1344
A.A. Lingo	DEP	904 488 - 1344
Michael Hewitt	DEP/OPARM	904/488-0114
David S. Dee	Landis + Parsons	904-681-0311
LA SONGER	FDEP / OGC	904-488-9730
Ceresu Heron	FDEP / NSR	904-488-1344
Syed Arif	FDEP / NSR	904-488-1344
Donald F. Elias	RTP Env. Assoc.	908-968-9600
Dan Strabridge	CDM	813-281-2900
LOUIS NULTOLS	FDEP / EMS	904/488-6140
Paul J. Brandl	" "	" "
M. D. HARLEY	" "	" "



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

January 30, 1997

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Donald F. Elias
RTP Environmental Associates Inc.
239 U.S. Highway 22 East
Green Brook, New Jersey 08812-1909

Dear Mr. Elias:

Re: Hillsborough County RRF Emission Guidelines Compliance Project
Your letters of November 14 and 19, 1996

The Department is in receipt of your letters dated November 14 and 19, 1996, on behalf of the Hillsborough County Resource Recovery Facility (HCRRF) requesting approval of various issues prior to submittal of the construction permit application. The purpose of the referenced project is to comply with 40 CFR 60 Subpart Cb - Emission Guidelines and Compliance Times for Municipal Waste Combustors that are constructed on or before December 19, 1995 (adopted as in Rule 62-204.800(8)(b), F.A.C.). These issues pertain to the Reasonable Available Control Technology (RACT) requirements for minor and fugitive sources of Particulate Matter (PM) as well as the definition of municipal solid waste (MSW) and the most appropriate process limitation for the proposed project.

The Department has reviewed your request and has the following responses:

RACT DETERMINATION

The Subpart Cb requirements for PM from minor and fugitive sources proposed for these sources appear to be reasonable as RACT. The specific plan will be reviewed with your application and a determination will be made as part of our technical review pursuant to the Department's authority contained in Rule 62-296.711(2)(c) F.A.C. However, the proposal to use a different test method (EPA Method 22 instead of EPA Method 9) will be reviewed under *Exceptions and Approval of Alternate Procedures and Requirements*, Rule 62-297.620 F.A.C. The Department does not have the authority under 62-296.711 (3) F.A.C. to approve a different test method.

Please submit a request in accordance with Rule 62-297.620 F.A.C., for approval of an alternate sampling procedure (ASP) along with your application.

DEFINITION OF MUNICIPAL SOLID WASTE (MSW) AS INCLUDED IN THE EG

The Department has received requests other than yours regarding the definition of solid waste from other MWC operators. We have referred these matters to the Division's Office of Policy Analysis and Program Management who will coordinate a response with this Bureau, the Office of General Counsel, and the Bureau of Solid and Hazardous Waste Management. We will provide a determination on this matter during the course of reviewing the application.

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

OPERATING CONDITIONS

PROCESS LIMITATION:

Based on preliminary discussions, the Department is not inclined to delete the current MSW throughput limit measured as tons per day (TPD). We are continuing to review the matter and will make a final decision during review of the application.

We recognize that the throughput rating depends on the heating value of the waste. Heating value of municipal waste can vary significantly from one part of the country to another. It can also vary in time based on changing composition of municipal waste - for example from the continuing trend toward burning of plastics. Therefore a 250 TPD unit in one part of the country and at a given time may not be a 250 TPD unit at another site or time. Note however that based on the increasing amounts of plastic in waste, we would expect the units to be capable of processing less waste instead of more than originally designed to handle (unless they were oversized to begin with).

Now that the units at HCRRF have operated for years, it should be possible to provide ratings for them and get the manufacturer or modification contractor to guarantee their ability to efficiently burn waste throughout an appropriate operating window. If the new ratings (for waste throughput and steam production) and future method of operation will result in an increase in emissions, it will be necessary to conduct a PSD and BACT Review. You will need to assess and reconcile the ramifications of the permit revisions required to incorporate the NSPS requirements with the possible PSD/BACT implications of a throughput increase.

The proposal to use steam production to calculate the solid waste firing rate (in lieu of actually weighing the material) will be acceptable *only* under the following circumstances:

1. COMPLIANCE TESTING

Under this scenario, HCRRF would be required to use the F-factor in Table 19-1 of EPA Method 19 or collect the samples necessary to determine a fuel specific F- factor and heating value at the time of each run of the emission test. The procedures specified in EPA Method 19 should be used to determine the fuel specific F- factor and heating value. This eliminates boiler efficiency as a potential source of error. Subpart Ea [40 CFR 60.58a (b) (4)] requires affected sources to use the F- factor and EPA Method 19 in the emission rate determination. EPA Method 19 allows HCRRF the option of using the F- factor in Table 19 or determining a source specific F- factor using the procedure given in EPA Method 19.

2. CONTINUOUS COMPLIANCE

Under this scenario, HCRRF will either need to install weighing devices, or devices to continuously measure flue gas flow rate and oxygen and content. HCRRF would also need to either use the F- factor in Table 19-1 of EPA Method 19 or conduct daily analyses to determine the fuel specific F- factor and heating value. When units are continuously charged the options include, but are not limited to, belt scales. For units that are continuously charged, the weighing options may include a weighing device mounted on the crane based on the principle of a strain gauge.

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Don Elias
RTP Env. Assoc. Inc.
239 US Hwy 22 East
Green Brook, NJ
08812-1909

4a. Article Number
P 265 659 154

4b. Service Type

<input type="checkbox"/> Registered	<input checked="" type="checkbox"/> Certified
<input type="checkbox"/> Express Mail	<input type="checkbox"/> Insured
<input type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> COD

7. Date of Delivery
2/6/97

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)
Mary J. Jordan

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1994

Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

P 265 659 154

US Postal Service
Receipt for Certified Mail
 No Insurance Coverage Provided.
 Do not use for International Mail (See reverse)

Sender	<i>Don Elias</i>
Street & Number	<i>RTP</i>
Post Office, State, & ZIP Code	<i>Green Brook, NJ</i>
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	<i>2-3-97</i>
	<i>Hillsboro CRF</i>

PS Form 3800, April 1995

OPERATING WINDOW

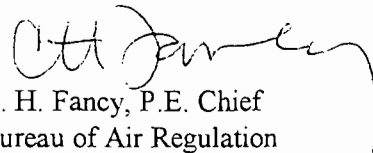
The Department acknowledges your statement that the MSW unit will be operationally limited by 40 CFR 60.53b (b) to a load level of 110% or less of the maximum demonstrated MWC *unit load* [40 CFR 60.51b and 40 CFR 60.58b(i)(6)]. This is consistent with the federal guidelines which stated that "no owner or operator of an affected facility located within a small or large municipal waste combustor plant shall cause such facility to operate at a load level greater than 110 percent of the of the maximum demonstrated MWC *unit load* level [highest 4-hour arithmetic average], achieved during four consecutive hours during the most recent dioxin/furan compliance test" (Page 65424, FR/Vol 60. No. 243 Tuesday, December 19, 1995).

The *proposed operating window* based on 80% to 115% of a nominal 250 tpd capacity and 80% to 115% of a nominal 104.2 MMBtu/hour capacity (250 tpd at 5000 Btu/lb) is not acceptable as presented because it appears to conflict with NSPS Subpart Cb. However, as mentioned above, the characteristics of the unit can be updated (by the manufacturer or modification designers) and expressed at a nominal heating value of 4,500 Btu/lb as indicated in Subpart Cb and the operating window defined within the constraints of Subpart Cb [40 CFR 60.51b and 40 CFR 60.58b(j)].

HCRRF shall also comply with Rule 62-297.310(2), F.A.C., Operating Rate during Testing and Rule 62-297.310(2)(b) F.A.C., Permitted Capacity definition.

If you have any questions, please contact Al Linero or Teresa Heron at 904/488-1344.

Sincerely,



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

CHF/th/hh

cc: Brian Beals, EPA
Bill Thomas, SWD
Jerry Campbell, HCEPC
Pat Comer, DEP
Larry George, DEP
Dottie Diltz, DEP
Michael Hewett, DEP



RTP ENVIRONMENTAL ASSOCIATES INC.®

AIR • WATER • SOLID WASTE CONSULTANTS

239 U.S. Highway 22 East
Green Brook, New Jersey 08812-1909

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Fax: (908) 968-9603

November 14, 1996

Mr. Clair H. Fancy, P.E.
Florida Dept. of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED

NOV 20 1996

BUREAU OF
AIR REGULATION

Dear Mr. Fancy:

As discussed in our meetings last week with the Department, Camp Dresser & McKee, Inc. (CDM) is planning to submit a construction permit application for the Hillsborough County Resource Recovery Facility (HCRRF) in early 1997. The permit application will be to obtain the necessary Department approvals for planned improvements to the HCRRF to meet the Emission Guidelines (EG) requirements given at 40 CFR 60 Subpart Cb, and incorporated by reference at FAC 62-204.800(8). Since the facility is located in the particulate matter (PM) maintenance area described in FAC 62-204.340(4)(b)1, we are seeking guidance from the Department concerning Reasonably Available Control Technology (RACT) requirements for PM emissions from minor and fugitive sources. This information will assist us with preparation of the permit application and the preliminary facility design.

RACT requirements for PM emissions are given at FAC 62-296.700 through 62-296.712. For minor and fugitive particulate sources at HCRRF, applicable RACT requirements are given at FAC 62-296.711, Materials Handling, Sizing, Screening, Crushing and Grinding Operations. These PM RACT requirements are applicable to:

- Loading/unloading of materials to/from containers such as trucks and storage structures (FAC 62-296.711(1)(a));
- Non-portable conveyor systems (FAC 62-296.711(1)(b)); and
- Storage of materials in silos or enclosed bins with capacities of 50 cubic yards or greater (FAC 62-296.711(1)(c)).

PM RACT emission limitations for Materials Handling... Operations are given as:

- No visible emissions (i.e., 5% opacity) (FAC 62-296.711(2)(a)) and
- Emissions exhausted through a stack or vent shall be limited to 0.03 gr/dscf or less for operations totally or partially enclosed to comply with the RACT visible emissions limits (FAC 62-296.711(2)(b)).

- 2 -

Pursuant to the authority given the Department at FAC 62-296.711(2)(c), the applicant is requesting the Department to approve the following alternative limitations as RACT for the proposed HCRRF improvements. These alternative limitations are based on the EG requirements or recent permit applications for similar type sources.

Visible Emission Limitations for Fugitive PM Emissions

Ash conveyors and ash storage, handling, and transfer facilities are enclosed to minimize fugitive emissions. However, some fugitive emissions will still occur from small openings in the enclosure, from seams around access hatches, from building doors, etc. Also, maintenance and repair activities may require opening of the enclosure that could generate short-term fugitive emissions.

USEPA recognized in the new EG that it is not possible to eliminate all visible emissions of ash at all times. USEPA's EG standards at 40 CFR 60.55b(a) do not allow visible emissions "in excess of 5% of the observation period (i.e., 9 minutes per 3-hour period), as determined by EPA Reference Method 22..." Stated differently, visible emissions are allowed up to 9 minutes per 3-hour observation period. As noted at 40 CFR 60.55b(b), this standard applies to both fugitive emissions and emissions from buildings or enclosures of ash conveying systems. The standard for visible emissions does not apply during maintenance and repair activities of ash conveying systems, as noted at 40 CFR 60.55b(c). It should be noted that the EG standards were developed by USEPA after spending several years studying municipal waste combustors in the United States. The limits in the EG are based on the use of Maximum Achievable Control Technology (MACT), which represents the level of performance that is attained by the best 12% of all existing facilities. In light of these facts, the applicant is requesting that the EG visible emission limitations for fugitive ash emissions be approved as RACT for the HCRRF by the Department.

Outlet PM Emission Limitations for Minor PM Sources

Upgrading the air pollution control (APC) equipment to meet the EG requirements (i.e., adding spray dry adsorbers and carbon injection systems) will require lime and activated carbon storage silos. The silos will be equipped with dust collectors (i.e., baghouses) to control PM emissions during filling operations. PM emissions from the baghouse ventilating the ash handling building are already included in the existing permit at emission limits of 1.63 lb/hour (equal to 0.02 gr/dscf at 9500 dscf/min) and opacity not to exceed 5%. As part of the bid specifications for the HCRRF improvements, the County plans to specify dust collectors for the silos with design outlet loadings of 0.015 gr/dscf. The applicant is requesting the Department to determine that this proposed emission limitation complies with the Department's RACT requirements.

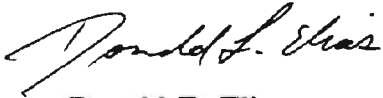
In addition, pursuant to FAC 62-296.711(3)(c), the applicant is requesting that compliance for the silo dust collectors be determined using USEPA Method 9 visible emission tests indicating no visible emissions (5% opacity) in lieu of particulate stack tests (i.e., the same as currently permitted for that ash building ventilation baghouse).

- 3 -

Thank you for your consideration of these matters. The Department's response to these PM RACT issues will assist us in our preparation of the preliminary facility design and air permit application forms. If you have any questions, please feel free to contact me at 908-968-9600 or David S. Dee, Esq. at 904-681-0311.

Sincerely,

RTP ENVIRONMENTAL ASSOCIATES, INC.®



Donald F. Elias
Principal

DFE/WEC/wec

cc: **A. Linero**, T. Heron, C. Holladay/FDEP-Tallahassee
J. Kissel/FDEP-Southwest District
J. Campbell/Hillsborough County Environmental Protection Commission
T. Smith, Hillsborough County Department of Solid Waste
D. Strobridge, C. Hibbard/CDM
R. Donelan, Jr., Esq./Carlton Fields
W. Corbin, HCRR2 Project File/RTP



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Fax: (908) 968-9603

November 19, 1996

Mr. Clair H. Fancy, P.E.
Florida Dept. of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED

NOV 20 1996

BUREAU OF
AIR REGULATION

Dear Mr. Fancy:

As discussed in our November 6th and 7th meetings with the Department, Camp Dresser & McKee, Inc. (CDM) is planning to submit a construction permit application for the Hillsborough County Resource Recovery Facility (HCRRF) in early 1997. After obtaining the necessary Department approvals, proposed improvements to the HCRRF will be made to enable the facility to meet the Emission Guidelines (EG) requirements contained in 40 CFR 60 Subpart Cb, and incorporated by reference at FAC 62-204.800(8). The applicant is also requesting other changes in the permit to make conditions consistent with EG definitions and current industry practice.

For allowable fuels, the applicant is proposing to use the definition of Municipal Solid Waste (MSW) as included in the EG, with some clarifications based on the intent of the EG and current statewide practices. The applicant is also proposing to redefine the operating window for the facility based on steam load, according to EG requirements, rather than waste throughput, which is impossible to accurately measure.

There is considerable interest in expediting the EG improvements to the HCRRF. Therefore, we are submitting the attached for your approval so we can complete the air permit application. Thank you for your consideration to these matters. If you have any questions, please feel free to contact either William E. Corbin or myself at 908-968-9600.

Sincerely,

RTP ENVIRONMENTAL ASSOCIATES, INC.®

Donald F. Elias
Principal

DFE/WEC/wec

Attachment

- 2 -

cc: A. Linero, T. Heron, C. Holladay/FDEP-Tallahassee
J. Kissel/FDEP-Southwest District
J. Campbell/Hillsborough County Environmental Protection Commission
T. Smith/Hillsborough County Department of Solid Waste
D. Stobridge, C. Hibbard/CDM
R. Donelan, Jr., Esq./Carlton Fields
W. Corbin, HCRR2 Project File/RTP

DRAFT LANGUAGE FOR INCLUSION INTO AIR CONSTRUCTION PERMIT APPLICATION

Definition of Allowable Fuels

Current permit conditions for the Hillsborough County Resource Recovery Facility (HCRRF) allow the incineration of refuse such as garbage and trash as defined at Florida Administrative Code (FAC) 17-7 (now FAC 62-701) but not sludge or other wastes from sewage treatment plants (i.e., prohibits the charging of grease, scum, grit screenings or sewage sludge to the facility). Thus, the facility currently can accept a wide variety of materials that fits within the broad definition of municipal solid waste (MSW), except for sewage treatment waste, hazardous waste, untreated medical waste, radioactive materials, and those special wastes that are prohibited by law, such as lead acid batteries. Acceptable wastes may be received either as a mixture or as a single-item stream of household, commercial, institutional, or industrial discards (except industrial process wastes). In addition to the typical components of MSW, the facility also can receive a variety of other non-hazardous wastes, including but not limited to pharmaceuticals, contraband, used oil filters, waste oil, yard trash, agricultural waste, treated medical waste, plastics, waste tires, and oil spill debris.

In order to make the permit consistent with EG definitions incorporated by reference at Florida Administrative Code (FAC) 62-204.800(8), the applicant is proposing to redefine fuel charged at the facility as MSW as defined at 40 CFR 60.51b, except for those materials prohibited by law. The federal and EG MSW definitions are consistent with current permit conditions. For example, Section 129(g)(5) of the Clean Air Act defines "Municipal Waste" as:

"refuse (and refuse-derived fuel) collected from the general public and from residential, commercial, institutional, and industrial sources consisting of paper, wood, yard wastes, food wastes, plastic, leather, rubber, and other combustible materials and non-combustible materials such as metals, glass and rock...[but] does not include industrial process wastes or medical wastes that are segregated from such other wastes."

An equally broad definition of MSW is included in USEPA's EG for MWCs (40 CFR 60.51b):

"Municipal solid waste or municipal-type solid waste or MSW means household, commercial/retail, and/or institutional waste. Household waste includes material discarded by single and multiple residential dwellings, hotels, motels, and other similar permanent or temporary housing establishments or facilities. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar establishments or facilities. Institutional waste includes material discarded by schools, nonmedical waste discarded by hospitals, material discarded by nonmanufacturing activities at prisons and government facilities, and material discarded by other similar establishments or facilities. Household, commercial/retail, and institutional waste does not include used oil; sewage sludge; wood pallets; construction, renovation, and demolition wastes (which includes but is not limited to railroad ties and telephone poles); clean wood; industrial process or

manufacturing wastes; medical waste; or motor vehicles (including motor vehicle parts or vehicle fluff). Household, commercial/retail, and institutional wastes include: (1) Yard wastes; (2) Refuse-derived fuel; and (3) Motor vehicle maintenance materials limited to vehicle batteries and tires..."

In the EG preamble (60 FR 65392), the MSW definition is further clarified to include either a mixture or a single-item waste stream of household, commercial and/or institutional discards. Also, while the MSW definition does not include used oil, sewage sludge, wood pallets, medical waste, etc., these wastes can be intermixed and combusted with MSW (i.e., the regulations do not prohibit their combustion).

Since the EG requirements and definition of MSW are consistent with current operating practices and permit conditions, the County proposes to redefine allowable fuel as:

"The authorized fuels for the facility include municipal solid waste (MSW), as defined at 40 CFR 60.51b, and non-hazardous solid waste, except those materials that are prohibited by state or federal law or otherwise prohibited below. The authorized fuels may be received either as a mixture or as a single-item stream of household, commercial, institutional, agricultural or industrial discards (except industrial process wastes). The facility may receive non-hazardous wastes not included in the federal definition of MSW including, but not limited to, pharmaceuticals, contraband, used oil filters, waste oil, yard trash, agricultural waste, treated medical waste, plastics, waste tires, and oil spill debris, provided that these materials are intermixed and combusted with MSW. The facility owner and operator shall not knowingly burn prohibited fuels, such as lead acid batteries, industrial process wastes, untreated medical wastes, nuclear wastes, and sludge or sewage treatment wastes (e.g., grease, scum, grit, and sewage sludge)."

All of the allowable materials can be safely combusted at the facility because the units are designed to handle a wide range of operating conditions. The combustion of these materials will not adversely affect the facility's ability to comply with permit requirements. The facility will be equipped with spray dry adsorbers, fabric filters, selective non-catalytic reduction, and activated carbon injections systems, which are designed to handle all of the operating conditions that are likely to occur while combusting the normal fuels, including all of the fuels described herein. These air pollution control systems perform well, even when there are fluctuations in the facility's operating conditions. Further, the facility will have continuous emission monitors, which will monitor the facility's performance at all times and under all operating conditions.

Operating Conditions

The facility consists of three MWCs with each MWC capable of incinerating a nominal 400 tons/day (tpd) of waste. Each unit is currently permitted to combust up to 440 tpd of MSW and operate up to a gross heat input rate of 165 million BTU per hour (MMBTU/hr). MSW is a

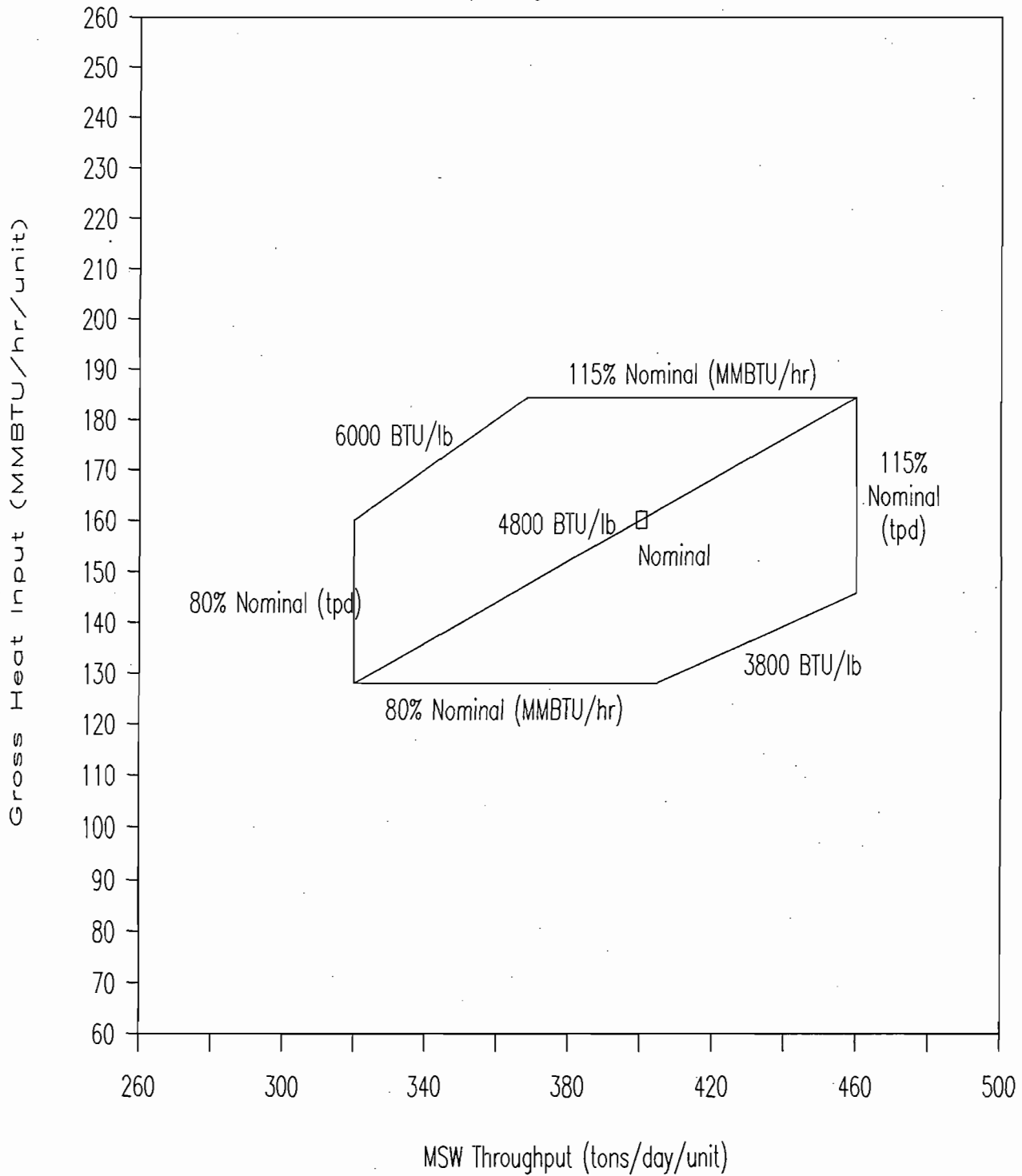
heterogenous material and the estimated heat content of MSW ranges from 3800 to 6000 BTU/lb, based on the amount of moisture and non-combustible materials present (average estimated to be 4800 BTU/lb based on recent data). Since emissions and other combustion parameters are related to the incineration of combustible materials, recent industry practice has been to rate MWC units on gross heat input, similar to fossil fuel boilers and other types of combustion equipment, rather than MSW tonnage. As a practical matter, it is impossible to accurately weigh the amount of MSW combusted during short time intervals, but compliance with permitted heat input rates can be determined from steam flow measurements, which are directly related to heat input based on the unit's efficiency.

In the original 1991 EG for MWCs, USEPA recognized that MWCs are "heat input devices" and that actual capacity should be determined by heat input rather than by the weight of MSW charged due to the varying heat content of MSW. As a result, USEPA promulgated maximum capacity requirements based on steam load, which have been retained in the current EG. The measurement of steam load, based on ASME methods, gives a practical method to continuously measure facility load and, together with particulate device temperature and flue gas oxygen (or carbon dioxide) measurements, demonstrate good combustion practice.

Therefore, Hillsborough County would like to delete the current permit limits for MSW throughput and modify the permit limits to be consistent with EG requirements. The operating window shown on the attached figure reflects the physical capacity of each MWC unit. The operating window is based on 80% to 115% of a nominal 400 tpd capacity and 80% to 115% of a nominal 160 MMBTU/hour capacity (400 tpd at 4800 BTU/lb). Maximum unit capacity will be determined by steam load, based on annual compliance tests and continuous steam flow measurements (averaged over four hours), as required by the EG. The maximum demonstrated MWC unit load is defined in 40 CFR 60.51b as the highest 4-hour arithmetic average steam load, measured in accordance with 40 CFR 60.58b(i)(6), during the most recent dioxin stack test which demonstrated compliance. After the maximum unit capacity is established during the annual stack test, the unit will be operationally limited by 40 CFR 60.53b(b) to a load level of 110% or less of the maximum demonstrated MWC unit load. Compliance with this limit is based on continuous steam flow measurements calculated in 4-hour block arithmetic averages. Including these EG requirements for steam load as permit conditions will effectively limit the facility's capacity in a manner that is consistent with the EG requirements and current industry practice.

Hillsborough County Resource Recovery Facility

Operating Window



HILLSBOROUGH COUNTY RESOURCE RECOVERY FACILITY

Air Permit Discussion Issues
November 6 and 7, 1996

EMISSION GUIDELINE (b)

I. INTRODUCTION OF PROJECT PERSONNEL

II. SCOPE OF PROJECT

JUST APC EQUIPMENT

III. PERMITTING ISSUES

*PROCESS RATES - Normalize around
a parameter which makes sense
and is not increasing. Steam flow,
TPD, Heat Input.*

- A. Non-PSD Applicability
- B. Air Pollution Control Analysis Requirements
- C. Air Quality Impact Analysis Requirements

IV. RACT ISSUES - Minor PM Sources in PM Maintenance Area - *No agreement now !!*

*Get us facts + will will review.
We will do rule applicability.*

- A. Fugitive Ash Emissions
- B. Minor Baghouse Sources (e.g., lime and activated carbon silos)

V. OTHER AGENCY INVOLVEMENT

- A. USEPA
- B. National Park Service

> WE WILL PROVIDE LETTER

VI. SCHEDULE

VII. CONTACT PERSONNEL

Thomas G. Smith
Hillsborough County
Department of Solid Waste
P.O. Box 1110
Tampa, FL 33601
813/276-2909 813/276-2960 (Fax)

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Carlton Fields
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Tallahassee, FL 32302
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904/222-0398 (Fax)

Daniel E. Strobridge
Camp Dresser & McKee Inc.
Westshore Center
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Tampa, FL 33607
813/281-2900 813/288-8787 (Fax)

Donald F. Elias
RTP Environmental Associates, Inc.
239 U.S. Highway 22 East
Green Brook, NJ 08812
908/968-9600
908/968-9603 (Fax)

<u>Name</u>	<u>Organization</u>	<u>Phone</u>
Donald F. Elias	RTP Environmental	(908) 968-9600
Richard T. Donelon	Carlton Fields	(904) 299-1585
Bill Corbin	RTP	908-968-9600
Cynthia Hibbard	CDM	(617) 252-8233
Teresa Heron	DEP	(904) 488-1344
Cheer Holaday	DEP	904-1344
Bob Keen	DEP	904 921-7744
Dan Strubridge	CDM	813 281 2900
Al Lewis	DEP	(904) 488-1344



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239 U.S. Highway 22 East
Green Brook, New Jersey 08812-1909

(908) 968-9600
Fax: (908) 968-9603

October 11, 1996

Mr. Clair H. Fancy, P.E.
Florida Dept. of Environmental Protection
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Fancy:

This letter is to confirm our meeting on the afternoon of Wednesday, November 6th concerning the Hillsborough County Resource Recovery Facility (RRF). The meeting will be held at your offices at 111 S. Magnolia in Tallahassee. This pre-application meeting is to discuss permitting requirements and protocols for modifying the RRF to meet the Emission Guideline (EG) requirements.

Please call me with your confirmation of this meeting and a list of possible attendees from the Department. If you have any questions, please feel free to contact me at the above number.

Sincerely,

RTP ENVIRONMENTAL ASSOCIATES, INC.®

Donald F. Elias/wec

Donald F. Elias
Principal

DFE/WEC/wec

cc: A. Linero, C. Holladay, T. Rogers/FDEP
D. Ströbridge, C. Hibbard/CDM
T. Smith/Hillsborough County
R. Donelan, Esq./Carlton Fields

```

Details | Emis unit | perMit | prOject | Pollutant | reLated party | >
----- ARMS Facility -----
+-----+
| POINT Office SD   Sth: FT MYERS           Cty LEE           AIRS ID 0710119 |
+-----+
| Owner LEE COUNTY                               Name LEE COUNTY ENERGY RECOVER |
| Directions LEE COUNTY ENERGY RECOVERY FACILITY |
| Street LEE COUNTY ENERGY RECOV FACIL |
| City FORT MYERS                               Zip - |
| UTM Zone 17 East 424.21 North 2945.70 Latitude 26:37:54 Longitude 81:45:41 |
+-----+
| Status C CONSTRUCTION           Maj Group SIC 49 ELECTRIC, GAS AND SANITARY S |
| Reloc Shtdwn Dt                 Strt Dt                 Final Shtdwn Dt |
| Gov Fac 0 NOT OWNED OR OPERATED BY A FED HAZ Waste Generator ID: FLD |
| AOR Req Y Ozone SIP Facility N   Type 3 MUNICIPAL INCINERATION OR RRF |
| Compliance Tracking A ACTUAL OR POTENTIAL EMISSION One Time Title V Credit N |
| Title V TITLE V                 non-HAP Class EPA MAJOR           HAP Class |
+-----+
| # of Emis Units   C   4       A   0       I   0 Generator Rating           MW |
+-----+
| Comment BUCKINGHAM ROAD & SR 82 INCINERATOR BURNS MSW |
+-----+

```

Enter the Type of this FACILITY. (POINT or AREA)

Count: *1

<Replace>

Facility Pollutant

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
 NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
 OWNER LEE COUNTY

Pollutant CO Carbon Monoxide
 Poll Class B ACTUAL AND POTENTIAL EMISSIONS BELOW ALL APPLICABLE MAJOR
 SOURCE THRESHOLDS

Emission CAP	Pounds/Hr	Tons/Yr
Basis		
Regulation		
Comment		

Act Emis Year1996	Actual Emission	46.740000Tons/Yr
Potential Sum	0.000000Tons/Yr HAP Pot SubTotal	0.000000Tons/Yr

Enter Pollutant Code

Count: 1 v

<List><Replace>

Facility Pollutant

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
 NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
 OWNER LEE COUNTY

Pollutant FL Fluorides - Total (elemental fluorine and floride com
 Poll Class B ACTUAL AND POTENTIAL EMISSIONS BELOW ALL APPLICABLE MAJOR
 SOURCE THRESHOLDS

Emission CAP	Pounds/Hr	Tons/Yr
Basis		
Regulation		
Comment		

Act Emis Year1996	Actual Emission	0.130000Tons/Yr
Potential Sum	0.000000Tons/Yr HAP Pot SubTotal	0.000000Tons/Yr

Enter Pollutant Code
 Count: 3 ^ v

<List><Replace>

Facility Pollutant

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
 NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
 OWNER LEE COUNTY

Pollutant PM Particulate Matter - Total
 Poll Class B ACTUAL AND POTENTIAL EMISSIONS BELOW ALL APPLICABLE MAJOR
 SOURCE THRESHOLDS

Emission CAP	Pounds/Hr	Tons/Yr
Basis		
Regulation		
Comment		

Act Emis Year1996	Actual Emission	4.886000Tons/Yr
Potential Sum	0.000000Tons/Yr HAP Pot SubTotal	0.000000Tons/Yr

Enter Pollutant Code

Count: 10 ^ v

<List><Replace>

History | Fugitive | Poten Emis | Capped EU | Return | eXit

Facility Pollutant

+-----+
| POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
| NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
| OWNER LEE COUNTY
+-----+

| Pollutant PM10 Particulate Matter - PM10
| Poll Class B ACTUAL AND POTENTIAL EMISSIONS BELOW ALL APPLICABLE MAJOR
| SOURCE THRESHOLDS
+-----+

| Emission CAP Pounds/Hr Tons/Yr
| Basis
| Regulation
| Comment
+-----+

| Act Emis Year1996 Actual Emission 2.710000Tons/Yr
| Potential Sum 0.000000Tons/Yr HAP Pot SubTotal 0.000000Tons/Yr
+-----+

Enter Pollutant Code

Count: 11 ^ v

<List><Replace>

History | Fugitive | Poten Emis | Capped EU | Return | exit

----- Facility Pollutant -----

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
OWNER LEE COUNTY

Pollutant SAM Sulfuric Acid Mist
Poll Class B ACTUAL AND POTENTIAL EMISSIONS BELOW ALL APPLICABLE MAJOR
SOURCE THRESHOLDS

Emission CAP	Pounds/Hr	Tons/Yr
Basis		
Regulation		
Comment		

Act Emis Year1996	Actual Emission	3.680000Tons/Yr
Potential Sum	0.000000Tons/Yr HAP Pot SubTotal	0.000000Tons/Yr

35 13784 = 4/3 = 10

Enter Pollutant Code

Count: 12 ^ v

<List><Replace>

History | Fugitive | Poten Emis | Capped EU | Return | eXit

----- Facility Pollutant -----

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
OWNER LEE COUNTY

Pollutant VOC Volatile Organic Compounds
Poll Class B ACTUAL AND POTENTIAL EMISSIONS BELOW ALL APPLICABLE MAJOR
SOURCE THRESHOLDS

Emission CAP Pounds/Hr Tons/Yr
Basis
Regulation
Comment

Act Emis Year1996 Actual Emission 4.555000Tons/Yr
Potential Sum 0.000000Tons/Yr HAP Pot SubTotal 0.000000Tons/Yr

x 3 = 15 x 2/3

Enter Pollutant Code

Count: *15 ^

<List><Replace>

History | Fugitive | Poten Emis | Capped EU | Return | eXit

Facility Pollutant

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
OWNER LEE COUNTY

Pollutant T006 Ammonia
Poll Class B ACTUAL AND POTENTIAL EMISSIONS BELOW ALL APPLICABLE MAJOR
SOURCE THRESHOLDS

Emission CAP	Pounds/Hr	Tons/Yr
Basis		
Regulation		
Comment		

Act Emis Year1996	Actual Emission	2.090000Tons/Yr
Potential Sum	0.000000Tons/Yr HAP Pot SubTotal	0.000000Tons/Yr

Enter Pollutant Code

Count: *15 ^ v

<List><Replace>

History | Fugitive | Poten Emis | Capped EU | Return | eXit

Facility Pollutant

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
OWNER LEE COUNTY

Pollutant H015 Arsenic Compounds (inorganic including arsine)
Poll Class C CLASS IS UNKNOWN

Emission CAP	Pounds/Hr	Tons/Yr
Basis		
Regulation		
Comment		

Act Emis Year1996	Actual Emission	0.000266Tons/Yr
Potential Sum	0.000000Tons/Yr HAP Pot SubTotal	0.000000Tons/Yr

Enter Pollutant Code

Count: *15 ^ v

<List><Replace>

Allowable	poll Test	test Meth	History	Return	eXit
		Emission Unit	Pollutant		
POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS					
NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE					
OWNER LEE COUNTY					
EU ID 001 Desc UNIT #1 MUNICIPAL SOLID WASTE COMBUSTOR					
Pollutant CO Carbon Monoxide					
Status A ACTIVE		# Allow 001 % Control Efficiency			
Pri Cont		Sec Cont			
Reg Class					
Potential Emission Lb/Hr Ton/Yr Synth Ltd					
Emission Method					
Emission Factor		Act Emis	23.970000Tons/Yr	Year 1996	
Unit		Emis Fac Ref			
Emis Calculation					
Est Fugitive Lower		Upper	Tons/Yr		
Pollutant Comment 100 PPMDV @ 7% O2					

Enter Pollutant Code

Count: *1

<List><Replace>

Allowable | poll Test | test Meth | History | Return | eXit
 ----- Emission Unit Pollutant -----

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
 NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
 OWNER LEE COUNTY

EU ID 001 Desc UNIT #1 MUNICIPAL SOLID WASTE COMBUSTOR

Pollutant PM Particulate Matter - Total
 Status A ACTIVE # Allow 002 % Control Efficiency
 Pri Cont Sec Cont
 Reg Class

Potential Emission	Lb/Hr	Ton/Yr	Synth Ltd
Emission Method			
Emission Factor	Act Emis	0.970000Tons/Yr	Year 1996
Unit		Emis Fac Ref	
Emis Calculation			
Est Fugitive Lower	Upper	Tons/Yr	
Pollutant Comment			

Enter Pollutant Code
 Count: *1 <List><Replace>

Allowable | poll Test | test Meth | History | Return | eXit

Emission Unit Pollutant

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
OWNER LEE COUNTY

EU ID 001 Desc UNIT #1 MUNICIPAL SOLID WASTE COMBUSTOR

Pollutant PM10 Particulate Matter - PM10
Status A ACTIVE # Allow 001 % Control Efficiency
Pri Cont Sec Cont
Reg Class

Potential Emission Lb/Hr Ton/Yr Synth Ltd
Emission Method
Emission Factor Act Emis 1.195000Tons/Yr Year 1996
Unit Emis Fac Ref
Emis Calculation
Est Fugitive Lower Upper Tons/Yr
Pollutant Comment

Enter Pollutant Code

Count: *1

<List><Replace>

Allowable | poll Test | test Meth | History | Return | eXit

Emission Unit Pollutant

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
OWNER LEE COUNTY

EU ID 001 Desc UNIT #1 MUNICIPAL SOLID WASTE COMBUSTOR

Pollutant SAM Sulfuric Acid Mist
Status A ACTIVE # Allow 001 % Control Efficiency
Pri Cont Sec Cont
Reg Class

Potential Emission Lb/Hr Ton/Yr Synth Ltd
Emission Method
Emission Factor Act Emis 1.500000Tons/Yr Year 1996
Unit Emis Fac Ref
Emis Calculation
Est Fugitive Lower Upper Tons/Yr
Pollutant Comment

Enter Pollutant Code

Count: *1

<List><Replace>

Allowable | poll Test | test Meth | History | Return | eXit

 Emission Unit Pollutant

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
 NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
 OWNER LEE COUNTY

EU ID 001 Desc UNIT #1 MUNICIPAL SOLID WASTE COMBUSTOR

Pollutant SAM Sulfuric Acid Mist
 Status A ACTIVE # Allow 001 % Control Efficiency
 Pri Cont Sec Cont
 Reg Class

Potential Emission	Lb/Hr	Ton/Yr	Synth Ltd
Emission Method			
Emission Factor	Act Emis	1.500000Tons/Yr	Year 1996
Unit	Emis Fac Ref		
Emis Calculation			
Est Fugitive Lower	Upper	Tons/Yr	
Pollutant Comment			

Enter Pollutant Code

Count: *1

<List><Replace>

Allowable | poll Test | test Meth | History | Return | eXit

 Emission Unit Pollutant

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
 NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
 OWNER LEE COUNTY

EU ID 001 Desc UNIT #1 MUNICIPAL SOLID WASTE COMBUSTOR

Pollutant VOC Volatile Organic Compounds
 Status A ACTIVE # Allow 001 % Control Efficiency
 Pri Cont Sec Cont
 Reg Class

Potential Emission	Lb/Hr	Ton/Yr	Synth Ltd
Emission Method			
Emission Factor	Act Emis	2.280000Tons/Yr	Year 1996
Unit		Emis Fac Ref	
Emis Calculation			
Est Fugitive Lower	Upper	Tons/Yr	
Pollutant Comment			

Enter Pollutant Code
 Count: *1

<List><Replace>

Allowable | poll Test | test Meth | History | Return | exit

Emission Unit Pollutant

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
OWNER LEE COUNTY

EU ID 002 Desc UNIT #2 MUNICIPAL SOLID WASTE COMBUSTOR

Pollutant CO Carbon Monoxide
Status A ACTIVE # Allow 001 % Control Efficiency
Pri Cont Sec Cont
Reg Class

Potential Emission Lb/Hr Ton/Yr Synth Ltd
Emission Method
Emission Factor Act Emis 22.770000Tons/Yr Year 1996
Unit Emis Fac Ref
Emis Calculation
Est Fugitive Lower Upper Tons/Yr
Pollutant Comment

Enter Pollutant Code

Count: *1

<List><Replace>

Allowable | poll Test | test Meth | History | Return | eXit

Emission Unit Pollutant

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
OWNER LEE COUNTY

EU ID 002 Desc UNIT #2 MUNICIPAL SOLID WASTE COMBUSTOR

Pollutant FL Fluorides - Total (elemental fluorine and floride comp
Status A ACTIVE # Allow 001 % Control Efficiency
Pri Cont Sec Cont
Reg Class

Potential Emission Lb/Hr Ton/Yr Synth Ltd
Emission Method
Emission Factor Act Emis 0.030000Tons/Yr Year 1996
Unit Emis Fac Ref
Emis Calculation
Est Fugitive Lower Upper Tons/Yr
Pollutant Comment

Enter Pollutant Code

Count: *1

<List><Replace>

Allowable | poll Test | test Meth | History | Return | eXit

Emission Unit Pollutant

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
OWNER LEE COUNTY

EU ID 002 Desc UNIT #2 MUNICIPAL SOLID WASTE COMBUSTOR

Pollutant PM Particulate Matter - Total
Status A ACTIVE # Allow 002 % Control Efficiency
Pri Cont Sec Cont
Reg Class

Potential Emission Lb/Hr Ton/Yr Synth Ltd
Emission Method
Emission Factor Act Emis 3.780000Tons/Yr Year 1996
Unit Emis Fac Ref
Emis Calculation
Est Fugitive Lower Upper Tons/Yr
Pollutant Comment

Enter Pollutant Code
Count: *1 <List><Replace>

Query all | Add a poll | Return | eXit

Emission Unit Pollutant

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
OWNER LEE COUNTY

EU NO. 002 Desc UNIT #2 MUNICIPAL SOLID WASTE COMBUSTOR

Pollutant

Status

FL	Fluorides - Total (elemental fluorine and fl	A ACTIVE
H015	Arsenic Compounds (inorganic including arsin	A ACTIVE
H021	Beryllium Compounds	A ACTIVE
H106	Hydrogen chloride (Hydrochloric acid)	A ACTIVE
H114	Mercury Compounds	A ACTIVE
NOX	Nitrogen Oxides	A ACTIVE
PB	Lead - Total (elemental lead and lead compou	A ACTIVE
PM	Particulate Matter - Total	A ACTIVE
PM10	Particulate Matter - PM10	A ACTIVE
SAM	Sulfuric Acid Mist	A ACTIVE

Pollutant Code

Count: 12

^ v

<Replace>

Query all | Add a poll | Return | eXit

Emission Unit Pollutant

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
OWNER LEE COUNTY

EU NO. 002 Desc UNIT #2 MUNICIPAL SOLID WASTE COMBUSTOR

Pollutant

Status

DIOX	Dioxin/Furan	A ACTIVE
FL	Fluorides - Total (elemental fluorine and fl	A ACTIVE
H015	Arsenic Compounds (inorganic including arsin	A ACTIVE
H021	Beryllium Compounds	A ACTIVE
H106	Hydrogen chloride (Hydrochloric acid)	A ACTIVE
H114	Mercury Compounds	A ACTIVE
NOX	Nitrogen Oxides	A ACTIVE
PB	Lead - Total (elemental lead and lead compou	A ACTIVE
PM	Particulate Matter - Total	A ACTIVE
PM10	Particulate Matter - PM10	A ACTIVE

Pollutant Code

Count: 11

^ v

<Replace>

Allowable | poll Test | test Meth | History | Return | exit

Emission Unit Pollutant

POINT AIRS ID 0710119 OFFICE SD Sth: FT MYERS
NAME LEE COUNTY ENERGY RECOVERY FA COUNTY LEE
OWNER LEE COUNTY

EU ID 002 Desc UNIT #2 MUNICIPAL SOLID WASTE COMBUSTOR

Pollutant VOC Volatile Organic Compounds
Status A ACTIVE # Allow 001 % Control Efficiency
Pri Cont Sec Cont
Reg Class

Potential Emission Lb/Hr Ton/Yr Synth Ltd
Emission Method
Emission Factor Act Emis 2.275000Tons/Yr Year 1996
Unit Emis Fac Ref
Emis Calculation
Est Fugitive Lower Upper Tons/Yr
Pollutant Comment

Enter Pollutant Code

Count: *1

<List><Replace>

History | Fugitive | Poten Emis | Capped EU | Return | eXit

Facility Pollutant

POINT AIRS ID 1010056 OFFICE SWD SW: TAMPA
NAME PASCO COUNTY RESOURCE RECOVER COUNTY PASCO
OWNER PASCO COUNTY (OWNER)

Pollutant PM Particulate Matter - Total
Poll Class A ACTUAL OR POTENTIAL EMISSIONS ARE ABOVE THE APPLICABLE
MAJOR SOURCE THRESHOLDS.

Emission CAP	Pounds/Hr	Tons/Yr
Basis		
Regulation		
Comment		

Act Emis Year1996	Actual Emission	3.072770Tons/Yr
Potential Sum	61.729900Tons/Yr HAP Pot SubTotal	2.762100Tons/Yr

X 45 13 TPY

Enter Pollutant Code

Count: 7 ^ v

<List><Replace>

History | Fugitive | Poten Emis | Capped EU | Return | eXit

Facility Pollutant

POINT AIRS ID 1010056 OFFICE SWD SW: TAMPA
NAME PASCO COUNTY RESOURCE RECOVER COUNTY PASCO
OWNER PASCO COUNTY (OWNER)

Pollutant PM10 Particulate Matter - PM10
Poll Class B ACTUAL AND POTENTIAL EMISSIONS BELOW ALL APPLICABLE MAJOR
SOURCE THRESHOLDS

Emission CAP	Pounds/Hr	Tons/Yr
Basis		
Regulation		
Comment		

Act Emis Year1996	Actual Emission	3.072770Tons/Yr
Potential Sum	0.000000Tons/Yr HAP Pot SubTotal	2.762100Tons/Yr

Enter Pollutant Code
Count: 8 ^ v

<List><Replace>

History | Fugitive | Poten Emis | Capped EU | Return | eXit

Facility Pollutant

POINT AIRS ID 1010056 OFFICE SWD SW: TAMPA
NAME PASCO COUNTY RESOURCE RECOVER COUNTY PASCO
OWNER PASCO COUNTY (OWNER)

Pollutant FL Fluorides - Total (elemental fluorine and floride com
Poll Class B ACTUAL AND POTENTIAL EMISSIONS BELOW ALL APPLICABLE MAJOR
SOURCE THRESHOLDS

Emission CAP	Pounds/Hr	Tons/Yr
Basis		
Regulation		
Comment		

Act Emis Year1996	Actual Emission	0.259000Tons/Yr
Potential Sum	14.400000Tons/Yr HAP Pot SubTotal	2.762100Tons/Yr

x 4 = 1784

Enter Pollutant Code

Count: 2 ^ v

<List><Replace>

History | Fugitive | Poten Emis | Capped EU | Return | eXit

Facility Pollutant

POINT AIRS ID 1010056 OFFICE SWD SW: TAMPA
NAME PASCO COUNTY RESOURCE RECOVER COUNTY PASCO
OWNER PASCO COUNTY (OWNER)

Pollutant CO Carbon Monoxide
Poll Class A ACTUAL OR POTENTIAL EMISSIONS ARE ABOVE THE APPLICABLE
MAJOR SOURCE THRESHOLDS.

Emission CAP	Pounds/Hr	Tons/Yr
Basis		
Regulation		
Comment		

Act Emis Year1996	Actual Emission	19.060000Tons/Yr
Potential Sum	180.270000Tons/Yr HAP Pot SubTotal	2.762100Tons/Yr

x4 ≈ 80 TPY

Enter Pollutant Code

Count: 1 v

<List><Replace>

History | Fugitive | Poten Emis | Capped EU | Return | eXit

----- Facility Pollutant -----

POINT AIRS ID 1010056 OFFICE SWD SW: TAMPA
NAME PASCO COUNTY RESOURCE RECOVER COUNTY PASCO
OWNER PASCO COUNTY (OWNER)

Pollutant SAM Sulfuric Acid Mist
Poll Class A ACTUAL OR POTENTIAL EMISSIONS ARE ABOVE THE APPLICABLE
MAJOR SOURCE THRESHOLDS.

Emission CAP	Pounds/Hr	Tons/Yr
Basis		
Regulation		
Comment		

Act Emis Year1996	Actual Emission	0.000000Tons/Yr
Potential Sum	66.000000Tons/Yr HAP Pot SubTotal	2.762100Tons/Yr

Enter Pollutant Code

Count: 9 ^ v

<List><Replace>

FINAL DETERMINATION

Hillsborough County Refuse-to-Energy Facility
Tampa, Florida
PSD-FL-121(B) and PA 83-19
Facility ID. No. 0570261

An Intent to Issue an air construction permit, to authorize the replacement of the air pollution control equipment on existing municipal waste incinerators, for Hillsborough County Refuse-to-Energy Facility was distributed on January 28, 1998. This facility is located at 350 Falkenburg Road in Tampa, Hillsborough County, Florida. The Public Notice of Intent to Issue Air Construction Permit was published in The Tampa Tribune on February 6, 1998.

In response to the public notice, comments were received by telephone from Carlos Gonzalez, Engineer for the Hillsborough County Environmental Protection Commission (HCEPC), Dan Strobridge of Camp Dresser & McKee (CDM) and Michael Hewett from the DARM/OPAPM office. Their verbal comments were primarily related to identifying typographical errors or minor points of clarification.

The County's Consultant, Dan Strobridge of Camp Dresser & McKee (CDM) also sent written comments (letter dated February 20, 1998). These comments were to clarify wording in Section III Subsection B and Specific Condition B.9; to revise limitations expressed in terms of pounds per hour and pounds per million Btu for the pollutants mercury, hydrochloric acid and sulfur dioxide; to delete initial compliance test for volatile organic compounds (VOCs) and sulfuric acid mist (SAM); to change the 45-day requirement for submitting stack test report; and to request only initial and operating permit removal tests for beryllium (Be) and fluorides (F). Mr. Dan Strobridge also requested to change the expiration date of the permit and to clarify that the permit should specify that PM testing using EPA Method 5 would utilize the front-half catch of the sampling train.

The Department evaluated their requests and agreed to the following: 1) To clarify the wording in Section III Subsection B and Specific Condition B.9. 2) To revise the emission limits Table (Specific Condition B.8) to include the percentage reduction as specified in the NSPS guidelines. 3) The initial compliance tests for VOC and SAM were not deleted from the permit nor the annual test requirements for Be and F (the test results will be evaluated for at least a 5 year period), for the reasons stated in the Technical Evaluation (refer to sections 7 and 8 of this technical evaluation). 4) The definition of allowable wastes was also slightly revised for clarity, so the permit properly reflects the Department's intent with respect to the definition of allowable wastes for this facility. 5) The 45-day time period for submitting the stack test report will remain as noted, this requirement is in accordance with Rule 62-297.310 (8) F.A.C. 6) The EPA Method 5 is a front-half catch method, and measurement of particulate matter captured in the back half of the sampling train is not required for this source. The emissions limited pollutant is particulate matter not PM₁₀ as defined in 40 CFR 60.51b which refers specifically to EPA Reference Method 5. To further clarify that the emissions limited pollutant is particulate matter, Specific Condition B.8. has been changed to refer only to PM, not PM₁₀, and the requirements for particulate matter testing from 40 CFR 60.58b(c)(3) have been added to Specific Condition B.10. 7) The expiration date of this permit was changed to March 30, 2003.

The final action of the Department will be to issue the permit with the changes noted above.

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

In the Matter of an
Application for Permit Modification

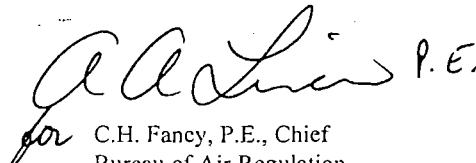
Mr. Daniel A. Kleman
County Administrator
Hillsborough County
601 East Kennedy
Tampa, Florida 33602

Resource Recovery Facility
Permit Nos. PSD-FL-121(B)
FID No. 0570261
Air Pollution Control Project
Hillsborough County

Enclosed is the Final Permit Modification Number PSD-FI-121 (B). This construction permit is to replace and improve the air pollution control system; define process throughput parameters; increase amount of waste that can be burned on a short-term basis, and specify which materials can be burned at its solid waste energy recovery facility located at 350 Faulkenburg Road, Tampa, Hillsborough County, Florida. 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.


for 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 6-29-98 to the person(s) listed:

Daniel Kleman, County Administrator *
Ronnie Mason, City Council Chairman, Tampa
Brian Beals, EPA
John Bunyak, NPS
Douglas W. Fredericks, P.E.
Jerry Campbell, HCEPC
Bill Thomas, SWD
Martha Chumbler, Carlton Fields
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.


(Clerk) 6-29-98
(Date)

THE TAMPA TRIBUNE
Published Daily
Tampa, Hillsborough County, Florida

State of Florida }
 County of Hillsborough } ss.

Before the undersigned authority personally appeared J. Rosenthal, who on oath says that she is Classified Billing Manager 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 _____

NOTICE OF APPLICATION

was published in said newspaper in the issues of _____

FEBRUARY 6, 1998

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 she has neither paid nor promised any person, this advertisement for publication in the said newspaper.

J. Rosenthal

 9

Sworn to and subscribed before me, this _____ day
 of _____ FEBRUARY, A.D. 1998

Personally Known _____ or Product Identification _____
 Type of Identification Produced _____

(SEAL)

Susie Lee Slaton



PUBLIC NOTICE OF INTENT TO ISSUE PERMIT MODIFICATION
 STATE OF FLORIDA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 DRAFT Permit No. PSD-FL-121(B)
 Hillsborough County Resource Recovery Facility
 Hillsborough County
 The Department of Environmental Protection (Department) gives notice of its intent to issue a permit modification to Hillsborough County to: replace and improve the air pollution control system; define process throughput parameters; increase amount of waste that can be burned on a short-term basis, and specify which materials can be burned at its resource recovery facility located at 350 Falkenburg Road, Tampa, Hillsborough County, Florida. It was determined that an additional review for the Prevention of Significant Deterioration (PSD) is not applicable and a Best Available Control Technology determination was not required pursuant to Rule 62-212.400, and 410., F.A.C. The applicant's name and address are: Hillsborough County, 601 East Kennedy, Tampa, Florida 33602.

The purpose of the project is to comply with 40 CFR 60, Subpart Cb - Emission Guideline and Compliance Times for Municipal Waste Combustors That Are Constructed on or Before December 19, 1995. The Emission Guideline was developed pursuant to Section 129 (Solid Waste Combustion) of the Clean Air Act as amended in 1990. These requirements are incorporated in Department Rule 62-204.800(8), F.A.C.

The facility consists of three nominal 400 ton per day (TPD) mass burn furnaces, water-wall boilers, ash discharge systems, air pollution control equipment, and a single three-stage steam turbine with a 29 megawatt electrical generator. The proposed improvements to the air pollution control system consist of replacing the existing electrostatic precipitators with lime spray dryer absorbers and fabric filters. This will add acid gas control for sulfur dioxide and hydrogen chloride, improve particulate (PA/PM 10) collection efficiency, and enhance collection of heavy metals, including lead and cadmium. An activated carbon injection system will be installed for additional mercury control. Nitrogen oxides will be controlled by selective non-catalytic reduction. Combustion controls will be incorporated to minimize formation of dioxins and furans, volatile organic compounds, and carbon monoxide.

The original PSD permit contained annual testing requirements only for particulate matter. Specific limits and testing requirements are proposed for all previously mentioned pollutants. Continuous emission monitors will be installed for sulfur dioxide, nitrogen oxides, oxygen, carbon monoxide, and temperature of key points.

The units were originally permitted to utilize 'refuse such as garbage and trash' as defined in the Department's solid waste rules. The modified permit will specify the wastes as: solid waste including municipal solid waste (MSW) as defined at 40 CFR 60.51b and Section 403.704(5), F.S.; segregated wastes such as records and documents, non-hazardous contraband, clean wood and land clearing debris, packaging materials, clothing and fabric remnants and certain types of floor covering; segregated waste tires (not to exceed 3 percent of the total wastes received); other segregated wastes (not to exceed 5 percent of the total wastes received) such as construction and demolition debris, oil spill debris, expired or off-spec packaged or unpackaged consumable goods (e.g. pharmaceuticals), consume

P 265 659 286

US Postal Service
Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent To		Daniel Kennedy	
Street & Number		Hillsboro Co.	
Post Office, State, & ZIP Code		RRF	
Postage	Tampa, FL		
Certified Fee			
Special Delivery Fee			
Restricted Delivery Fee			
Return Receipt Showing to Whom & Date Delivered			
Return Receipt Showing to Whom, Date, & Addressee's Address			
TOTAL Postage & Fees	\$		
Postmark or Date	1-28-98		
PSD-F1-121(B)			

PS Form 3800, April 1995

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. Addressee's Address
2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. Daniel A. Klemm, CA
 Hillsborough County
 601 E. Kennedy
 Tampa, FL 33602

4a. Article Number

P265 659 286

4b. Service Type

- | | |
|---|---|
| <input type="checkbox"/> Registered | <input checked="" type="checkbox"/> Certified |
| <input type="checkbox"/> Express Mail | <input type="checkbox"/> Insured |
| <input type="checkbox"/> Return Receipt for Merchandise | <input type="checkbox"/> COD |

7. Date of Delivery

FFR A 2 1998

5. Received By: (Print Name)

6. Signature (Addressee or Agent)

X

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.

ES POSTAL SERVICE



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Print your name, address, and ZIP Code in this box •

RECEIVED

FEB 11 1998

**BUREAU OF
AIR REGULATION**

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation, NSRS
2600 Blair Stone Road, MS 5505
Tallahassee, Florida 32399-2400



P 265 659 154

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sender	
Don Elias	
Street & Number	
RTP	
Post Office, State, & ZIP Code	
Sheen Brook, NJ	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	
Hillsboro NJ 2-3-97 RAF	

PS Form 3800, April 1995

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. Addressee's Address
2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Don Elias
RTP Env. Assoc. Inc.
239 US Hwy 22 East
Sheen Brook, NJ

08812-1909

4a. Article Number

P 265 659 154

4b. Service Type

- | | |
|---|---|
| <input type="checkbox"/> Registered | <input checked="" type="checkbox"/> Certified |
| <input type="checkbox"/> Express Mail | <input type="checkbox"/> Insured |
| <input type="checkbox"/> Return Receipt for Merchandise | <input type="checkbox"/> COD |

7. Date of Delivery

2/6/97

5. Received By: (Print Name)

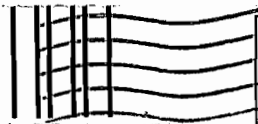
6. Signature: (Addressee or Agent)

X Mary P. Jordan

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.

UNITED STATES POSTAL SERVICE



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Print your name, address, and ZIP Code in this box •

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation, NSRS
2600 Blair Stone Road, MS 5505
Tallahassee, Florida 32399-2400

RECEIVED

FEB 12 1997

BUREAU OF
AIR REGULATION



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

January 27, 1998

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Daniel A. Kleman
County Administrator
Hillsborough County
601 East Kennedy
Tampa, Florida 33602

Re: Resource Recovery Facility Air Pollution Control Project
Draft Permit No. PSD-FL-121(B)

Dear Mr. Kleman:

Enclosed is one copy of the Draft Modification to the Permit for the Prevention of Significant Deterioration of Air Quality (PSD Permit) for the Hillsborough County Resource Recovery facility located at 350 Falkenburg Road, Tampa, Hillsborough County, Florida 33619. The Department's Intent to Issue Permit Modification, the DRAFT Permit Modification, Technical Evaluation and Preliminary Determination, and the "PUBLIC NOTICE OF INTENT TO ISSUE PERMIT MODIFICATION" are also included.

The "PUBLIC NOTICE OF INTENT TO ISSUE PERMIT MODIFICATION" must be published within 30 (thirty) days of receipt of this letter. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A. A. Linero, P.E., Administrator, New Source Review Section at the above letterhead address. If you have any other questions, please contact Ms. Teresa Heron or Mr. Linero at 850/488-1344.

Sincerely,

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

CHF/th

Enclosures

In the Matter of an
Application for Permit by:

Hillsborough County
601 East Kennedy
Tampa, Florida 33602

DRAFT Permit No. PSD-FL-121(B)
Resource Recovery Facility
Hillsborough County

INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit modification (copy of DRAFT Permit modification attached) for the proposed project, detailed in the application specified above, for the reasons stated below.

The applicant, Hillsborough County, applied on September 16, 1997 to the Department for a modification of the Prevention of Significant Deterioration Permit (PSD Permit) originally issued in 1986 by the United States Environmental Protection Agency. The modification is to: replace and improve the air pollution control system to comply with the requirements of 40 CFR 60 Subpart Cb, Emission Guideline and Compliance Times for Municipal Waste Combustors That Are Constructed on or before December 19, 1995; specify which materials can be burned; and define process throughput parameters at the County's nominal 1200 ton per day Resource Recovery Facility located at 350 Falkenburg Road, Tampa, Florida 33619.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. The Department has determined that a PSD permit modification is required for the proposed work and other changes requested by the applicant.

The Department intends to issue this permit modification based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed "Public Notice of Intent to Issue PERMIT MODIFICATION". The notice shall be published one time only within 30 (thirty) days in the legal advertisement section of a newspaper of general circulation in the area affected. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 904/488-1344; Fax 904/ 922-6979) within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit pursuant to Rule 62-103.150 (6), F.A.C.

The Department will issue the FINAL Permit Modification, in accordance with the conditions of the enclosed DRAFT Permit Modification unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed DRAFT Permit issuance action for a period of 14 (fourteen) days from the date of publication of "PUBLIC NOTICE OF INTENT TO ISSUE PERMIT MODIFICATION." Written comments should be provided to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit Modification, the Department shall issue a Revised DRAFT Permit Modification and require, if applicable, another Public Notice.



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

January 30, 1997

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Donald F. Elias
RTP Environmental Associates Inc.
239 U.S. Highway 22 East
Green Brook, New Jersey 08812-1909

Dear Mr. Elias:

Re: Hillsborough County RRF Emission Guidelines Compliance Project
Your letters of November 14 and 19, 1996

The Department is in receipt of your letters dated November 14 and 19, 1996, on behalf of the Hillsborough County Resource Recovery Facility (HCRRF) requesting approval of various issues prior to submittal of the construction permit application. The purpose of the referenced project is to comply with 40 CFR 60 Subpart Cb - Emission Guidelines and Compliance Times for Municipal Waste Combustors that are constructed on or before December 19, 1995 (adopted as in Rule 62-204.800(8)(b), F.A.C.). These issues pertain to the Reasonable Available Control Technology (RACT) requirements for minor and fugitive sources of Particulate Matter (PM) as well as the definition of municipal solid waste (MSW) and the most appropriate process limitation for the proposed project.

The Department has reviewed your request and has the following responses:

RACT DETERMINATION

The Subpart Cb requirements for PM from minor and fugitive sources proposed for these sources appear to be reasonable as RACT. The specific plan will be reviewed with your application and a determination will be made as part of our technical review pursuant to the Department's authority contained in Rule 62-296.711(2)(c) F.A.C. However, the proposal to use a different test method (EPA Method 22 instead of EPA Method 9) will be reviewed under *Exceptions and Approval of Alternate Procedures and Requirements*, Rule 62-297.620 F.A.C. The Department does not have the authority under 62-296.711 (3) F.A.C. to approve a different test method.

Please submit a request in accordance with Rule 62-297.620 F.A.C., for approval of an alternate sampling procedure (ASP) along with your application.

DEFINITION OF MUNICIPAL SOLID WASTE (MSW) AS INCLUDED IN THE EG

The Department has received requests other than yours regarding the definition of solid waste from other MWC operators. We have referred these matters to the Division's Office of Policy Analysis and Program Management who will coordinate a response with this Bureau, the Office of General Counsel, and the Bureau of Solid and Hazardous Waste Management. We will provide a determination on this matter during the course of reviewing the application.

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

OPERATING CONDITIONS

PROCESS LIMITATION:

Based on preliminary discussions, the Department is not inclined to delete the current MSW throughput limit measured as tons per day (TPD). We are continuing to review the matter and will make a final decision during review of the application.

We recognize that the throughput rating depends on the heating value of the waste. Heating value of municipal waste can vary significantly from one part of the country to another. It can also vary in time based on changing composition of municipal waste - for example from the continuing trend toward burning of plastics. Therefore a 250 TPD unit in one part of the country and at a given time may not be a 250 TPD unit at another site or time. Note however that based on the increasing amounts of plastic in waste, we would expect the units to be capable of processing less waste instead of more than originally designed to handle (unless they were overdesigned to begin with).

Now that the units at HCRRF have operated for years, it should be possible to provide ratings for them and get the manufacturer or modification contractor to guarantee their ability to efficiently burn waste throughout an appropriate operating window. If the new ratings (for waste throughput and steam production) and future method of operation will result in an increase in emissions, it will be necessary to conduct a PSD and BACT Review. You will need to assess and reconcile the ramifications of the permit revisions required to incorporate the NSPS requirements with the possible PSD/BACT implications of a throughput increase.

The proposal to use steam production to calculate the solid waste firing rate (in lieu of actually weighing the material) will be acceptable *only* under the following circumstances:

1. COMPLIANCE TESTING

Under this scenario, HCRRF would be required to use the F-factor in Table 19-1 of EPA Method 19 or collect the samples necessary to determine a fuel specific F- factor and heating value at the time of each run of the emission test. The procedures specified in EPA Method 19 should be used to determine the fuel specific F- factor and heating value. This eliminates boiler efficiency as a potential source of error. Subpart Ea [40 CFR 60.58a (b) (4)] requires affected sources to use the F- factor and EPA Method 19 in the emission rate determination. EPA Method 19 allows HCRRF the option of using the F- factor in Table 19 or determining a source specific F- factor using the procedure given in EPA Method 19.

2. CONTINUOUS COMPLIANCE

Under this scenario, HCRRF will either need to install weighing devices, or devices to continuously measure flue gas flow rate and oxygen and content. HCRRF would also need to either use the F- factor in Table 19-1 of EPA Method 19 or conduct daily analyses to determine the fuel specific F- factor and heating value. When units are continuously charged the options include, but are not limited to, belt scales. For units that are continuously charged, the weighing options may include a weighing device mounted on the crane based on the principle of a strain gauge.

Part "B", "C"
Where is "A" and
the APP