

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
NOTICE OF PERMIT AMENDMENT

In the matter of an  
Application for Permit Amendment by:

DEP File No. PSD-FL-006A  
Dade County

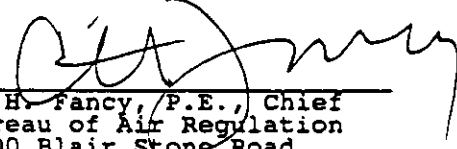
Mr. Ben Guilford II, Director  
Department of Solid Waste Management  
Dade County  
8675 N.W. 53rd Street  
Suite 20  
Miami, Florida 33166

Enclosed is Construction Permit Amendment Number PSD-FL-006A for modifying the existing four incinerator boilers and the bulky waste processing system at your facility located at 6990 NW 97th Avenue, Miami, Dade County, Florida 33166. This permit amendment will not change the intent of the previously issued PSD permit nor will it result in an increase of emissions. This permit is issued pursuant to Section 403, Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, 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 Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION

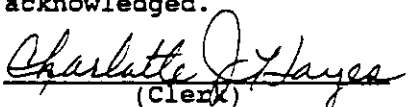
  
C. H. Fancy, P.E., Chief  
Bureau of Air Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400  
904-488-1344

CERTIFICATE OF SERVICE

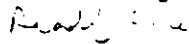
The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT AMENDMENT and all copies were mailed before the close of business on 12/16/94 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,  
on this date, pursuant to  
§120.52(11), Florida Statutes,  
with the designated Department  
Clerk, receipt of which is hereby  
acknowledged.

 12/16/94  
(Clerk) (Date)

Copies furnished to:  
David Buff, P.E., KBN  
Hamilton Owen, PPS  
Richard Donelan, OGC  
Isidore Goldman, SED  
Patrick Wong, DERM  
John Bunyak, NPS  
Jewell Harper, EPA

  
Trans.  
Clerk

12-16-94

## FINAL DETERMINATION

PSD-FL-006(A)

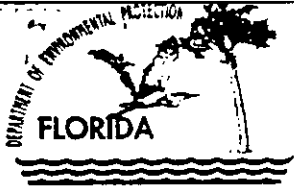
This permit amendment, which includes the upgrading of the pollution control equipment and the modification of the existing bulky waste processing system at the existing Dade Solid Waste Resource Recovery facility, was distributed on October 25, 1994. The Notice of the Intent was published in the Miami Daily Business Review on November 15, 1994. Copies of the permit amendment were available for inspection at the Dade County Department of Environmental Resources Management (DERM) office and the Department of Environmental Protection's (Department) Southeast District office and Bureau of Air Regulation office.

Comments were submitted by the U.S. Department of the Interior's National Park Service (NPS) and the Region IV U.S. Environmental Protection Agency (EPA) and they were received on November 10 and December 12, respectively. The NPS finds the proposal acceptable because of the reduction of pollutant emissions and impact. The EPA concurs with the proposal, but made it clear that 40 CFR 60, Subpart Cb, will become a requirement upon final rule promulgation and adoption by Florida. No changes to the proposed permit are required.

Also, comments regarding how to determine interim compliance (while the units are being modified) with the existing standards were submitted by Tom Tittle, Compliance Engineer, from the Department's Southeast District office. Mr. Tittle's concerns were addressed by Jim Pennington, Compliance Chief, Bureau of Air Regulation, and the response follows:

The existing emission standards apply to the existing units prior to the modification (i.e., upgrading the pollution control equipment). Upon completion of the modification, the new emission standards would apply. However, the requirements of 40 CFR 60.8, Performance Tests, Subpart A, apply and require that each affected facility shall be tested within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility.

The final action of the Department is to issue PSD-FL-006(A) as noticed during the public notice period.



# Department of Environmental Protection

Lawton Chiles  
Governor

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

Virginia B. Wetherell  
Secretary

**PERMITTEE:**  
**Dade County Department of**  
**Solid Waste Management**  
**8675 N.W. 53rd Street**  
**Suite 20**  
**Miami, Florida 33166**

**Permit Number: PSD-FL-006A**  
**Expiration Date: June 30, 1999**  
**County: Dade**  
**Latitude/Longitude: 25°50'06"N**  
**80°21'30"W**  
**Project: Dade County Waste to**  
**Energy Recovery Facility**  
**Units 1 through 4**

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-210, 212, 272, 275, 296, and 297, Florida Administrative Code (F.A.C.); and, Chapter 62-4, F.A.C. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department of Environmental Protection (Department) and specifically described as follows:

For the construction (modification) of the existing Dade County Solid Waste Energy Resource Recovery Facility consisting of four (4) existing municipal waste combustor units located at 6990 N.W. 97th Avenue in Miami, Florida. Each combustor unit shall be equipped with auxiliary burners to be fired by only propane gas at a maximum heat input of 80 MMBtu/hr. Emissions from each unit shall be controlled by a spray dryer scrubber followed by a baghouse. Mercury emissions shall be controlled by injecting activated carbon or other appropriate reagent. Each unit shall have a maximum permitted capacity of 27 tons per hour (TPH) of Refuse Derived Fuel (RDF) and a maximum heat input of 302.4 MMBtu/hr, based on a refuse derived fuel (RDF) heating value of 5600 Btu/lb. The Dade County Resource Recovery Facility is designed to process 3,000 tons per day (TPD), 18,000 tons per week (TPW) and 936,000 tons per year (TPY) of municipal solid waste (trash and garbage).

Each unit shall be allowed to produce a maximum of 180,000 lbs of steam per hour at 625 psig and 730°F. Two 38-MW (gross) turbine-generators (using the steam from the four boilers) will supply the in-plant electrical load. The balance of electricity generated will be sold to Florida Power Corporation.

The existing bulky waste processing system will be modified into a biomass fuel preparation system. The modified system will have the ability to process up to 400,000 tons per year (TPY) of bulky waste into biomass fuel. This biomass fuel would be transported off-site for use in biomass-fired cogeneration units located in south Florida.

**PERMITTEE:**  
Dade County Department of  
Solid Waste Management

**Permit Number:** PSD-FL-006A  
**Expiration Date:** June 30, 1999

The permittee shall submit at least four copies of the specifications prior to purchase and installation of any equipment authorized by this permit to the Department's Bureau of Air Regulation 90 days prior to commencement of operation. Such information shall include the following: make and model numbers of all pollution control equipment, continuous emissions monitoring devices, and related equipment. The permittee shall also submit operation and maintenance manuals and calibration procedures for the equipment to the Bureau of Air Regulation at least 90 days prior to commencing operations.

The power plant site certification number for this facility is PA77-08.

The emission unit(s) shall be constructed/modified in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are as follows:

Power Plant Site Certification package submitted on July 27, 1992, and related correspondence:

1. Model input information, September 2, 1992.
2. EPA's letter of September 16, 1992.
3. Department's letter of September 28, 1992.
4. Response to agency comments, February 17, 1993.
5. Application for Reasonable Available Control Technology (RACT), March, 1993.
6. Second response to agency comments, July 8, 1993.
7. KBN's letter of November 5, 1993.
8. Modified Expansion Project, December 14, 1993.
9. Fine Jacobson Schwartz Nash Block's letter of December 27, 1993.
10. KBN's letter with attachments received January 11, 1994.
11. KBN's letter with enclosure received January 13, 1994.
12. Fine Jacobson Schwartz Nash Block's letter of February 2, 1994, received via FAX.
13. KBN's letter received February 3, 1994.
14. Final Order (PA 77-08C) signed March 2, 1994, and filed on March 3, 1994.
15. KBN's letter received April 7, 1994.
16. KBN's letter received May 12, 1994.
17. KBN's letter received May 16, 1994.
18. Mr. C. H. Fancy's letter with attachment dated July 20, 1994.
19. Mr. C. H. Fancy's letter with attachment dated October 25, 1994.
20. NPS's letter received November 10, 1994.
21. Public Notice received December 2, 1994.
22. Mr. Tom Tittle's E-Mail received December 2, 1994.
23. EPA's letter received December 12, 1994.

**PERMITTEE:**  
Dade County Department of  
Solid Waste Management

**Permit Number:** PSD-FL-006A  
**Expiration Date:** June 30, 1999

**GENERAL CONDITIONS:**

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, F.S.. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), F.S., 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 of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, 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 F.S. and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

PERMITTEE:  
Dade County Department of  
Solid Waste Management

Permit Number: PSD-FL-006A  
Expiration Date: June 30, 1999

**GENERAL CONDITIONS:**

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

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

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

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

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

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

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

**PERMITTEE:**  
Dade County Department of  
Solid Waste Management

**Permit Number:** PSD-FL-006A  
**Expiration Date:** June 30, 1999

**GENERAL CONDITIONS:**

11. 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.

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

13. This permit also constitutes:

- ( ) Determination of Best Available Control Technology (BACT). Original permit issued in 1978 by EPA.
- ( ) Determination of Prevention of Significant Deterioration (PSD). Original permit issued in 1978 by EPA.
- ( ) Compliance with New Source Performance Standards (NSPS)

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

PERMITTEE:  
Dade County Department of  
Solid Waste Management

Permit Number: PSD-FL-006A  
Expiration Date: June 30, 1999

**GENERAL CONDITIONS:**

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.

**SPECIFIC CONDITIONS:**

**1. EMISSION STANDARDS**

- A. Maximum capacity of each unit shall not exceed 27 tons/hr and 302.4 MMBtu/hr based on a heating value of 5,600 Btu/lb of refuse derived fuel (RDF). The stack emissions from each unit shall not exceed any of the following limitations:

<u>Pollutant</u>	<u>Emission Limits</u>
(PM)	Particulate emissions from the baghouse shall not exceed 0.011 grains/dry standard ft <sup>3</sup> (gr/dscf), corrected to 7 percent O <sub>2</sub> (dry basis); 6.6 lbs/hr per unit and 29.0 tons/year per unit.
(PM <sub>10</sub> )	Particulate emissions less than 10 micron diameter shall not exceed 0.011 gr/dscf, corrected to 7 percent O <sub>2</sub> (dry basis); 6.6 lbs/hr per unit and 29.0 tons/year per unit.
(SO <sub>2</sub> )	Sulfur Dioxide emissions shall not exceed 30 parts per million by volume (ppmvd), corrected to 7 percent O <sub>2</sub> (dry basis); or, 70 percent removal efficiency, whichever, is least restrictive, based on a 24-hour daily period (i.e., block; midnight to midnight) geometric mean; not to exceed 70 ppmvd corrected to 7 percent O <sub>2</sub> , 0.16 lb/MMBtu per unit, 48.9 lbs/hr per unit, 24-hour block average; and, 214.2 tons/year per unit.
(NO <sub>x</sub> )	Nitrogen Oxide emissions shall not exceed 280 ppmvd corrected to 7 percent O <sub>2</sub> (dry basis); 0.5 lb/MMBtu, 140.4 lbs/hr per unit, 24-hour daily arithmetic average; and, 614.9 tons/year per unit.
(CO)	Carbon Monoxide emissions shall not exceed 200 ppmvd at 7 percent O <sub>2</sub> (dry basis); 0.20 lb/MMBtu, 61.1 lbs/hr per unit, 24-hour daily arithmetic average; and, 267.7 tons/year per unit.



SPECIFIC CONDITIONS:

- (VOC) Volatile Organic Compound (Hydrocarbons) emissions shall not exceed 25 ppmvd, corrected to 7 percent O<sub>2</sub> (dry basis); 0.0145 lb/MMBtu, 4.37 lbs/hr per unit and 19.1 tons/yr per unit. Due to DCRRF's location in a non-attainment area for ozone, the permittee must furnish to the Department evidence (i.e. test results) that this facility emits less than 100 tons per year of hydrocarbons, or must obtain legally enforceable limits for the hydrocarbon emissions from this facility.
- (HCl) Hydrogen Chloride emissions shall not exceed 25 ppmvd, corrected to 7 percent O<sub>2</sub> (dry basis); or, 90 percent removal, whichever is least restrictive, not to exceed 78 ppmvd corrected to 7 percent O<sub>2</sub>, 0.10 lb/MMBtu, 30.6 lbs/hr per unit, and 134.2 tons/year per unit.
- (Hg) Mercury emissions shall not exceed 70 micrograms per dry standard cubic meter (ug/dscm), corrected to 7 percent O<sub>2</sub> (dry basis); or, 20 percent by weight of the mercury in the flue gas upstream of the mercury control device (80 percent reduction by weight) not to exceed  $6.1 \times 10^{-5}$  lb/MMBtu, 0.018 lb/hr per unit, and 0.080 ton/year per unit.
- (Dioxins/  
Furans) Emissions of total (tetra-through octa-chlorinated) dibenzo-p dioxins and dibenzofurans shall not exceed 60 nanograms per standard cubic meter (ng/m<sub>3</sub>) corrected to 7 percent O<sub>2</sub> (dry basis),  $5.2 \times 10^{-8}$  lb/MMBtu,  $1.6 \times 10^{-5}$  lb/hr per unit, and  $6.9 \times 10^{-5}$  ton/year per unit.
- (F) Fluoride emissions shall not exceed 840 ug/m<sub>3</sub> corrected to 7 percent O<sub>2</sub> (dry basis),  $7.3 \times 10^{-4}$  lb/MMBtu, 0.22 lb/hr per unit and 0.97 ton/year per unit.
- (Cd) Cadmium emissions shall not exceed 15 ug/m<sub>3</sub> corrected to 7 percent O<sub>2</sub> (dry basis), 0.006 lb/hr per unit and 0.027 ton/year per unit.
- (H<sub>2</sub>SO<sub>4</sub>) Sulfuric Acid Mist emissions shall not exceed 2.1 ppmvd corrected to 7 percent O<sub>2</sub> (dry basis), 0.007 lb/MMBtu, 2.20 lbs/hr per unit and 9.8 tons/year per unit.
- (Pb) Lead emissions shall not exceed 380 ug/m<sub>3</sub> corrected to 7 percent O<sub>2</sub> (dry basis),  $3.3 \times 10^{-4}$  lb/MMBtu, 0.10 lb/hr per unit and 0.44 ton/year per unit.

PERMITTEE:  
Dade County Department of  
Solid Waste Management

Permit Number: PSD-FL-006A  
Expiration Date: June 30, 1999

**SPECIFIC CONDITIONS:**

- (Be) Beryllium emissions shall not exceed 0.46 ug/m<sub>3</sub> corrected to 7 percent O<sub>2</sub> (dry basis); 4.0x10<sup>-7</sup> lb/MMBtu, 0.00012 lb/hr per unit and 0.0005 ton/yr per unit.
- (As) Arsenic emissions shall not exceed 9.3 ug/m<sub>3</sub> corrected to 7 percent O<sub>2</sub> (dry basis); 8.1x10<sup>-6</sup> lb/MMBtu, 0.0024 lb/hr per unit and 0.011 ton/yr per unit.
- (VE) There shall be no visible emissions during the lime silo loading operations (i.e., less than 5 percent opacity).
- (VE) Emissions from the biomass and ash silo baghouses, ash conditioning agent silo baghouses, and mercury reactant silo baghouses shall not exceed a particulate matter limit of 0.01 grains/dscf, or visible emissions of 5 percent opacity.
- (VE) Visible emissions from any other baghouse exhaust shall not exceed 10 percent opacity (six minute average).

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 for any regulated pollutants and visible emissions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on request of the permittee, the Department may grant additional time.

**2. COMPLIANCE DETERMINATIONS**

**A. STACK TESTING**

**1) Test Methods**

Compliance with emission limiting standards referenced in Specific Condition No. 1 shall be demonstrated using EPA Methods, as specified in 40 CFR Part 60 (Standards of Performance for New Stationary Sources), Appendix A, or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants), Appendix B. No other test method shall be used unless approval from the Department has been received in writing. Any alternate sampling procedure shall be approved in accordance with Rule 62-297.620, F.A.C. A test protocol shall be submitted for approval to the Bureau of Air Regulation at least 90 days prior to testing.

**SPECIFIC CONDITIONS:**

<u>EPA Method</u>	<u>For Determination of</u>
1	Sample and Velocity Traverses for Stationary Sources.
2	Stack Gas Velocity and Volumetric Flow Rate.
3A	Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources.
4	Moisture Content in Stack Gases.
5	PM Emissions from Stationary Sources.
201 or 201A	PM <sub>10</sub> Emissions; however, if compliance with PM emission limitations are met, these tests are not required.
6C and 19	Sulfur Dioxide Emissions from Stationary Sources.
7E and 19	Nitrogen Oxide Emissions from Stationary Sources.
9	Visible Emission Determination of Opacity from Stationary Sources.
10	Carbon Monoxide Emissions from Stationary Sources.
12	Inorganic Lead Emissions from Stationary Sources.
13A or 13B	Total Fluoride Emissions from Stationary Sources.
23	Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans.
25	Total Gaseous Volatile Organic Compounds Concentration.
26	Hydrogen Chloride Emissions from Stationary Sources.
40 CFR 266 Appendix IX Section 3.1	Cadmium Emissions.

PERMITTEE:  
Dade County Department of  
Solid Waste Management

Permit Number: PSD-FL-006A  
Expiration Date: June 30, 1999

**SPECIFIC CONDITIONS:**

- 101A                    Gaseous Mercury Emissions from Sewage Sludge Incinerators.
- 104                    Beryllium Emissions from Stationary Sources.
- 108                    Gaseous Arsenic Emissions.

The weight of the refuse derived fuel (RDF) being fed to each combustor during the compliance test shall be determined by use of the EPA published "F" factor for MSW, which is 9,570 dscf/MMBtu (Fd), or 1,820 scf/MMBtu (Fc) (reference 40 CFR 60, Appendix A, Method 19, Table 19-1, 1993 edition).

Testing shall be conducted upstream (removal efficiency for SO<sub>2</sub> and HCl) and downstream (mass emissions) of the applicable control device for the following pollutants: SO<sub>2</sub>, Hg, and HCl. Soot blowers shall be operated in a mode consistent with normal cleaning requirements of the system during the compliance testing.

Test results will be the average of three valid one-hour runs. The Department's Southeast District office and the Dade County's Department of Environmental Resource Management (DERM) office will be notified at least 30 days in writing in advance of the compliance test(s).

Testing of emissions shall be conducted with the source operating at permitted capacity. Permitted capacity is defined as 90-100% of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then sources may be tested at less than 90% of the maximum operating rate allowed by the permit; in this case subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen consecutive days for purposes of additional compliance testing to regain the permitted capacity in the permit, with prior notification to the Department's Southeast District office and the Dade County's DERM office.

2) Testing Frequency

Compliance with emission standards contained in Condition No. 1 shall be determined by conducting stack tests within 60 days after achieving the maximum production rate at which this facility will be operating, but not later than 180 days after initial startup, and annually thereafter. These tests may be staggered throughout the year with the approval of the Department's Bureau of Air Regulation. For mercury emissions, testing shall be performed according to Rule 62-296.416, F.A.C.

PERMITTEE:  
Dade County Department of  
Solid Waste Management

Permit Number: PSD-FL-006A  
Expiration Date: June 30, 1999

**SPECIFIC CONDITIONS:**

Pursuant to Rule 62-297.340(2), F.A.C., when the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in this permit is being violated, it may require the owner or operator of the source to conduct compliance tests which identify the nature and quantity of pollutant emissions from the source and to provide a report on the results of said test to the Department's Southeast District office and the Dade County's DERM office.

Compliance testing of the ash silos (baghouse) and the lime silo loading operation (visible emissions test) shall be conducted within 90 days of completion of construction and initial operation; and, annually thereafter.

Notification requirements of 40 CFR Parts 60.7 and 61.09 shall be complied with by the owner/operator of the facility.

3) Sampling Ports

The permittee shall provide sampling ports in the air pollution control equipment inlet (control efficiency measurement) outlet duct or stack and shall provide access to the sampling ports in accordance with Chapter 62-297, F.A.C. Detailed drawings of the stacks showing testing facilities and sampling port locations, as required by Rule 62-297.345, F.A.C., shall be submitted to the Department's Southeast District office and the Dade County's DERM office for approval at least 60 days prior to construction of the stack.

4) Temperature Standard and Monitoring

(a) Temperature Standard

Except during a malfunction, the maximum flue gas temperature at the final particulate matter control device inlet, during the combustion of solid waste, shall not exceed 30 degrees Fahrenheit above the maximum temperature measured at the particulate matter control device inlet during the most recent mercury compliance test under which the facility was found to be in compliance with the mercury emission limit specified in Specific Condition No. 1, based on a 4-hour block arithmetic average. If the maximum flue gas temperature standard is exceeded during a malfunction, then up to three hours of that malfunction may be excluded from the 4-hour block arithmetic average.

**SPECIFIC CONDITIONS:**

(b) Temperature Monitoring

Continuous monitoring equipment shall be installed on each unit to monitor and record the flue gas temperature at the inlet to the final particulate matter control device and record the output. The monitors shall be calibrated, operated and maintained in accordance with the manufacturers' instructions.

(1) The temperature shall be calculated in 4-hour block arithmetic averages.

(2) The monitoring equipment shall meet the requirements of 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60.7(a)(5). The monitoring equipment is to be certified by the manufacturer to be accurate within  $\pm 1$  percent of the temperature being measured.

**B. MONITORING REQUIREMENTS**

1) Continuous Emissions Monitoring

Continuous monitors with recorders shall be installed, calibrated, maintained and operated for each unit, subject to approval by the Department, for the following:

- Carbon Monoxide
- Oxygen
- Opacity
- Sulfur Dioxide (for SO<sub>2</sub>, one monitor shall be located upstream of the scrubber and one shall be located downstream of the baghouse), as specified in 40 CFR 60, Appendix B
- Total steam production (lbs/hr, pressure, and temperature)
- Power generation (MW)
- Slake lime utilization
- Activated carbon or mercury reactant injection or usage rate
- Temperature of combustion zone

The monitoring devices shall meet the applicable requirements of Chapter 62-297, F.A.C., 40 CFR 60, Appendix F, 40 CFR 60.58a, 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), Notification Requirements. Data on monitoring equipment specifications, manufacturer, type calibration and maintenance requirements, and the proposed location of each monitor shall be provided to the Department's Southeast District office and the Dade County's DERM office for review at least 90 days prior to installation.

**SPECIFIC CONDITIONS:**

**C. OPERATING PROCEDURES**

Operating procedures shall include good combustion practices and proper training and certification of all operators and supervisors. The good combustion practices shall meet the guidelines established in 40 CFR 60, Subpart Ea, and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained and certified in plant specific equipment (40 CFR 60.56a). A list of all such certified personnel shall be submitted to the Department's Southeast District office and the Dade County's DERM office.

Department staff shall be given notice of any training sessions related to operation and maintenance of air pollution control devices.

The emission standards for this facility shall apply at all times, except during periods of start-up, shut-down, or malfunctions, provided that the duration of start-up, shut-down, or malfunction shall not exceed 2 hours in any 24 hour period. The start-up period commences when the affected facility begins the continuous burning of RDF but does not include any warm-up period when the affected facility is combusting only propane gas. During all startups, shutdowns and malfunctions the owner/operator shall use best operational practices to minimize air pollutant emissions.

Within 90 days prior to start-up of the modified facility, the permittee shall submit to the Department's Southeast District office and the Dade County's DERM office an operational procedures manual that identifies and describes best operational practices that will be used during startup, shutdown, and malfunctions of this facility.

**3. OPERATIONAL REQUIREMENTS**

**A. OPERATING CAPACITY**

- 1) Each unit shall not be operated in excess of the permitted maximum capacity of 302.4 MMBtu/hr, based on maximum heating value of 5,600 Btu/lb of RDF and 27 tons RDF per hour per unit.
- 2) The DCRRF is allowed to process 400,000 TPY of bulky waste (trash) for biomass fuel preparation. This biomass fuel will be transported and combusted off-site.

PERMITTEE:  
Dade County Department of  
Solid Waste Management

Permit Number: PSD-FL-006A  
Expiration Date: June 30, 1999

**SPECIFIC CONDITIONS:**

- 3) The DCRRF is allowed to process 3,000 tons per day, 18,000 tons per week, and 936,000 tons per year of RDF.
- 4) The DCRRF is allowed to operate continuously (8760 hours per year).

**B. AUXILIARY BURNERS**

Auxiliary burners for each unit shall be fired only by propane gas. They shall not exceed a heat input of 80 MMBtu/hr.

**C. RESTRICTION FOR TYPE OF WASTES COMBUSTED**

No biological waste, bio-medical waste, sewage sludge, or hazardous wastes shall be combusted at this facility without obtaining proper modification to the site certification conditions. The permittee may combust up to 3% (by weight) of used tires along with the RDF. If the applicant wishes to combust used tires in excess of 3% (by weight), a modification to this permit will be required prior to increasing the feed rate of the tires.

**D. BAGHOUSE OPERATIONS**

The baghouses installed downstream of the dry lime scrubbers shall be equipped with pressure drop monitoring instruments. The baghouses shall have a maximum air to cloth ratio of 4:1.

**E. STACK HEIGHT**

The height at the top of the boiler exhaust stacks shall not be less than 250 feet above grade.

**F. FUGITIVE (UNCONFINED) EMISSIONS**

Fugitive (unconfined) emissions at this facility shall be adequately controlled at all times (Rule 62-296.310, F.A.C.). All roads, except roads within the ash landfill, shall be adequately paved to control visible dust. Maximum 15 MPH speed limit signs shall be posted to minimize dust generation. 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 handling and silo system to minimize fugitive dust. The ash/residue in the bottom ash building shall be kept sufficiently moist to minimize fugitive dust during storage and handling operations.



**SPECIFIC CONDITIONS:**

In accordance with Rule 62-296.310(3)(b), F.A.C., reasonable precautions during the processing of biomass may include, but shall not be limited to the following:

- 1) Windows and doors of the enclosed space shall be kept closed except when needed to minimize fugitive dust.
- 2) Conveyor systems, screens, handling shredded wood fines and dust shall be covered or enclosed.
- 3) Shredded wood conveyor systems shall have baghouse pick up points at the transfer points.
- 4) Wind breaks shall be installed around the shredded wood load-out area.
- 5) Floors in the enclosed area shall be cleaned periodically.
- 6) Loading areas for shredded wood shall be cleaned or wetted as needed to minimize fugitive dust.
- 7) Trucks transporting shredded wood shall be covered.

**g. ODOR CONTROL**

No air pollutants that cause or contribute to objectionable odors are allowed from this facility pursuant to Rule 62-296.320(2), F.A.C. The truck access doors to the facility shall remain closed except during normal working shifts when garbage is being received near the garbage storage pit area to allow vehicle passage. To minimize odors at the facility, a negative pressure shall be maintained on the garbage tipping floor and air from within the garbage building will be used as the combustion air.

**4. MISCELLANEOUS REQUIREMENTS**

**A. EMISSION CONTROL EQUIPMENT DESIGN SPECIFICATIONS**

- 1) The combustor's particulate control baghouse shall be designed, constructed and operated to achieve a maximum emission rate of 0.011 grains per dscf, corrected to 7 percent O<sub>2</sub>.
- 2) The facility shall be equipped with dry scrubbers designed, constructed and operated to remove SO<sub>2</sub> at an efficiency of 70 percent, by weight, or to achieve a maximum emission rate of 30 ppmvd, corrected to 7 percent O<sub>2</sub>, 24-hour daily geometric mean, whichever is less stringent.

PERMITTEE:  
Dade County Department of  
Solid Waste Management

Permit Number: PSD-FL-006A  
Expiration Date: June 30, 1999

**SPECIFIC CONDITIONS:**

3) The Permittee shall submit to the Department's Bureau of Air Regulation, within thirty (30) days after it becomes available, copies of technical data pertaining to the selected emissions control systems. The technical data should include, but not be limited to, guaranteed efficiencies and emission rates, and major design parameters.

**B. RECORDKEEPING**

The DCRRF 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) the data collected from in-stack monitoring instruments;
- 2) the records on RDF input rates per unit;
- 3) the amount of propane gas burned per unit;
- 4) the results of all source tests or performance tests;
- 5) the amount of activated carbon or other reactant chemicals used for mercury control;
- 6) calibration logs for all instruments;
- 7) maintenance/repair logs for any work performed on equipment or instrument which is subject to this permit; and,
- 8) fuel analysis data.

All measurements, records, and other data required to be maintained by DCRRF shall be retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These data shall be made available to the Department upon request. The Department's Southeast District office and the Dade County's DERM office shall be notified in writing at least 15 days prior to the testing of any instrument required to be operated by these conditions of certification in order to allow witnessing by authorized personnel.

**C. REPORTING**

- 1) Two copies of the results of the emission tests for the pollutants listed in Condition 1 shall be submitted within forty-five days of the last sampling run to the Department's Southeast District office and the Dade County's DERM office.

PERMITTEE:  
Dade County Department of  
Solid Waste Management

Permit Number: PSD-FL-006A  
Expiration Date: June 30, 1999

**SPECIFIC CONDITIONS:**

Reports shall be in a format consistent with and shall include the information in accordance with Rule 62-297.570, F.A.C.

2) Emissions monitoring shall be reported to the Department's Southeast District office and the Dade County's DERM office on a quarterly basis in accordance with Chapter 62-297, F.A.C., and 40 CFR Part 60.7, as appropriate.

3) Notice of anticipated and actual start-up dates of control devices under this permit shall be submitted to the Department's Southeast District office and the Dade County's DERM office.

**D. REPORTING OF EXCESS EMISSIONS AND MALFUNCTIONS**

1) A malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, any other preventable upset condition, or preventable equipment breakdown shall not be considered malfunctions (Rule 62-210, F.A.C.).

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

3) Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonable be prevented during startup, shutdown, or malfunction shall be prohibited (Rule 62-210.700(4), F.A.C.).

4) In case of excess emissions resulting from malfunctions, the DCRRF shall notify the Department's Southeast District office and the Dade County's DERM office in accordance with Section 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report (Rule 62-210.700(6), F.A.C.).

5) The owner or operator shall submit excess emission reports for any calendar quarter during which there are excess emissions from the facility. 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:

**SPECIFIC CONDITIONS:**

(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 was inoperative except for zero and span checks, and the nature of the system repairs or adjustments [40 CFR 60.7(c)(2)].

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

(e) The owner or operator shall maintain a file of all measurements, including continuous monitoring systems performance evaluations; monitoring systems or monitoring device calibration; checks; adjustments and maintenance performed on these systems or devices; and all other information required by this permit recorded in a permanent form suitable for inspection [40 CFR 60.7(d)].

**E. CIRCUMVENTION**

The owner or operator of this facility shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard (40 CFR 60.12).

**5. RULE REQUIREMENTS**

This facility shall comply with all applicable provisions of Chapter 403, F.S.; Chapter 62-4 and Chapters 62-209 through

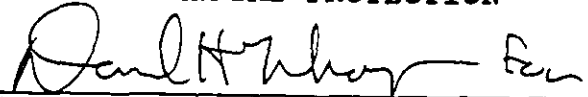
PERMITTEE:  
Dade County Department of  
Solid Waste Management

Permit Number: PSD-FL-006A  
Expiration Date: June 30, 1999

**SPECIFIC CONDITIONS:**

297, F.A.C.; 40 CFR 60; 40 CFR 61; and, specifically, Rule  
62-296.416, F.A.C., Waste-to-Energy Facilities.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION

  
\_\_\_\_\_  
Virginia B. Wetherell, Secretary  
Department of Environmental  
Protection

ATTACHMENTS AVAILABLE UPON REQUEST



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.  
ATLANTA, GEORGIA 30365

DEC 08 1994

RECEIVED

DEC 12 1994

4APT-AEB

Bureau of  
Air Regulation

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

SUBJ: Dade County Resource Recovery Facility,  
Amendment to PSD-FL-006(A)

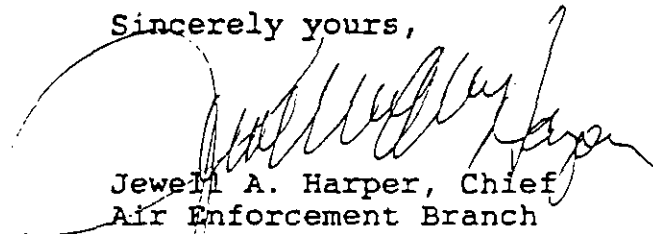
Dear Mr. Fancy:

This is to acknowledge receipt of the amendment to the Prevention of Significant Deterioration (PSD) permit for the above referenced facility, by your correspondence dated October 25, 1994. The existing facility consists of four municipal waste combustor (MWC) units, with an aggregate capacity of 3000 tons per day of municipal solid waste. The amendment proposes a replacement to the existing air pollution control system and an alteration in biomass fuel processing. The amendment is not subject to PSD requirements. This facility will, however, be subject to the future requirements of 40 C.F.R. Part 60, Subpart Cb (MWC Emission Guidelines) as these requirements become part of an approved plan from the State of Florida. The federal emission guidelines were proposed in the Federal Register on September 20, 1994, and are scheduled to be promulgated as a final rule in September 1995.

Your permit amendment proposes to allow the installation and upgrade of the existing air pollution control system to incorporate a spray dryer followed by a baghouse for each MWC unit and a mercury control system utilizing the injection of activated carbon or another appropriate reagent. Use of this new control system will reduce the emissions of MWC metals, organics, and acid gases, and mercury. In addition, this amendment proposes to modify the existing bulky waste processing system into a biomass fuel preparation system for combustion at other cogeneration facilities.

We have reviewed the package as submitted and have no adverse comments. Thank you for the opportunity to review and comment on this package. If you have any questions or comments, please contact Mr. Scott Davis of my staff at (404) 347-5014.

Sincerely yours,

A large, stylized handwritten signature in dark ink, likely belonging to Jewell A. Harper, is written over the typed name and title.

Jewell A. Harper, Chief  
Air Enforcement Branch  
Air, Pesticides and Toxics  
Management Division