PSD-FL-006C

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METRO DADE
SOLID WASTE MANAGEMENT

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March 10, 1999

Mr. Al Linero
Department of Air Resources Management
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Mr. Hamilton Oven
Office of Siting Coordinator
Florida Department of Environmental Protection
2699 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Dade County Resources Recovery Facility
40 CFR Subpart Cb modifications
PA 77-08, PSD-FL 006A & Title V Application

Dear Messers Linero & Oven

Dade County Department of Solid Waste Management (DSWM) herein submits a request to modify the Conditions of Certification (COC) and the Prevention of Significant Deterioration (PSD) permits which authorize the construction of the Dade County Resources Recovery Facility. The permits (PA77-08 and PSD-FL-006A) were revised in 1994 for the purpose of incorporating the Maximum Available Control Technology (MACT) standards of the Clean Air Act Amendments and for the purpose of allowing additional units to be constructed. At the time of that revision, the MACT standards were proposed as Subpart Ca, however, that proposal has since been withdrawn and re-promulgated as Subpart Cb. This application seeks to adopt the changes made to the earlier MACT standards (Subpart Ca) as contained in the final rule (Subpart Cb).

The changes necessary to incorporate Subpart Cb are proposed in the attachment hereto. They include: changing the to emission test methods to be consistent with Subpart Cb; allowing the installation of combustion controls for achieving Subpart Cb nitrogen oxide and carbon monoxide limits should combustion controls be determined to be necessary; adopting steam flow as the indicator of unit load (in lieu of waste tonnage) consistent with Subpart Cb; and amending emission measurement units to be consistent with the standard.

In addition to the changes to adopt the final MACT standards, this application also seeks to make minor modifications to: allow the use of natural gas as supplemental fuel; allow the disposal of used oil from on-site sources in the combustion units; and amend the baghouse inlet temperature accuracy measurements to those achievable by standards thermocouples.

In order for these changes to be effective following issuance of the Title V operating permit, corresponding changes to the Title V application will also be made. These changes will be submitted to FDEP within the next few weeks via FDEP's ELSA format.

8675 Northwest 53 Street, Suite 201, Miami, Florida 33166 • 305-592-1776

"Love Your Neighbor"

This submittal further requests an extension of the PSD permit expiration date to November 13, 2000, (as reflected in the attachment) in order to allow construction activities to continue until that date. November 13, 2000, is the completion-of-construction deadline in MACT implementation schedule which was approved by FDEP, and included in the SIP, for this facility. The change will allow the construction activities authorized by the PSD permit to continue if the Title V operating permit (which does not cover the construction period and which otherwise automatically replaces any expired permits) is issued prior to the November 13th date.

A check for payment of the $10,000 fee for modifying the COC and PSD permits, and for extending the PSD permit expiration date, is enclosed.

Please contact me, at 305-594-1677, or Anetha Lue with the plant operator (Montenay Power Corp) at 305-854-2229, if there are any questions regarding this request.

Sincerely,

Vicente Castro
Assistant Director, Technical Services

cc: W. Uchdorf – DSWM
R. Johns – DERM
P. Wong – DERM
J. Lurix – FDEP/WPB

PROPOSED CHANGES FOR PSD & COC PERMITS

- DCRRF

Notes :

- Permit numbers correspond to PSD Permit. Similar changes should be made to COC permit
- Inserted text is indicated by a single underline
- Deleted text is indicated by a strikeout
- Comments are shown in italics
- Normally underlined text, such as headings is indicated by a double underline..

PSD-FL-006C

RECEIVED
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BUREAU OF
AIR REGULATION

AIR CONSTRUCTION PERMIT APPLICATION
REVISION OF PREVENTION OF SIGNIFICANT DETERIORATION PERMIT AND CONDITIONS OF SITE CERTIFICATION
DADE COUNTY RESOURCE RECOVERY FACILITY
MIAMI, FLORIDA

Prepared For:

Montenay International Corporation
3225 Aviation Avenue, Fourth Floor
Miami, Florida 33133

Prepared By:

Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653

DISTRIBUTION:

3 Copies – Montenay International Corporation
2 Copies - Golder Associates Inc.

List of Attachments

Attachment 1

Air Construction Permit Application

Department of
Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT

APPLICATION FOR AIR PERMIT - LONG FORM

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

This section of the Application for Air Permit form identifies the facility and provides general information on the scope and purpose of this application. This section also includes information on the owner or authorized representative of the facility (or the responsible official in the case of a Title V source) and the necessary statements for the applicant and professional engineer, where required, to sign and date for formal submittal of the Application for Air Permit to the Department. If the application form is submitted to the Department using ELSA, this section of the Application for Air Permit must also be submitted in hard-copy.

Identification of Facility Addressed in This Application

Enter the name of the corporation, business, governmental entity, or individual that has ownership or control of the facility; the facility site name, if any; and the facility's physical location. If known, also enter the facility identification number.

1. Facility Owner/Company Name: **Dade County Resource Recovery Facility**	
2. Site Name: **Dade Co. Resource Recovery Fac.**	
3. Facility Identification Number:	[x] Unknown
4. Facility Location Information: Street Address or Other Locator: **6990 NW 97th Avenue** City: **Medley** County: **Dade** Zip Code: **33178**	
5. Relocatable Facility? [ ] Yes [x] No	6. Existing Permitted Facility? [x] Yes [ ] No

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:

   Vicente Castro, Asst. Director, Technical Services

2. Owner/Authorized Representative or Responsible Official Mailing Address:

Organization/Firm: **Dade County Dept. of Solid Waste Mgmt.**
Street Address: **8675 NW 53rd Street, Suite 201**
City: **Miami** State: **FL** Zip Code: **33166**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:

Telephone: **(305) 594-1677** Fax: **(305) 594-1591**

4. Owner/Authorized Representative or Responsible Official Statement:

I, the undersigned, am the owner or authorized representative of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

Signature: _____ Date: 3-12-99

* Attach letter of authorization if not currently on file.

Scope of Application

This Application for Air Permit addresses the following emissions unit(s) at the facility. An Emissions Unit Information Section (a Section III of the form) must be included for each emissions unit listed.

Emissions Unit ID		Description of Emissions Unit	Permit Type
Unit #	Unit ID		
1R	---	Units 1 through 4	ACIF

See individual Emissions Unit (EU) sections for more detailed descriptions.
Multiple EU IDs indicated with an asterisk (*). Regulated EU indicated with an "R".

Purpose of Application and Category

Check one (except as otherwise indicated):

Category I: All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.

This Application for Air Permit is submitted to obtain:

[ ] Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.

[ ] Initial air operation permit under Chapter 62-213, F.A.C., for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

[ ] Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed: _____

[ ] Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit to be renewed: _____

[ ] Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. Also check Category III.

Operation permit to be revised/corrected: _____

_____

[ ] Air operation permit revision for a Title V source for reasons other than construction or modification of an emissions unit. Give reason for the revision e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit to be revised: _____

Reason for revision: _____

_____

Category II: All Air Construction Permit Applications Subject to Processing Under Rule 62-210.300(2)(b),F.A.C.

This Application for Air Permit is submitted to obtain:

[ ] Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s): _____

_____

[ ] Renewal air operation permit under Rule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed: _____

[ ] Air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g.; to address one or more newly constructed or modified emissions units.

Operation permit to be revised: _____

Reason for revision: _____

_____

Category III: All Air Construction Permit Applications for All Facilities and Emissions Units.

This Application for Air Permit is submitted to obtain:

[x] Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

Current operation permit number(s), if any: _____

PSD-FL-006A; Site Certification PA77-08

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

Current operation permit number(s): _____

_____

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

Application Processing Fee

Check one:

[ ] Attached - Amount: _____ [x] Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations:

a) To incorporate NSPS, Subpart Cb requirements into the PSD Permit and Conditions of Certification; b) To modify the PSD Permit and Conditions of Certification to allow the use of natural gas as a supplemental fuel; and c) To modify the PSD Permit and Conditions of Certification to allow the disposal of used oil.

2. Projected or Actual Date of Commencement of Construction :

1 May 1999

3. Projected Date of Completion of Construction :

13 Nov 2000

Professional Engineer Certification

1. Professional Engineer Name: **David A. Buff**
   Registration Number: **19011**

2. Professional Engineer Mailing Address:
   Organization/Firm: **Golder Associates Inc.**
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653-1500**

3. Professional Engineer Telephone Numbers:
   Telephone: **(352) 336-5600** Fax: **(352) 336-6603**

4. Professional Engineer's Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [ ] if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [X] if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ] if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

David A. Buff — 3/5/99

Signature (seal) — Date

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact:

   Anetha Lue, Environmental Coordinator

2. Application Contact Mailing Address:

   Organization/Firm: **Montenay International Corporation**
   Street Address: **3225 Aviation Ave., 4th Floor**
   City: **Miami** State: **FL** Zip Code: **33133**

3. Application Contact Telephone Numbers:

   Telephone: **(305) 854-2229** Fax: **(305) 854-2272**

Application Comment

Attachment 2

Proposed Revisions to the Prevention of Significant Deterioration Permit For the Dade County Resource Recovery Facility

PROPOSED CHANGES FOR PSD & COC PERMITS - DCRRF

Notes :

- Permit numbers correspond to PSD Permit. Similar changes should be made to COC permit
- Inserted text is indicated by a single underline
- Deleted text is indicated by a strikeout
- Comments are shown in italics
- Normally underlined text, such as headings is indicated by a double underline..

PERMITTEE:
Dade County Department of Solid Waste Management

Permit Number: PSD-FL-006A
Expiration Date: ~~June 30, 1999~~ November 13, 2000

Comment - Add natural gas as supplemental fuel; remove process limits (in TPH, & MMBTU/HR); remove design description (in TPW & TPY as MACT does not require such definitions).

FACILITY DESCRIPTION

This permit is issued under the provisions of Chapter 403, Florida Status (F.S.), and chapters 62-210, 212, 272, 275, 296, 297 Florida Administrative Code (F.A.C); and, Chapter 62-4, F.A.C. The above name 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 or natural 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. Combustion controls shall be installed for carbon monoxide and nitrogen oxides, as necessary, to meet the emission limits of this permit.

Each unit shall operate within the nominal design capacity of ~~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 refused derived fuel (RDF) heating value of 5600 Btu/lb. Unit capacity is not limited by these design factors, under this permit, and each unit shall instead be limited by steam flow and shall be allowed to produce a maximum of 180,000 lbs of steam per hour at 625 psig and 730°F.unit

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 the 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 400,00 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 or combusted on-site.

(Comment: Insert pages 2 through 6, paragraph 1 from original permit)

GENERAL CONDITIONS:

(Comment: Insert Conditions 1 through 15 from original permit)
Comment – Add condition to allow COC to be automatically revised by PSD changes. COC permit should state similarly that it is automatically modified by the PSD permit.

16. This permit is federally enforceable and, in keeping with Section 403.516 (5) of the Florida Statutes, shall have the effect of automatically modifying the Conditions of Certification PA77-08 for this site when changes are necessary to conform to any subsequent amendments, modifications, or renewals which prescribe new or stricter criteria.

SPECIFIC CONDITIONS:

Comments - Remove capacity limit in "TPH" and replace with load limit (in "lbs/hr" steam flow) as determined by method in MACT; revise limits (in "ppm" & "percent removal") that are less stringent than MACT to MACT levels; remove "lbs/hr", "tons/yr" & "lbs/MMBTU" emission limits as these are not required by MACT; remove error in statement of SO2 limit which currently prescribes (2) different 24-hour average limits.

1. EMISSION STANDARDS

A. Maximum ~~capacity of~~ load for 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)~~ 180,000 lbs of steam per hour at 625 psig and 730°F, based on a 4-hour block average. The stack emissions from each unit shall not exceed any of the following limitations:

Pollutant	Emission Limits
(PM)	Particulate emissions from the baghouse shall not exceed ~~0.011~~ 0.012 grains/dry standard ft^3 (gr/dscf), corrected to 7 percent O_2 (dry basis)~~; 6.6 lbs/hr per unit and 29.0 tons/year~~ per unit.
(PM_{10})	Particulate emissions less than 10 micron diameter shall not exceed ~~0.011~~ 0.012 gr/dcscf, corrected to 7 percent O_2 (dry basis)~~; 6.6 lbs/hr per unit and 29.0 tons/year~~ per unit.
(SO_2)	Sulfur Dioxide emissions shall not exceed ~~30~~ 29 parts per million by volume (ppmvd), corrected to 7 percent O_2 (dry basis) ~~;~~ or ~~70~~ 75 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_2, 0.16 lb/MMBtu per unit, 48.9 lbs/hr per unit, 24-hour block average; and 214.2 tons/year~~ per unit.
(NO_x)	Nitrogen Oxide emissions shall not exceed ~~280~~ 250 ppmvd corrected to 7 percent O_2 (dry basis)~~; 0.5 lb/MMBtu, 140.3 lbs/hr per unit,~~ 24-hour daily arithmetic average ~~; and 614.9 tons/year per unit.~~ As specified in 40 CFR 60.33b(d)(1) a facility-wide average emission limit of 230 ppmvd, corrected to 7 percent O_2 (dry basis), 24-hour average, shall be applied in lieu of the per unit limit provided that the conditions of 40 CFR 60.33b(d)(1) are met.

(CO) Carbon Monoxide emissions shall not exceed 200 ppmvd at 7 percent O_2 (dry basis) ~~; 0.20 lb/MMBtu, 61.1 lbs/hr per unit,~~ 24-hour daily arithmetic average ~~; and, 267.7 tons/year per unit~~.

(VOC) Volatile Organic Compound (Hydrocarbons) emissions shall not exceed 25 ppmvd, corrected to 7 percent O_2 (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~~ 29 ppmvd, corrected to 7 percent O_2 (dry basis); or, ~~90~~ 95 percent removal, whichever is least restrictive ~~, not to exceed 78 ppmvd corrected to 7 percent O_2, 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_2 (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 6.1×10^{-5} lb/MMBtu, or 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~~ 30 nanograms per standard cubic meter (ng/m_3) corrected to 7 percent O_2 (dry basis) ~~, 5.2×10^{-8} lb/MMBtu, 1.6×10^{-5} lb/hr per unit, and 6.9×10^{-5} ton/year~~ per unit.

~~(F)~~ ~~Fluoride emissions shall not exceed 840 ug/m$_3$ corrected to 7 percent O_2 (dry basis) ; 7.3 x 10^{-4} lb/MMBtu, 0.22 lb/hr per unit and 0.97 ton/year per unit.~~

(Cd) Cadmium emissions shall not exceed ~~15~~ 40 ug/m$_3$ corrected to 7 percent O_2 (dry basis) ~~, 0.006 lb/hr per unit and 0.027 ton/year~~ per unit.

~~(H_2SO_4)~~ ~~Sulfuric Acid Mist emissions shall not exceed 2.1 ppmvd corrected to 7 percent O_2 (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~~ 490 ug/m$_3$ corrected to 7 percent O_2 (dry basis) ~~, 3.3 x 10^{-4} lb/MMBtu, 0.10 lb/hr per unit and 0.44 ton/year~~ per unit.

~~(Be)~~ ~~Beryllium emissions shall not exceed 0.46 ug/m$_3$ corrected to 7 percent O_2 (dry basis) ; 4.0 x 10^{-7} 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$_3$ corrected to 7 percent O_2 (dry basis) ; 8.1 x 10^{-6} 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 DETERMINATION

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 procedures 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.

Comments : Revise Test Methods to Methods specified under MACT; remove reference to F- Factor; add condition specifying minimum allowable carbon usage rate (as required under MACT); add provision allowing CEM data for annual compliance determination.

EPA Method	For Determination Of
1	Sample and Velocity Traverses for Stationary Sources.
2	Stack Gas Velocity and Volumetric Flow Rate
3A or 3	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_{10} Emissions; however, if compliance with PM emission limitations are met, these tests are not required.
~~6C and 19~~ CEM; 6C for RATA; & 19 Sec 4.3 & 5.4 for averaging calculations	Sulfur Dioxide Emissions from Stationary Sources
CEM; 7E-for RATA; and 19 Sec 4.1for averaging	Nitrogen Dioxide Emissions from Stationary Sources
9	Visible Emission Determination of Opacity from Stationary Sources
CEM; 10 for RATA	Carbon Monoxide Emissions from Stationary Sources
~~12~~ 29	Inorganic Lead Emissions from Stationary Sources
~~13A or 13B~~	~~Total Fluoride Emissions from Stationary Sources~~
22	Visible Determination of Fugitive Emissions From Material Sources and Smoke Emissions from Flares

23	Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans
25 or 25A	Total Gaseous Volatile Organic Compounds Concentration
26 or 26A	Hydrogen Chloride Emissions from Stationary Sources
~~40CFR 266 Appendix IX Section 3.1~~ 29	Cadmium Emissions
~~101A~~ 29	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~~). The unit load during compliance testing shall be determined by a 4-hour block arithmetic average of the steam flow reported in pounds per hour as specified in 40 CFR 60.58b(i)(6).

Testing shall be conducted upstream (removal efficiency for SO_2 and HCl) and downstream (mass emissions) of the applicable control device for the following pollutants : SO_2 ,Hg, and HCl. Soot blowers shall be operated in a mode consistent with normal cleaning requirements of the system during the compliance testing.

If carbon is used to achieve the mercury limit or the dioxin/furan limit under Condition 1.A. of this permit, the rate of carbon injection used to achieve the emission limits during the most recent compliance test shall be determined according to the procedures in 40 CFR 60.58b(m). During operation the unit carbon injection feedrate must equal or exceed the level documented during the most recent compliance test.

Test results will be the average of three valid runs of at least one-hour ~~runs~~. Annual emissions testing may use the results of a certified continuous emissions monitor over the averaging period required by the specific EPA test method to demonstrate compliance with emissions limits of Condition 1.A. of this permit. 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, the 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

a) Compliance with emissions 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 except as specified in "c" and "d" of this section. These tests may be staggered throughout the year with the approval of the Department's Bureau of Air Regulation.

b) For mercury emissions, testing shall be performed according to Rule 62-296.416, F.A.C.

c) As specified in 40 CFR 60-38b(b) and 60.58b(g)(5)(iii), where all performance tests over a 2-year period indicate dioxin/furan emissions are less than or equal to 7 nanograms per dry standard cubic meters (total mass) for all (4) units within the facility, the permittee may elect to conduct annual performance test for one unit per

year. If any annual test indicates a dioxin/furan emission level greater than 7 nanograms per dry standard cubic meters (total mass) performance tests thereafter shall be conducted annually on all (4) units until annual performance tests for all (4) units indicate a dioxin/furan emission level less than or equal to 7 nanograms per dry standard cubic meters (total mass).

d) Pursuant to Rule 62-2977.340(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.

e) Compliance testing of 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.

f) 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.

(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 a 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 with ± ~~1~~ 5 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
- Nitrogen oxides
- Oxygen
- Opacity

- Sulfur Dioxide (for SO2, one monitor shall be locate 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~~ 60.58b, 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.

C. OPERATING PROCEDURES

Operating procedures shall include food 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~~ Cb 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).~~ (40 CFR 60.54b). 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 or natural 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 prescribes best operational practices that will be used during startup, shutdown, and malfunctions of this facility.

Comments: Remove MMBTU/HR and TPH, TPD, TPW & TPY capacity limits for consistency with MACT and replace with unit load limit; add natural gas as supplemental fuel source; add MACT conditions on fugitive emissions.

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.~~ Each unit shall not be operated in excess of the lesser of - i) the permitted maximum load of 180,000 lbs/hr steam flow based on a 4-hour average, or ii) 110% of the maximum demonstrated unit load during the most recent dioxin/furan test.

2) The unit load specified in Condition 3.A.(1). shall not apply during the annual dioxin/furan performance testing and during the 2 weeks preceding the annual dioxin/furan performance test.

~~2)~~ 3) 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, and used on-site for fuel supply.

~~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 (8,760 hours per year).

B. AUXILIARY BURNERS

Auxiliary burners for each unit shall be fired ~~only~~ by propane gas or natural gas. They shall not exceed a heat input of 80 MMBtu/hr. Natural gas or propane gas may be used as fuel during warm-up, start-up, shutdown, and malfunction periods, and at other times when necessary and consistent with good combustion practices.

C. RESTRICTION FOR TYPE OF WASTES COMBUSTED

1) 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).

2) No biological waste, bio-medical waste, sewage sludge, of hazardous wastes shall be combusted at this facility without obtaining proper modification to the site certification conditions.

3) The permittee may combust up to 3% (by weight) of used tires along with the RDF. If the applicant wishes to combust use tires in excess of 3% (by weight), a modification to this permit will be required prior to increasing the feed rate of the tires.

4) Used oil, oily water, oily sludge, spent greases and oily solids (such as rags) generated from on-site sources may be burned at the facility provided that the material conforms to the standards of 40 CFR 761.20(e) and 40 CFR 279.11. A composite, that is representative of the material disposed of, shall be analyzed quarterly to demonstrate that the waste meets the following specifications:

Arsenic	-	5 ppm. Max.
Cadmium	-	2 ppm, max.
Chromium	-	10 ppm, max.
Lead	-	100 ppm, max.

Total halogens	-	1000 ppm max.
Flash point	-	100 degrees F., min.
PCB	-	less than 2 ppm

The heating value of the waste oil shall also be determined during quarterly testing. No more than 0.5% percent of the maximum design heat input to the units, on a monthly average, of oily wastes shall be disposed of in the units.

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) emission at the 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 15MPH 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.

In accordance with 40 CFR60.55b fugitive emissions from the ash conveying points shall not be observed in excess of 5% of the time for a 3-hour observation period (i.e. 9 minutes per 3-hour period) as determined by EPA Method 22. This limit

does not apply to emissions inside buildings or enclosures or the emission generated during maintenance and repair of the ash conveying systems.

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 enclosed.

3) Shredded wood conveyor systems shall have baghouse pick up points ~~a~~ 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~~G. ODOR CONTROL

No air pollutants that cause or contribute to objectionable odors are allowed form 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~~ 0.012 grains per dscf, corrected to 7 percent O_2.

2) The facility shall be equipped with dry scrubbers designed, constructed and operated to remove SO_2 at an efficiency of ~~70~~ 75 percent, by weight, or to achieve a maximum emission rate of ~~30~~ 29 ppmvd, corrected to 7 percent O_2, 24-hour daily geometric mean, whichever is less stringent.

3) Carbon injection will be installed and operated if necessary to achieve a mercury emission limit in Condition 1.

4) Permanently mounted gas burners and other controls will be installed and operated, if necessary, to achieve a maximum nitrogen oxide and carbon monoxide emission rate in Condition 1.

5)~~3)~~ The permittee shall submit to the Department's Bureau of Air Regulation, within thirty (90) days after it becomes available, copies of technical data pertaining to the selected emission 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 rate per unit;

3) the amount of propane gas and natural 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, 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.

(Comment – Insert remaining sections of the permit – Sections 4C through Section 5 –which are un-changed.)

Attachment 3

Comparison of Emission Rates of Criteria Pollutants from Combustion Units Firing Propane, Natural Gas, and Refuse Derived Fuel

Table 1. Comparison of Emission Rates of Criteria Pollutants from Combustion Units Firing Propane, Natural Gas, and Refuse Derived Fuel

Criteria Pollutant	Propane		Natural Gas		Refuse Derived Fuel Emission Rates After Retrofit Controls (lb/MMBTU)
	Emission Factor[a] (lb/1000 gal.)	Uncontrolled Emission Rate (lb/MMBTU)	Emission Factor[b] (lb/10^6 ft^3)	Uncontrolled Emission Rate (lb/MMBTU)	
Particulate Matter	0.6	0.0066	7.6	0.0076	0.0218
Sulfur Dioxide	0.10S[c]	0.00044	0.6	0.00060	0.16
Nitrogen Oxides	19	0.21	170[d]	0.17	0.5
Carbon Monoxide	3.2	0.035	24[d]	0.024	0.2
Volatile Organic Compounds	0.5	0.0055	5.5	0.0055	0.0145

Notes:

Heating Value of Propane = 90,500 BTU/gallon (AP-42, Chapter 1.5, Page 1.5-1)

Heating Value of Natural Gas = 1000 BTU/ft^3 (AP-42, Chapter 1.4, Page 1.4-1)

Footnotes:

[a] AP-42, Compilation of Air Pollutant Emission Factors, Chapter 1.5, Table 1.5-1 (October 1996)

[b] AP-42, Compilation of Air Pollutant Emission Factors, Chapter 1.4, Tables 1.4-1 and 1.4-2 (July 1998)

[c] AP-42, Compilation of Air Pollutant Emission Factors, Chapter 1.5, Table 1.5-1 (October 1996) where S equals the sulfur content of the fuel in gr/100 ft3 of vapor, in this case 0.4 gr/100 ft3. (Exxon specification provided by Montenay)

[d] AP-42, Compilation of Air Pollutant Emission Factors, Chapter 1.4, Tables 1.4-1, Tangential-Fired Boilers

Attachment 4

Used Oil Specifications and Estimated Disposal Rates

DADE COUNTY RESOURCE RECOVER FACILITY
USED OIL SPECIFICATIONS AND ESTIMATED DISPOSAL RATES

1998 Disposal Rates

Used Oil: 6,232 gallons
Water/Oil Mixture: 6,594 gallons
Oil Sludge: 1,644 gallons
Total Used-Oil Waste: 14,435 gallons

Estimated Heat Input From Used Oil

Estimated Heating Value of Used Oil: 18,950 Btu/lb or 142,000 Btu/gallon
Estimated Disposal Rate: 2,000 gallons/batch (one batch disposed of in any one day)
Estimated Daily Heat Input: 142,000 Btu/gallon x 2,000 gallons/day
= 284 MMBtu/day

Nominal Permitted Heat Input for Each Unit: 302.4 MMBtu/hr or 7,258 MMBtu/day
Percent of Permitted Heat Input from Used Oil: 284MMBtu/day / 7,258 MMBtu/day
= 4%

Used Oil Specifications

DCRRF requests the modification of their Prevention of Significant Deterioration (PSD) Permit and their Conditions of Certification (COC) to allow disposal, in accordance with 40 CFR 279, of on-specification used oil as defined in 40 CFR 279.11. This request does not include disposal of used oil generated off-site or hazardous waste as defined in 40 CFR 261, Subpart C.