



Wheelabrator South Broward Inc.

A Waste Management Company

4400 South State Road 7
Ft. Lauderdale, FL 33314
(954) 581-6606
(954) 581-6705 Fax

RECEIVED

APR 25 2005

BUREAU OF AIR REGULATION

VIA UPS

April 22, 2005

Mr. Al Linero
Program Administrator
South Permitting Section
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Wheelabrator South Broward
Title V Permit No. 0112119-008-AV
Permit Renewal Application

Dear Mr. Linero:

Project No.: 0112119-009-AV

Please find enclosed four copies of Wheelabrator South Broward's Title V permit renewal application.

If there are any questions, or if further information is required, please contact myself or Jairaj Gosine at (954) 581-6606.

Sincerely,

Christopher M. Carey
Regional Vice President

cc: Juan Maldonado (without)
Jairaj Gosine (without)
Tim Porter (without)
Laxmana Tallam – FDEP – West Palm Beach (without)
Matt Killeen (without)
Sandy Gunter – MPI (without)
File: 3.1.5.2 (without)

S:admin/receptionist/042205



**APPLICATION FOR RENEWAL OF
TITLE V AIR OPERATION PERMIT
WHEELABRATOR SOUTH
BROWARD, INC.
*FORT LAUDERDALE, FLORIDA***



Prepared By:



6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500

April 2005

0537533

**APPLICATION FOR RENEWAL OF
TITLE V AIR OPERATION PERMIT
WHEELABRATOR SOUTH BROWARD, INC.
FT. LAUDERDALE, FLORIDA**

**Prepared For:
Wheelabrator South Broward, Inc.
4400 South State Road 7
Ft. Lauderdale, Florida 33314**

**Prepared By:
Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500**

April 2005

0537533

DISTRIBUTION:

4 Copies – FDEP

2 Copies – Wheelabrator South Broward, Inc.

1 Copy – Golder Associates Inc.



Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

RECEIVED

APR 25 2005

BUREAU OF AIR REGULATION

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit for a proposed project:

- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

Air Operation Permit – Use this form to apply for:

- an initial federally enforceable state air operation permit (FESOP); or
- an initial/revised/renewal Title V air operation permit.

Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: Wheelabrator South Broward, Inc.	
2. Site Name: Wheelabrator South Broward	
3. Facility Identification Number: 0112119	
4. Facility Location...: Street Address or Other Locator: 4400 South State Road 7 City: Ft. Lauderdale County: Broward Zip Code: 33314	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Application Contact Name: Jairaj Gosine, Operations Manager	
2. Application Contact Mailing Address... Organization/Firm: Wheelabrator South Broward, Inc. Street Address: 4400 South State Road 7 City: Ft. Lauderdale State: FL Zip Code: 33314	
3. Application Contact Telephone Numbers... Telephone: (954) 581-6606 ext. Fax: (954) 581-6705	
4. Application Contact Email Address:	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Project Number(s):	0112119-009-AV
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

APPLICATION INFORMATION

Purpose of Application

This application for air permit is submitted to obtain: (Check one)

Air Construction Permit

Air construction permit.

Air Operation Permit

Initial Title V air operation permit.

Title V air operation permit revision.

Title V air operation permit renewal.

Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.

Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

Air construction permit and Title V permit revision, incorporating the proposed project.

Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
001	863 TPD MSW Combustor & Auxiliary Burners - Unit 1	AF2A	
002	863 TPD MSW Combustor & Auxiliary Burners - Unit 2	AF2A	
003	863 TPD MSW Combustor & Auxiliary Burners - Unit 3	AF2A	
004	236 Ton Lime Silo	AF2A	
005	Ash Handling System	AF2A	

Application Processing Fee

Check one: Attached - Amount: \$ _____ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Owner/Authorized Representative Telephone Numbers... Telephone: () - ext. Fax: () -
4. Owner/Authorized Representative Email Address:
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. 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 and all other requirements identified in this application to which the facility is subject. 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 the facility or any permitted emissions unit.</i> _____ Signature _____ Date

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: Christopher M. Carey, Regional Vice President
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.
3. Application Responsible Official Mailing Address... Organization/Firm: Wheelabrator South Broward, Inc. Street Address: 4400 South State Road 7 City: Ft. Lauderdale State: Florida Zip Code: 33314
4. Application Responsible Official Telephone Numbers... Telephone: (954) 581-6606 ext. 212 Fax: (954) 581-6705
5. Application Responsible Official Email Address:
6. Application Responsible Official Certification: I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. 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 and all other applicable requirements identified in this application to which the Title V source is subject. 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 the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application. _____ <i>Christopher M. Carey</i> Signature _____ <i>4/22/05</i> Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Kennard F. Kosky Registration Number: 14996
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
3. Professional Engineer Telephone Numbers... Telephone: (352) 336-5600 ext.516 Fax: (352) 336-6603
4. Professional Engineer Email Address: kkosky@golder.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(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</i> <i>(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.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, 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 plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, 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.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, 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.</i> <i>Kennard F. Kosky</i> Signature _____ Date <u>4/20/05</u>

* Attach any exception to certification statement.
** Board of Professional Engineers Certificate of Authorization #00001670

FACILITY INFORMATION

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 579.54 North (km) 2883.34		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 26/04/08 Longitude (DD/MM/SS) 80/12/13	
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4953
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: Jairaj Gosine, Operations Manager
2. Facility Contact Mailing Address... Organization/Firm: Wheelabrator South Broward, Inc. Street Address: 4400 South State Road 7 City: Fort Lauderdale State: FL Zip Code: 33314
3. Facility Contact Telephone Numbers: Telephone: (954) 581-6606 ext. Fax: (954) 581-6705
4. Facility Contact Email Address:

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: () - ext. Fax: () -
4. Facility Primary Responsible Official Email Address:

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. <input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2. <input type="checkbox"/> Synthetic Non-Title V Source	
3. <input checked="" type="checkbox"/> Title V Source	
4. <input checked="" type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. <input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. <input checked="" type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7. <input type="checkbox"/> Synthetic Minor Source of HAPs	
8. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. <input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. <input type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. <input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	
<p>40 CFR 60, Subpart Cb; 40 CFR 60, Subpart E; and 40 CFR 60, Subpart Db.</p>	

FACILITY INFORMATION

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: WSB-FI-C1 <input type="checkbox"/> Previously Submitted, Date: _____
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: WSB-FI-C2 <input type="checkbox"/> Previously Submitted, Date: _____
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: WSB-FI-C3 <input type="checkbox"/> Previously Submitted, Date: _____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (existing permitted facility)
2. Description of Proposed Construction or Modification: <input type="checkbox"/> Attached, Document ID: _____
3. Rule Applicability Analysis: <input type="checkbox"/> Attached, Document ID: _____
4. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
6. Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
7. Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

FACILITY INFORMATION

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
 Attached, Document ID: _____ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

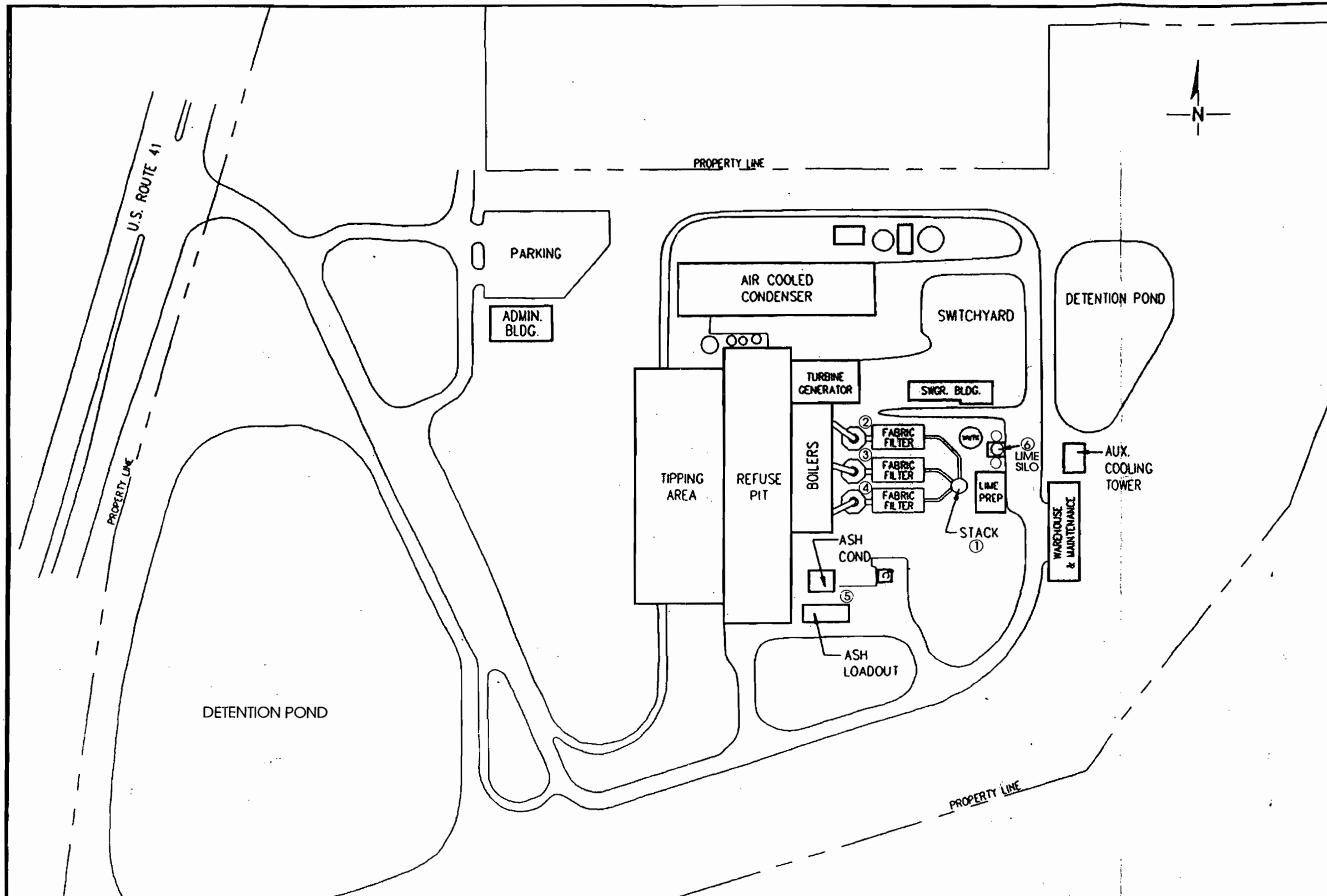
1. List of Insignificant Activities (Required for initial/renewal applications only):
 Attached, Document ID: **WSB-FI-CV1** Not Applicable (revision application)
2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought):
 Attached, Document ID: **WSB-FI-CV2**
 Not Applicable (revision application with no change in applicable requirements)
3. Compliance Report and Plan (Required for all initial/revision/renewal applications):
 Attached, Document ID: **WSB-FI-CV3**
Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.
4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only):
 Attached, Document ID: _____
 Equipment/Activities On site but Not Required to be Individually Listed
 Not Applicable
5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only):
 Attached, Document ID: _____ Not Applicable
6. Requested Changes to Current Title V Air Operation Permit:
 Attached, Document ID: **WSB-FI-CV6** Not Applicable

Additional Requirements Comment

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ATTACHMENT WSB-FI-C1

FACILITY PLOT PLAN



① Stack -- 3 Flues
(TV-001, TV-002, TV-003)

② Spray Dryer Absorber

③ Spray Dryer Absorber

④ Spray Dryer Absorber

⑤ Ash Conditioning System
(TV-005)

⑥ Lime Silo (TV-004)

SITE PLAN

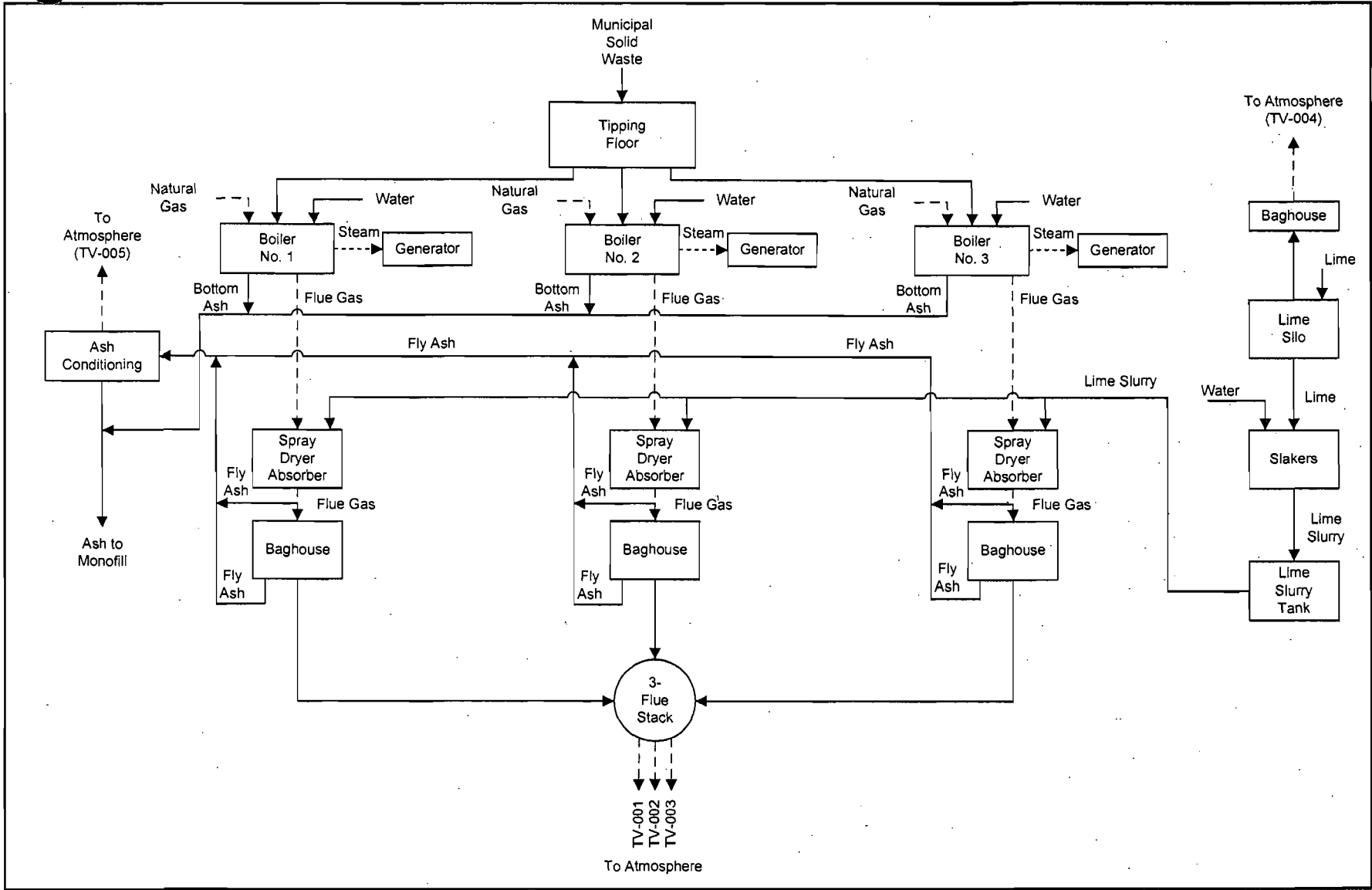
Wheelabrator South Broward, Inc. Ft. Lauderdale, Florida

EXHIBIT

F-2

ATTACHMENT WSB-FI-C2

PROCESS FLOW DIAGRAM



Attachment WSB-FI-C2
 Process Flow Diagram, Wheelabrator South Broward
 Pompano Beach, Florida

Process Flow Legend	
Solid/Liquid	—————>
Gas	- - - - ->
Steam	· · · · ·>

Filename: 0537533/WSB-FI-C2.VSD
 Date: 04/20/05



ATTACHMENT WSB-FI-C3

**PRECAUTIONS TO PREVENT EMISSIONS
OF UNCONFINED PARTICULATE MATTER**

ATTACHMENT WSB-FI-C3**PRECAUTIONS TO PREVENT EMISSIONS OF
OF UNCONFINED PARTICULATE MATTER**

The following precautions are taken to prevent emissions of unconfined particulate matter:

- Vehicular traffic areas such as roads and parking areas are paved, swept, and watered.
- Water is applied to active areas of the monofill. Closed areas are watered until sufficient vegetation has been established.
- Water is applied to areas that are unvegetated because of construction/operation activities.
- All conveyor systems are enclosed and maintained to minimize leaks.
- The facility maintains and utilizes a Dust Abatement Control Plan to minimize emissions of unconfined particulate matter from the monofill.

ATTACHMENT WSB-FI-CV1

LIST OF INSIGNIFICANT ACTIVITIES

Appendix I-1, List of Insignificant Emissions Units and/or Activities.

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, or that meet the criteria specified in Rule 62-210.300(3)(b)1., F.A.C., Generic Emissions Unit Exemption, are exempt from the permitting requirements of Chapters 62-210, 62-212 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

Brief Description of Emissions Units and/or Activities:

1. Slaker A
2. Slaker B
3. 3 Chemical Feed Tanks (for Boiler Nos 1-3)
4. Diesel Fuel Oil Tank (Ash Unloading)
5. Monofill Diesel Tank
6. Non-Halogenated Solvent Degreaser
7. Monofill
8. Plant Roads

ATTACHMENT WSB-FI-CV2

IDENTIFICATION OF APPLICABLE REQUIREMENTS

Title V Core List

Effective: 03/01/02

[Note: The Title V Core List is meant to simplify the completion of the "List of Applicable Regulations" for DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List.]

Federal: (description)

40 CFR 61, Subpart M: NESHAP for Asbestos.

40 CFR 82: Protection of Stratospheric Ozone.

40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).

40 CFR 82, Subpart F: Recycling and Emissions Reduction.

State: (description)

CHAPTER 62-4, F.A.C.: PERMITS, effective 06-01-01

62-4.030, F.A.C.: General Prohibition.

62-4.040, F.A.C.: Exemptions.

62-4.050, F.A.C.: Procedure to Obtain Permits; Application.

62-4.060, F.A.C.: Consultation.

62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.

62-4.080, F.A.C.: Modification of Permit Conditions.

62-4.090, F.A.C.: Renewals.

62-4.100, F.A.C.: Suspension and Revocation.

62-4.110, F.A.C.: Financial Responsibility.

62-4.120, F.A.C.: Transfer of Permits.

62-4.130, F.A.C.: Plant Operation - Problems.

62-4.150, F.A.C.: Review.

62-4.160, F.A.C.: Permit Conditions.

62-4.210, F.A.C.: Construction Permits.

62-4.220, F.A.C.: Operation Permit for New Sources.

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 06-21-01

62-210.300, F.A.C.: Permits Required.

62-210.300(1), F.A.C.: Air Construction Permits.

62-210.300(2), F.A.C.: Air Operation Permits.

62-210.300(3), F.A.C.: Exemptions.

62-210.300(5), F.A.C.: Notification of Startup.

62-210.300(6), F.A.C.: Emissions Unit Reclassification.

62-210.300(7), F.A.C.: Transfer of Air Permits.

Title V Core List

Effective: 03/01/02

- 62-210.350, F.A.C.: Public Notice and Comment.
- 62-210.350(1), F.A.C.: Public Notice of Proposed Agency Action.
- 62-210.350(2), F.A.C.: Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment-Area Preconstruction Review.
- 62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.

- 62-210.360, F.A.C.: Administrative Permit Corrections.
- 62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.
- 62-210.400, F.A.C.: Emission Estimates.
- 62-210.650, F.A.C.: Circumvention.
- 62-210.700, F.A.C.: Excess Emissions.

- 62-210.900, F.A.C.: Forms and Instructions.
- 62-210.900(1), F.A.C.: Application for Air Permit – Title V Source, Form and Instructions.
- 62-210.900(5), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.
- 62-210.900(7), F.A.C.: Application for Transfer of Air Permit – Title V and Non-Title V Source.

CHAPTER 62-212, F.A.C.: STATIONARY SOURCES - PRECONSTRUCTION REVIEW, effective 08-17-00

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 04-16-01

- 62-213.205, F.A.C.: Annual Emissions Fee.
- 62-213.400, F.A.C.: Permits and Permit Revisions Required.
- 62-213.410, F.A.C.: Changes Without Permit Revision.
- 62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.
- 62-213.415, F.A.C.: Trading of Emissions Within a Source.
- 62-213.420, F.A.C.: Permit Applications.
- 62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.
- 62-213.440, F.A.C.: Permit Content.
- 62-213.450, F.A.C.: Permit Review by EPA and Affected States
- 62-213.460, F.A.C.: Permit Shield.

- 62-213.900, F.A.C.: Forms and Instructions.
- 62-213.900(1), F.A.C.: Major Air Pollution Source Annual Emissions Fee Form.
- 62-213.900(7), F.A.C.: Statement of Compliance Form.

Title V Core List

Effective: 03/01/02

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 03-02-99

62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter.

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.

CHAPTER 62-297, F.A.C.: STATIONARY SOURCES - EMISSIONS MONITORING, effective 03-02-99

62-297.310, F.A.C.: General Test Requirements.

62-297.330, F.A.C.: Applicable Test Procedures.

62-297.340, F.A.C.: Frequency of Compliance Tests.

62-297.345, F.A.C.: Stack Sampling Facilities Provided by the Owner of an Emissions Unit.

62-297.350, F.A.C.: Determination of Process Variables.

62-297.570, F.A.C.: Test Report.

62-297.620, F.A.C.: Exceptions and Approval of Alternate Procedures and Requirements.

Miscellaneous:

CHAPTER 28-106, F.A.C.: Decisions Determining Substantial Interests

**CHAPTER 62-110, F.A.C.: Exception to the Uniform Rules of Procedure, effective
07-01-98**

CHAPTER 62-256, F.A.C.: Open Burning and Frost Protection Fires, effective 11-30-94

CHAPTER 62-257, F.A.C.: Asbestos Notification and Fee, effective 02-09-99

**CHAPTER 62-281, F.A.C.: Motor Vehicle Air Conditioning Refrigerant Recovery and
Recycling, effective 09-10-96**

ATTACHMENT WSB-FI-CV3

COMPLIANCE REPORT AND PLAN



Wheelabrator South Broward Inc.

A Waste Management Company

4400 South State Road 7
Ft. Lauderdale, FL 33314
(954) 581-6606
(954) 581-6705 Fax

January 20, 2005

**Certified #2004 0750 0003 5826 3952
Return Receipt Requested**

Mr. Laxmana Tallam
Air Permitting/Compliance/Enforcement Supervisor
Florida Department of Environmental Protection
Southeast District
400 North Congress, Suite 200
West Palm Beach, FL 33401

Re: Wheelabrator South Broward
Title V – Statement of Compliance
Title V Permit #: 0112119-006-AV

Dear Mr. Tallam:

Please find enclosed the Wheelabrator South Broward's *Statement of Compliance – Title V Source* for the reporting period of January 1, 2004 through December 31, 2004.

If there are any questions, please contact this office at (954) 581-6606.

I, the undersigned, am a responsible official, as defined in Rule 62-210.200, F.A.C., of the Title V source addressed in this submittal. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements and information in this document are true, accurate and complete.

Signature: Christopher M. Carey Date: 1/21/05

Title: General Manager

Enclosures

050120b.CMC.ch

cc:

USEPA, Region 4 Air, Pesticides & Toxics Management Division, Air & EPCRA
Enforcement Branch, Air Enforcement Section (with)
Certified #7004 0750 0003 5826 3969 Return Receipt Requested
Daniella Banu (with)
Jairaj Gosine (with)
Sandy Gutner (with)
Tim Porter (with)
Theodore Pytlar (with)
Matt Killeen (without)
File: 3.7.3 (with)
5.1.3.2 (without)



Department of Environmental Protection

Division of Air Resource Management

STATEMENT OF COMPLIANCE - TITLE V SOURCE

REASON FOR SUBMISSION (Check one to indicate why this statement of compliance is being submitted)

Annual Requirement Transfer of Permit Permanent Facility Shutdown

REPORTING PERIOD*	REPORT DEADLINE**
January 1 through December 31 of 2004 (year)	March 1, 2005

*The statement of compliance must cover all conditions that were in effect during the indicated reporting period, including any conditions that were added, deleted, or changed through permit revision.

**See Rule 62-213.440(3)(a)2., F.A.C.

Facility Owner/Company Name: Wheelabrator South Broward Inc.

Site Name: Wheelabrator South Broward

Facility ID No. 0112119

County: Broward

COMPLIANCE STATEMENT (Check only one of the following three options)

A. This facility was in compliance with all terms and conditions of the Title V Air Operation Permit and, if applicable, the Acid Rain Part, and there were no reportable incidents of deviations from applicable requirements associated with any malfunction or breakdown of process, fuel burning or emission control equipment, or monitoring systems during the reporting period identified above.

B. This facility was in compliance with all terms and conditions of the Title V Air Operation Permit and, if applicable, the Acid Rain Part; however, there were one or more reportable incidents of deviations from applicable requirements associated with malfunctions or breakdowns of process, fuel burning or emission control equipment, or monitoring systems during the reporting period identified above, which were reported to the Department. For each incident of deviation, the following information is included:

1. Date of report previously submitted identifying the incident of deviation.
2. Description of the incident.

C. This facility was in compliance with all terms and conditions of the Title V Air Operation Permit and, if applicable, the Acid Rain Part, EXCEPT those identified in the pages attached to this report and any reportable incidents of deviations from applicable requirements associated with malfunctions or breakdowns of process, fuel burning or emission control equipment, or monitoring systems during the reporting period identified above, which were reported to the Department. For each item of noncompliance, the following information is included:

1. Emissions unit identification number.
2. Specific permit condition number (note whether the permit condition has been added, deleted, or changed during certification period).
3. Description of the requirement of the permit condition.
4. Basis for the determination of noncompliance (for monitored parameters, indicate whether monitoring was continuous, i.e., recorded at least every 15 minutes, or intermittent).
5. Beginning and ending dates of periods of noncompliance.
6. Identification of the probable cause of noncompliance and description of corrective action or preventative measures implemented.
7. Dates of any reports previously submitted identifying this incident of noncompliance.
8. For each incident of deviation, as described in paragraph B. above, the following information is included:

**WHEELABRATOR SOUTH BROWARD
STATEMENT OF COMPLIANCE – TITLE V SOURCE
INCIDENTS OF DEVIATION
REPORTING PERIOD: 01/01/04 THROUGH 12/31/04**

Unit #1:

Date reported: 02/23/04, 04/14/04
Description: On 02/20/04, the turbine tripped causing steam flow loss until ACC bypass could be placed in service, this resulted in a combustion upset in the boiler. Steam was diverted to the Air Cooled Condenser bypass while bringing the boiler combustion under control. This resulted in a CO 4-hour block average from 1200 – 1600 hours that exceeded the facility limit.

Date reported: 04/14/04
Description: On 03/18/04, during a scheduled shutdown, the facility experienced a CO 4-hour block average from 1200 – 1600 hours exceeding the facility permit limit. The unit was brought offline at 1247 hours.

Date reported: 07/08/04
Description: On 05/21/04, during a unit start up, the facility experienced a CO 4-hour block average from 0800 – 1200 hours exceeding the facility permit limit. The unit was brought online at 1116 hours.

Date reported: 07/08/04
Description: On 05/26/04, during an emergency shutdown due to a ruptured superheater tube the facility experienced a CO 4-hour block average from 2000 – 2400 exceeding the facility permit limit. The unit was brought off line @ 2139 hours to affect repairs.

Unit #2:

Date reported: 04/14/04
Description: On 02/20/04, the turbine tripped causing a steam flow loss that resulted in a ruptured superheater tube. Stopped feeding trash to the boiler, burned fuel off the grates, took unit offline. This resulted in a CO 4-hour block average from 1200 – 1600 hours that exceeded the facility limit.

Date reported: 07/02/04, 10/07/04
Description: On 07/02/04, turbine tripped due to a UPS malfunction. This resulted in a combustion upset in the boiler that was further enhanced by the failure of the ERV to open. This resulted in a CO 4-hour block average from 0800 – 1200 hours that exceeded the facility limit.

Date reported: 10/07/04
Description: On 07/16/04, during a unit start up, the facility experienced a CO 4-hour block average from 2000 – 2400 hours exceeding the facility permit limit. The unit was brought online at 2157 hours.

Date reported: 10/07/04

Description: On 07/18/04, during a unit start up, the facility experienced a CO 4-hour block average from 0400 - 0800 hours exceeding the facility permit limit. The unit was brought online at 0546 hours.

Unit #3:

No deviations.

ATTACHMENT WSB-FI-CV6

REQUESTED CHANGES TO PERMIT

ATTACHMENT WSB-FI-CV6**REQUESTED CHANGES TO CURRENT
TITLE V AIR OPERATION PERMIT**

It is requested that the beryllium (Be) emission limit and testing requirements be deleted from the Title V Permit. The requirements for this parameter were added when Be was listed as a PSD pollutant. The Department's PSD rules in Chapter 62-212, F.A.C., deleted many pollutants previously regulated under NEHAPs based on the change in the federal PSD regulations under the 1990 amendments to the clean air act (refer to Table 212.400-2). The current Department rule regulates MWC metals for which this emission unit is regulated under Subpart Cb. As a result, Be should be eliminated.

It is requested that the testing requirements for fluoride (Fl) be eliminated from the permit as being unnecessary. Previous compliance tests have demonstrated Fl emissions well below the PSD thresholds. Moreover, the requirements for sulfur dioxide and hydrochloric acid provide the Department reasonable assurance that fluoride emissions are minimized through the air pollution control technology on the emission unit.

EMISSIONS UNIT INFORMATION

Section [1]

MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application – For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application – For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [1]

MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Three (3) 863-tons per day (TPD) MSW Combustor & Auxiliary Burners.

3. Emissions Unit Identification Number: **001, 002, and 003**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: 04/1991	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--	--	--

9. Package Unit:
 Manufacturer: **Babcock and Wilcox** Model Number:

10. Generator Nameplate Rating: **66.086 MW**

11. Emissions Unit Comment:
Generator nameplate rating of 66.086 MW is the facility total. All three units share a common stack containing one flue for each unit.

EMISSIONS UNIT INFORMATION

Section [1]

MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Spray Dryer Absorber

Fabric Filter High Temperature [T > 250 degrees Fahrenheit (°F)]

Selective Non-catalytic Reduction for NO_x

Combustion Controls for CO

2. Control Device or Method Code(s): **202, 016, 107, and 033**

EMISSIONS UNIT INFORMATION

Section [1]

MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

C. EMISSION POINT (STACK/VENT) INFORMATION
 (Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Boiler Nos. 1, 2, and 3		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code:	6. Stack Height: 195 feet	7. Exit Diameter: 7.5 feet	
8. Exit Temperature: 300 °F	9. Actual Volumetric Flow Rate: 169,000 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 579.54 North (km): 2883.34		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) 26/04/08 Longitude (DD/MM/SS) 80/12/13	
15. Emission Point Comment: There is one stack containing one flue for each of the three boilers. Stack parameters are average values for each flue.			

EMISSIONS UNIT INFORMATION

Section [1]

MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

D. SEGMENT (PROCESS/FUEL) INFORMATION**Segment Description and Rate: Segment 1 of 2**

1. Segment Description (Process/Fuel Type): Natural Gas Combustion		
2. Source Classification Code (SCC): 10100601		3. SCC Units: Million Cubic Feet Natural Gas Burned
4. Maximum Hourly Rate: 0.308	5. Maximum Annual Rate: 269.97	6. Estimated Annual Activity Factor: 10
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1,050
10. Segment Comment: Fuel used for auxiliary burner. Used as fuel during warm-up, startup, shutdown, and malfunctions, as well as other times when necessary and consistent with good combustion practice. 0.308 MMcuft/hr = (323.6 MMBtu/hr) / (1,050 MMBtu/MMcuft Gas) 269.97 MMcuft/yr = 0.308 x 8,760 x 0.10		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): MSW Combustion		
2. Source Classification Code (SCC): 10101201		3. SCC Units: Tons Solid Waste Burned
4. Maximum Hourly Rate:	5. Maximum Annual Rate: 314,995	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.2	8. Maximum % Ash: 30	9. Million Btu per SCC Unit: 9
10. Segment Comment: MWC throughput limited to 863 tons MSW per day per unit (2,589 tons per day: entire facility) and 323.6 MMBtu/hr as determined monthly. Maximum annual rate above based on one unit at 863 tons MSW per day and 365 days per year.		

EMISSIONS UNIT INFORMATION

Section [1]

MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO	033		EL
DIOX	001	016	EL
FI	001	016	EL
H021	001	016	EL
H027	001	016	EL
H106	001		EL
H114	001	016	EL
NO _x	107		EL
Pb	001	016	EL
PM	001	016	EL
PM ₁₀	001	016	NS
SO ₂	001		EL

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Carbon Monoxide - CO

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: CO		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 33.9 lb/hour 148.5 tons/year.		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 100 ppmvd @ 7-percent O₂ Reference: Permit Limit		7. Emissions Method Code: 0	
8. Calculation of Emissions: Emissions per MWC Unit.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Carbon Monoxide - CO

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 100 ppmvd @ 7-percent O₂	4. Equivalent Allowable Emissions: 33.9 lb/hour 148.5 tons/year
5. Method of Compliance: CEMS - 4-hour Block Average	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 60.34b(a) and PSD-FL-105(B). Emissions per MWC unit.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: DIOX		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 8.7 E-6 lb/hour 3.8 E-5 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 30 ng/dscm @ 7-percent O₂ Reference: Permit Limit		7. Emissions Method Code: 0	
8. Calculation of Emissions: Emissions per MWC unit.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION**POLLUTANT DETAIL INFORMATION**

Section [1]

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Dioxin/Furan - DIOX

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS****Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.****Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 30 ng/dscm @ 7-percent O₂	4. Equivalent Allowable Emissions: 8.7 E-6 lb/hour 3.8 E-5 tons/year
5. Method of Compliance: EPA Method 23. Test at least one unit annually [40 CFR 60.38b(b)]. Testing once every three years if test results < 15 ng/dscm.	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 60.33b(c)(1)(ii) and PSD-FL-105(B). Emissions per MWC unit.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: Flourides - FI		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 1.29 lb/hour 5.66 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.0040 lb/MMBtu Reference: Permit Limit		7. Emissions Method Code: 0	
8. Calculation of Emissions: Emissions per MWC unit.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Fluorides - FI

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0040 lb/MMBtu	4. Equivalent Allowable Emissions: 1.29 lb/hour 5.66 tons/year
5. Method of Compliance: EPA Method 13A, 13B, or modified Method 5 for fluorides. Every 5 years.	
6. Allowable Emissions Comment (Description of Operating Method): PSD-FL-105(B). Emissions per MWC unit.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: Beryllium - H021		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.0003 lb/hour 0.0013 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.001 mg/dscm @ 7-percent O₂ Reference: Permit Limit		7. Emissions Method Code: 0	
8. Calculation of Emissions: Emissions per MWC unit.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.001 mg/dscm @ 7-percent O₂	4. Equivalent Allowable Emissions: 0.0003 lb/hour 0.0013 tons/year
5. Method of Compliance: EPA Method 29, Annually	
6. Allowable Emissions Comment (Description of Operating Method): PSD-FL-105(B). Emissions per MWC unit.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: Cadmium - H027		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.012 lb/hour 0.051 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.04 mg/dscm @ 7-percent O₂ Reference: Permit Limit		7. Emissions Method Code: 0	
8. Calculation of Emissions: Emissions per MWC unit.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Cadmium - H027

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.04 mg/dscm @ 7-percent O₂	4. Equivalent Allowable Emissions: 0.012 lb/hour 0.051 tons/year
5. Method of Compliance: EPA Method 29, Annually	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 60.33b(a)(2)(i) and PSD-FL-105(B)	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Hydrogen Chloride - H106

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: Hydrogen Chloride - H106		2. Total Percent Efficiency of Control: 95	
3. Potential Emissions: 12.6 lb/hour 55 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 29 ppmvd @ 7-percent O₂ Reference: Permit Limit		7. Emissions Method Code: 0	
8. Calculation of Emissions: Emissions per MWC unit.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Hydrogen Chloride - H106

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 29 ppmvd @ 7-percent O₂	4. Equivalent Allowable Emissions: 12.6 lb/hour 55 tons/year
5. Method of Compliance: EPA Method 26, 26A; Annually	
6. Allowable Emissions Comment (Description of Operating Method): 29 ppmvd @ 7-percent O₂ or 95-percent reduction by weight or volume, whichever is less stringent.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: Mercury - H114		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.02 lb/hour 0.098 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.07 mg/dscm @ 7-percent O₂ Reference: Permit Limit		7. Emissions Method Code: 0	
8. Calculation of Emissions: Emissions per MWC unit.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Mercury - H114

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.07 mg/dscm @ 7-percent O₂	4. Equivalent Allowable Emissions: 0.02 lb/hour 0.09 tons/year
5. Method of Compliance: EPA Method 29 or 101A, Quarterly	
6. Allowable Emissions Comment (Description of Operating Method): 0.070 mg/dscm @ 7-percent O₂ or 85-percent reduction by weight, whichever is less stringent.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Nitrogen Oxides - NO_x

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NO_x		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 114 lb/hour 499 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 205 ppmvd @ 7-percent O₂ Reference: Permit Limit		7. Emissions Method Code:	
8. Calculation of Emissions: Emissions per MWC unit.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Nitrogen Oxides - NO_x**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS****Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.****Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 205 ppmvd @ 7-percent O₂	4. Equivalent Allowable Emissions: 114 lb/hour 499 tons/year
5. Method of Compliance: CEM 24-hour daily arithmetic average.	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 60.33b(d) and PSD-FL-105(B)	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: Pb		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.142 lb/hour 0.62 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.44 mg/dscm @ 7-percent O₂ Reference: Permit Limit		7. Emissions Method Code: 0	
8. Calculation of Emissions: Emissions per MWC unit			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Pb - Lead

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.44 mg/dscm @ 7-percent O₂	4. Equivalent Allowable Emissions: 0.142 lb/hour 0.62 tons/year
5. Method of Compliance: EPA Method 29 or 12, Annually	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 60.33b(a)(4) and PSD-FL-112(B)	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Particulate Matter Total - PM

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM		2. Total Percent Efficiency of Control: 99+	
3. Potential Emissions: 7.85 lb/hour 34.4 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 27 mg/dscm @ 7-percent O₂ Reference: Permit Limit		7. Emissions Method Code: 0	
8. Calculation of Emissions: Emissions per MWC unit.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Particulate Matter Total - PM

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 27 mg/dscm @ 7-percent O₂	4. Equivalent Allowable Emissions: 7.85 lb/hour 34.4 tons/year
5. Method of Compliance: EPA Method 5; Annually	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 60.33b(a)(1)(ii) and PSD-FL-112(B)	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Sulfur Dioxide - SO₂

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SO₂		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 35.1 lb/hour 153.7 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 29 ppmvd @ 7-percent O₂ Reference: Permit Limit		7. Emissions Method Code: 0	
8. Calculation of Emissions: Emissions per MWC unit.			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Sulfur Dioxide - SO₂

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 29 ppmvd @ 7-percent O₂	4. Equivalent Allowable Emissions: 35.1 lb/hour 153.7 tons/year
5. Method of Compliance: CEMS 24-hour block daily geometric mean.	
6. Allowable Emissions Comment (Description of Operating Method): 29 ppmvd @ 7-percent O₂ or 75-percent reduction by weight or volume, whichever is less stringent.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 7

1. Parameter Code: O₂ - Oxygen	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: SICK Model Number: MCS-100 EHW Serial Number: 278, 277, 279	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Used with SO₂, NO_x, and CO monitors Boiler No. 1 - Serial Number 278 Boiler No. 2 - Serial Numbr 277 Boiler No. 3 - Serial Number 279.	

Continuous Monitoring System: Continuous Monitor 2 of 7

1. Parameter Code: EM - Emission	2. Pollutant(s): SO₂
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: SICK Model Number: MCS-100EHW Serial Number: 278, 277, 279	
5. Installation Date: 2/1/2001	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Used with SO₂, NO_x, and CO monitors Boiler No. 1 - Serial Number 278 Boiler No. 2 - Serial Numbr 277 Boiler No. 3 - Serial Number 279.	

EMISSIONS UNIT INFORMATION

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 3 of 7

1. Parameter Code: EM - Emission	2. Pollutant(s): NO_x
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: SICK Model Number: MCS-100E Serial Number: 278, 277, 279	
5. Installation Date: 2/1/2001	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Used with SO₂, NO_x, and CO monitors Boiler No. 1 - Serial Number 278 Boiler No. 2 - Serial Numbr 277 Boiler No. 3 - Serial Number 279.	

Continuous Monitoring System: Continuous Monitor 4 of 7

1. Parameter Code: EM - Emission	2. Pollutant(s): CO
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: SICK Model Number: MCS-100E Serial Number: 278, 277, 279	
5. Installation Date: 2/1/2001	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Used with SO₂, NO_x, and CO monitors Boiler No. 1 - Serial Number 278 Boiler No. 2 - Serial Numbr 277 Boiler No. 3 - Serial Number 279.	

EMISSIONS UNIT INFORMATION

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 5 of 7

1. Parameter Code: VE - Visible Emissions (opacity)	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: LAND INSTRUMENTAL IN Model Number: 4500 MKII Serial Number: See Comment	
5. Installation Date: 7/21/2003	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Boiler No. 1 - Serial Number 0295809 Boiler No. 2 - Serial Number 0295813 Boiler No. 3 - Serial Number 0295815	

Continuous Monitoring System: Continuous Monitor 6 of 7

1. Parameter Code: TEMP	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: See Comment Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: 40 CFR 60, Subpart Cb, Monitor manufacturer and model number may vary for maintenance purposes.	

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 7 of 7

1. Parameter Code: FLOW - Steam Flow	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: See Comment Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: 40 CFR, Subpart Cb; Monitor manufacturer and model number may vary for maintenance purposes.	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: WSB-EU1-11 <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: WSB-EU1-13 <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: WSB-EU1-14 <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: WSB-EU1-14 <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input checked="" type="checkbox"/> Attached, Document ID: WSB-EU1-16 Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

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MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input checked="" type="checkbox"/> Attached, Document ID: WSB-EU1-IV1 <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input checked="" type="checkbox"/> Attached, Document ID: WSB-EU1-IV3 <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

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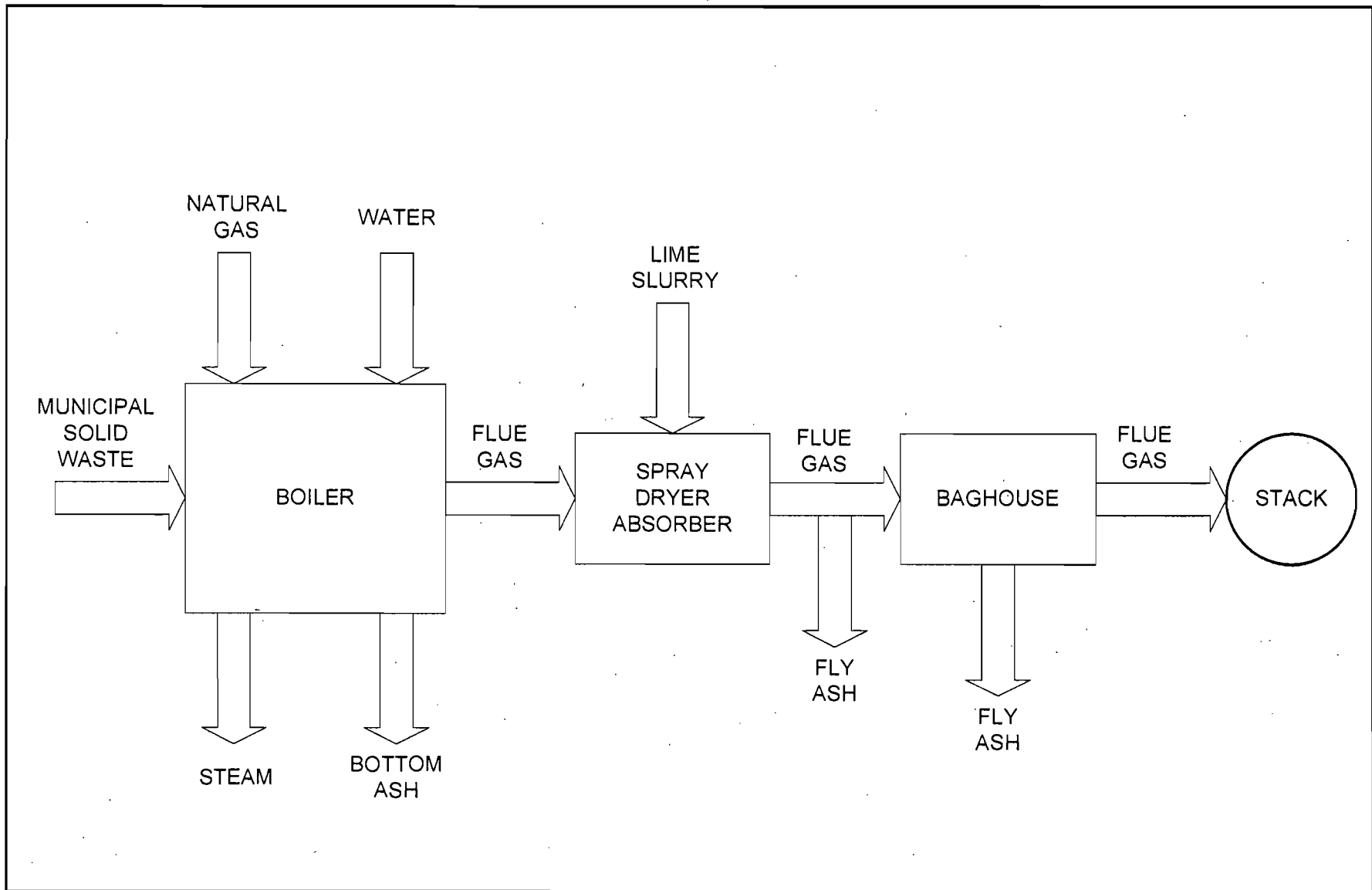
MSW Combustor & Auxiliary Burners: Units 1, 2, and 3

Additional Requirements Comment

[Empty rectangular box for additional requirements comment]

ATTACHMENT WSB-EU1-I1

PROCESS FLOW DIAGRAM



Attachment WSB-EU1-11
 Process Flow Diagram - Typical of all Three Boilers (Nos. 1, 2, and 3)
 Wheelabrator South Broward, Pompano Beach, Florida

Filename: WSB-EU1-11.VSD
 Date: 04/20/05



ATTACHMENT WSB-EU1-I3

DESCRIPTION OF CONTROL EQUIPMENT

EXHIBIT 1-2

DETAILED DESCRIPTION OF CONTROL EQUIPMENT WHEELABRATOR SOUTH BROWARD Typical of all 3 Boilers (No. 1, 2, and 3)

SPRAY DRYER ABSORBER

Flue gas enters the top of the Spray Dryer Absorber (SDA) through a diverging cone section and into the vessel. A total of three, multiple port two-fluid nozzles spray the atomized slurry down the center of the vessel, parallel to the gas flow. The flue gas and the evaporating slurry droplets pass down the vessel to the hopper. The flue gas makes a 90° turn and exits the SDA and enters the Fabric Filter (FF). Some of the entrained flyash and dried reaction products fall out of the flue gas and are discharged from the SDA hopper.

The SDA is designed to provide 10 seconds flue gas residence time based on the design gas flow rate.

Gas Distribution

Flue gas enters the top of the SDA and passes through a distribution section to evenly distribute the flue gas across the spray dryer absorber cross section at the slurry injection point. The flue gas elbow above the SDA utilizes turning vanes. The flue gas distribution section consists of two (2) banks of chevrons. The turning vanes and chevrons are constructed of abrasion-resistant steel.

Atomizing Nozzles

The SDA is provided with three multiple port two-fluid nozzles. Each two-fluid nozzle consists of a stainless steel (630) head with multiple, ceramic two-fluid nozzle inserts. Each nozzle is provided with a supporting lance assembly consisting of a structural tube and an aerodynamic shroud. The lance firmly positions the nozzle in the dryer and the shroud minimizes the external buildup of ash on the nozzle. The nozzle assembly is flange mounted on the SDA, and has quick disconnects for slurry, dilution water and compressed air.

The SDA operates using three nozzle heads, each with nine ceramic inserts.

SDA Process Control

The main control loops for the SDA are total slurry feed control and the control of the mixture of concentrated lime slurry and dilution water, which is designed to maintain the guaranteed SO₂ emission limits.

Atomizing Air Flow is controlled using a flow controller utilizing Flow Control Valve based on a feed back signal from a flow transmitter.

FABRIC FILTER

The fabric filter (FF) uses a combination of very low reverse gas or deflation air to clean the bags followed by a brief period of mechanical shaking.

Shake deflate cleaning uses a very low velocity, short duration reverse gas flow only to relax the bag. This is followed by a mechanical shake period. Each shake sends a wave down the bag, flexing the built up filter cake, cracking it and accelerating it off the bag. Fifteen to fifty oscillations are sent through the bag.

Each bag in a shake deflate FF is mechanically attached to the shaker, assuring cleaning.

Shake Deflate Cleaning Sequence

The cleaning sequence is initiated based on pressure drop or a timer override. The compartment is isolated by closing the outlet damper, allowing the compartment to settle. The deflation air damper is opened, the recirculation damper is closed, gently deflating the bags. The deflation and recirculation dampers are then reversed allowing another settle period. The shaker mechanism is then activated. Another, much longer settle period occurs, allowing the dust to settle into the hopper. The compartment is then brought back on line, first re-inflating the bags, then bringing them completely on line.

ATTACHMENT WSB-EU1-I4

PROCEDURES FOR STARTUP AND SHUTDOWN

EXHIBIT 1-4

Procedures for Startup and Shutdown

Normal Startup Procedure

The following procedure should be used during normal startup of the Babcock & Wilcox Stirling Power Boiler. To maintain maximum safety for the personnel, boiler and auxiliary equipment, each step must be carefully executed. Where equipment was not furnished by the Babcock & Wilcox Company, no detail is present. The operators should refer to that manufacturer's operating instruction. A brief mention is made to stimulate this action.

1. Inspect the Boiler
 - a. Check to be sure that adequate cooling water is on bearings, probes, etc.
 - b. Check all valve settings. All boiler drain valves should be closed. The non-return valve should be closed and the superheater drain valves and the non-return drain valve should be open. These valves are opened and left open until the boiler is on line to drain any condensate that might collect in the headers.
 - c. Check to be sure all boiler access doors are tightly closed, infiltration of outside air can cause boiler pluggage and reduce boiler efficiency. Also, check all five access doors to be sure they are closed and locked properly.
 - d. Check to be sure all electrical breakers are in.
 - e. Check to be sure the backend equipment and vent and seal fans are operating properly, if applicable.
 - f. Open the drum vent.
2. Place the feed water control on manual. Raise the level until the first bullseye shows water.
3. Make sure the flue gas has an open path to the stack.
4. Check safety interlocks, to start the ID fan.
5. Start the ID fan. When a negative draft of about one or two inches of water is achieved, place the draft on automatic control using the actual draft as the set point.
6. Check safety interlocks, to start the FD fan.

7. Close the inlet damper of the FD fan and start the fan. The damper is initially closed to prevent overloading the FD fan and to minimize the upset to the ID fan control. Slowly open the inlet damper to achieve an air flow of about 30% of maximum.
8. Adjust stoker air per Von Roll's instructions.
9. Readjust the furnace draft control to maintain a slightly negative draft of 0.2 inches of water. Once the draft has stabilized, control can be transferred to automatic.
10. Check safety interlocks, to begin the boiler purge.
11. Initiate the purge sequence.

The usual pressure raising rates of boilers are generally limited by the requirements of superheater metal protection or by other restrictions that automatically result in adherence to the drum temperature limits prescribed herein without resorting to special precautions to meet these limits. However, sufficient instrumentation is required to insure maintenance of the safe top-to-bottom drum temperature differential and the permissible rate of saturation temperature change during both pressure raising and reduction, and as shown on Figure 1.

The permissible rate of saturation temperature change is a function of the total saturation temperature change to be made. For instance, for a cold start from 100°F to 680°F (total change 580°F) the rate of saturated temperature change should be limited to 200°F/hr. For a hot start with a total saturation temperature change of less than 100°F, the rate of saturated temperature change can be as high as 400°F/hr. During the saturation temperature change the drum top-to-bottom temperature must be monitored to assure the maximum allowable average top-to-bottom differential is determined by comparing the average temperature of the bottom thermocouples to the average temperature of the top thermocouples.

The limits of rate of saturation temperature change and top-to-bottom drum differential are dictated by the necessity of:

- Protection of joints between pressure and non-pressure parts.
- Limiting the effects of drum humping on all pressure part connections to the drum.

It has been found best to come up to the maximum gas temperature limits entering the superheater as rapidly as possible. This insures boiling out of the superheater faster, and results in more uniform temperature distribution of the entire unit.

12. After purge is complete as indicated by the status lights on the flame safety panel, the main header safety shutoff valves for the auxiliary burn will open.

Burner lightoff is discussed in the Econopak section of the B& W manual. By following that procedure, the startup burner can be lit.

During the startup of the boiler, little or no steam will flow through the superheater because the capacity of the superheater drains are not adequate to ensure steam flow through all superheater tubes. For this reason, the gas temperature entering the superheater section during startup must be maintained below the design limits of metal temperature of the superheater tubes. B&W recommends not to exceed 900°F.

A thermal probe is provided just ahead of the superheater section. During startup, the probes are inserted into the furnace to measure the gas temperature after the first two burners are in service. The firing rate must be regulated to keep the gas temperature below 900°F. The use of high excess air can be used to temper the gas temperature.

13. Regulate gas pressure as required to maintain the steam drum pressure rise as shown on the startup curve, Figure 2. The total air flow should be adjusted to provide an excess oxygen of at least 4-5% while raising the boiler pressure.
14. Maintain the drum level in the lower half of the sight glass by manually adjusting the feedwater flow and /or by blowing down from the downcomer blow off valves (yarways).
15. When 25 psig pressure is reached on the steam drum, close the drum vents.
16. Maintain drum level at normal levels at the centerline of the drum.
17. Maintain constant pressure of the unit by blowing off with the superheater outlet relief valve (electromatic relief valve - ERV) until the superheater tubes are clear of condensate. Once the secondary superheater outlet leg has a steam temperature of 580°F the superheater can be assumed to be clear. Thermocouple locations can be found in B&W operation instructions.
18. Close ERV to bring drum up to operating pressure (900) and open non-return valve.
19. When operating pressure has been reached, the primary superheater drains are closed followed by the secondary superheater drains and non-return drains.
20. Place unit on line. Do not increase gas temperature above 900°F until unit is on line with a steam flow of 10% or more.

This concludes the startup procedure for the boiler.

B&W recommends not to exceed 100°F per hour increase in steam temperature during startup and 75°F per hour decrease in steam temperature during shutdown. This prevents excessive thermal stresses from building up in the boiler. On startup, the water in the drum should be 100°F and at the end of startup the steam temperature in the drum is about 543°F. This is less than 450°F during the 4-1/2 hours startup period, and within the startup rate.

Normal Shutdown Procedure

Figure 3 Shows the controlled cooling or shutdown curve.

The following procedure should be used during normal shutdown of these units. To maintain maximum safety for personnel, boiler and auxiliary equipment, each step must be carefully executed. To aid in this a check list has been developed and is given in the next subsection.

1. Stop refuse flow to unit.
2. Light off auxiliary burner to maintain the necessary steam load as required by the power plant. Re-adjust the total air flow as required by the burners.
3. Balance necessary steam load with the use of the auxiliary fuel burner.
4. After the refuse bed is burned out completely, the boiler is ready to go off line.
5. Reduce load on the boiler as directed by the power plant load. After the load is reduced to the lowest stable point, drop off line.
6. Reduce total air flow to 10% of maximum. Using 300°F air. This flow may be varied to stay near attached curve (Figure 3) depending on actual air temperature and operating pressure. This flow can be determined during an actual shutdown and included on the shutdown curve.
7. Open primary superheater inlet header drains several rounds to displace hotter steam at top of drum for equal cooling. This is started at 450 psig drum pressure.
8. Close primary inlet header drains at 75 psig to save condensate.
9. Open drum vents at 25 psig for equalizing and preventing vacuum.

ATTACHMENT WSB-EU1-I6

COMPLIANCE DEMONSTRATION



Wheelabrator South Broward
4400 South State Road 7
Ft. Lauderdale, FL 33314

REPORT ON COMPLIANCE TESTING


Performed for:
**WHEELABRATOR SOUTH BROWARD
UNITS 1, 2 AND 3 SDA INLET, FF OUTLET AND STACK
FT. LAUDERDALE, FL
VOLUME I OF II**

Client Reference No: 11400057
CleanAir Project No: 9511-2
Revision 0: April 20, 2004


To the best of our knowledge, the data presented in this report are accurate and complete and error free, legible and representative of the actual emissions during the test program.

Submitted by,

Reviewed by,



Scott Brown
Project Manager



Peter Kaufmann
Manager, Palatine Source

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WHEELABRATOR SOUTH BROWARD
FT. LAUDERDALE, FL

Client Reference No: 11400057
CleanAir Project No: 9511-2

PROJECT OVERVIEW

1-1

Wheelabrator South Broward, Inc. operates a Refuse to Energy Facility located in Ft. Lauderdale, Florida. The facility's emission levels are regulated by the Florida Department of Environmental Protection. Clean Air Engineering (CleanAir) was contracted to perform a compliance test program at their municipal waste combustor (MWC) facility in Ft. Lauderdale, Florida. The sampling was conducted at the Units 1, 2 and 3 Spray Dry Absorption (SDA) Inlet and Fabric Filter (FF) Outlets from March 9-12, 2004.

The visual emissions were determined at the exit of each respective flue. The lime silo fabric filter vent was observed for visual emissions (VE) and the ash handling system was observed for fugitive emissions. Testing was conducted in accordance with the Wheelabrator North and South Broward Protocol on Compliance Dated January 30, 2004, 40 CFR 60 Subpart Cb, and applicable sections of the facilities Title V Permit No. 0112119-006-AV.

The testing included the determination of the following pollutants:

- beryllium;
- cadmium;
- lead;
- mercury;
- PCDDs and PCDFs;
- total suspended particulate (TSP);
- hydrogen chloride;
- fluoride;
- visual emissions;
- fugitive emissions.

Coordinating the field portion of the program were:

J. Gosine	- Wheelabrator South Broward, Inc.
T. Porter	- Wheelabrator Technologies
S. Ganthier	- Florida Department of Environmental Protection (FDEP)
S. Brown	- Clean Air Engineering

The CleanAir test crew consisted of the following individuals:

J. Burton
M.P. Bomher
N. Shah
J. Vrakas
P. Bihun
M. Vianzon

WHEELABRATOR SOUTH BROWARD
FT. LAUDERDALE, FL

Client Reference No: 11400057
CleanAir Project No: 9511-2

PROJECT OVERVIEW

1-2

A schedule of activities is shown in Table 1-1 on pages 1-4 and 1-5. A summary of the results is presented in Table 1-2 on page 1-6. Opacity and fugitive emission results are presented in Table 1-4 on page 1-7.

All test methods were done in triplicate. All data reported in the units of lb/MMBtu utilized an Fd factor of 9,570 scf/MMBtu as per EPA Method 19.

During compliance testing all three boilers were operated within 10% of the 192,000 lb/hr maximum steam flow rating. The result tables present each boilers steam output for every test run.

Neha Shah of Clean Air Engineering conducted the VE readings for Units 1, 2 and 3 (per EPA Method 9). Mary Pat Bomher performed the fugitive emission readings (per EPA Method 22) on the ash handling system. Neha Shah also conducted the VE readings (per EPA Method 9) on the Lime Silo during one entire truck unloading. VE evaluation certificates are presented in Appendix H.

Any fractions of the mercury analysis that were reported as not detected were summed as zero if there were at least one fraction in that run that was detected. The cadmium and lead front and back half fractions were combined proportionately for analysis per EPA Method 29, Section 5.4.

Field blanks were collected for the Method 23 and 29 testing by assembling a used set of glassware, taking the complete train to the outlet location and performing a leak check. These blanks were treated exactly as the other sample runs. The results of the Method 23 and 29 field blanks are presented in Table 2-19 on page 2-17 as well in Appendices G, I and J. The results of the Method 29 reagent blank analysis were used to correct any data as outlined in Method 29.

All Method 23 samples were analyzed with the DB-5 column and Total TCDF analytes on the DB-225 column as EPA Method 23 directs. The lower result of the two columns is reported in all cases. Alta uses an alternative procedure approved by the EPA for 2,3,7 8 TCDD/DF confirmation. This alternative procedure uses different GC conditions that allow for the isomer specific determination of the 2,3,7 8 TCDD/DF. All QA/QC data (spikes and recoveries) for Method 23 as well as the EPA Audit Sample results are presented in Appendix G.

The Unit 1 Run 3 particulate/HCl (Method 5/26A) and mercury (Method 29) Run 6 were delayed for 20 minutes due to a loss of steam flow (< 90% of rated capacity).

WHEELABRATOR SOUTH BROWARD
FT. LAUDERDALE, FL

Client Reference No: 11400057
CleanAir Project No: 9511-2

PROJECT OVERVIEW

1-3

A leak developed in the Unit 1 Run 1 fluoride (Method 13B) sample train. A fourth run was performed on March 11 to substitute for Run 1. A leak in the M26A Unit 3 SDA Inlet Run 3 developed on March 10. The results from this test run are presented in Table 2-12 on page 2-12, but are not included in the averages and are not used in reduction efficiency determination.

The post meter calibration on meter 61-8 was not within the required 5% calibration error. This meter was used for all three PCDD/PCDF test runs. Since the lower Yd determined by the post meter calibration yields lower calculated dscf sample volumes and therefore higher PCDD/PCDF emission rates, the average Yd results of the post meter calibration were used for all PCDD/PCDF sample calculations.

All the integrated gas sample (IGS) bags results from March 9 (Unit 2 metals and particulate/HCl and Unit 3 metals and Runs 1 and 2, PCDD/PCDF) are suspect due to the CEM operator neglecting to leak check the analyzer sample system prior to analyzing the bags. This resulted in elevated oxygen and depressed carbon dioxide results for all the March 9 IGS analysis. The FDEP was notified of this problem and Stan Ganthier for the FDEP came on-site to discuss the issue. The FDEP agreed to allow the facilities CEM oxygen and carbon dioxide analyzer averages to be used for all tests run on March 9. These averages were used to determine stack gas molecular weight as well as for all oxygen correction calculations. The carbon dioxide and oxygen analyzers underwent RATA testing on March 9 (Unit 2) and March 10 (Unit 3). The O₂/CO₂ RATA results are presented in this report in Appendix F. The full RATA results can be found in the Clean Air Engineering test report number 9511-1. The facility oxygen and carbon dioxide printouts for these test runs are presented in Appendix F. The SDA Inlet HCl concentrations corrected to 7% O₂ are overestimated due to the elevated oxygen results from the IGS analysis.

Jairaj Gosine of Wheelabrator South Broward Inc. provided the process (operating) data. This data is presented in its entirety in Appendix C.

The particulate results for all three units are near or below the detection limits for Method 5. All test runs were two hours in length, exceeded the Cb requirement for sample volume (> 60 dscf) and passed the post test leak checks. The filters and acetone probe rinses from all the runs visually appeared very clean. Because the particulate trains were combined with the Method 26 (HCl) back half analysis, and consistent HCl results were obtained, the only conclusion that can be made is that the facilities fabric filters are performing at optimal levels.

PCDD/PCDF and HCl audit samples were supplied to CleanAir by the FDEP. The analytical results of these samples are in Appendix G.

WHEELABRATOR SOUTH BROWARD
FT. LAUDERDALE, FL

Client Reference No: 11400057
CleanAir Project No: 9511-2

PROJECT OVERVIEW

1-4

**Table 1-1:
Schedule of Activities**

<u>Date (2004)</u>							
Start Time	Stop Time	Unit	Location	Pollutant	Method	Run No.	
<u>March 9</u>							
7:27	9:42	3	FF Outlet	Metals	EPA 29	1	
7:27	11:46	3	FF Outlet	PCDDs/PCDFs	EPA 23	1	
8:23	10:40	2	FF Outlet	Metals	EPA 29	1	
8:23	10:40	2	FF Outlet/SDA Inlet	Particulate/HCl	EPA 5/26A	1	
9:13	10:13	2	Stack	Opacity	EPA 9	1	
10:07	12:24	3	FF Outlet	Metals	EPA 29	2	
11:27	13:42	2	FF Outlet	Metals	EPA 29	2	
11:27	13:42	2	FF Outlet/SDA Inlet	Particulate/HCl	EPA 5/26A	2	
12:19	16:38	3	FF Outlet	PCDDs/PCDFs	EPA 23	2	
12:41	13:41	2	Stack	Opacity	EPA 9	2	
12:53	15:07	3	FF Outlet	Metals	EPA 29	3	
14:21	16:33	2	FF Outlet	Metals	EPA 29	3	
15:05	17:22	2	FF Outlet/SDA Inlet	Particulate/HCl	EPA 5/26A	3	
16:30	17:30	2	Stack	Opacity	EPA 9	3	
<u>March 10</u>							
7:12	9:25	1	FF Outlet	Metals	EPA 29	1	
7:23	11:59	3	FF Outlet	PCDDs/PCDFs	EPA 23	3	
7:30	9:47	2	FF Outlet	Mercury	EPA 29	4	
7:55	10:09	3	FF Outlet/SDA Inlet	Particulate/HCl	EPA 5/26A	1	
9:04	10:04	3	Stack	Opacity	EPA 9	1	
9:52	12:05	1	FF Outlet	Metals	EPA 29	2	
10:22	12:47	2	FF Outlet	Mercury	EPA 29	5	
10:54	13:08	3	FF Outlet/SDA Inlet	Particulate/HCl	EPA 5/26A	2	
11:40	12:40	3	Stack	Opacity	EPA 9	2	
12:23	13:34	1	FF Outlet	Fluorides	EPA 13B	1	
12:44	15:02	1	FF Outlet	Metals	EPA 29	3	
13:21	15:38	2	FF Outlet	Mercury	EPA 29	6	
13:53	16:25	3	FF Outlet/SDA Inlet	Particulate/HCl	EPA 5/26A	3	
13:55	15:03	1	FF Outlet	Fluorides	EPA 13B	2	
15:05	16:05	3	Stack	Opacity	EPA 9	3	
15:23	16:40	1	FF Outlet	Fluorides	EPA 13B	3	

Note: Mercury runs 4-6 were collected as a contingency and not analyzed.

WHEELABRATOR SOUTH BROWARD
FT. LAUDERDALE, FL

Client Reference No: 11400057
CleanAir Project No: 9511-2

PROJECT OVERVIEW

1-5

**Table 1-1 (continued):
Schedule of Activities**

<u>Date (2004)</u>							
<u>Start Time</u>	<u>Stop Time</u>	<u>Unit</u>	<u>Location</u>	<u>Pollutant</u>	<u>Method</u>	<u>Run No.</u>	
<u>March 11</u>							
7:23	9:36	3	FF Outlet	Mercury	EPA 29	4	
7:36	8:49	2	FF Outlet	Fluorides	EPA 13B	1	
7:38	9:53	1	FF Outlet	Mercury	EPA 29	4	
7:38	9:53	1	FF Outlet/SDA Inlet	Particulate/HCl	EPA 5/26A	1	
8:10	9:25	Ash System	Various	Fugitive Emissions	EPA 22	1	
8:52	9:52	1	Stack	Opacity	EPA 9	1	
9:17	10:30	2	FF Outlet	Fluorides	EPA 13B	2	
10:05	12:17	3	FF Outlet	Mercury	EPA 29	5	
10:49	13:00	1	FF Outlet	Mercury	EPA 29	5	
11:04	12:16	2	FF Outlet	Fluorides	EPA 13B	3	
11:05	13:18	1	FF Outlet/SDA Inlet	Particulate/HCl	EPA 5/26A	2	
12:12	13:12	1	Stack	Opacity	EPA 9	2	
12:38	14:54	3	FF Outlet	Mercury	EPA 29	6	
12:53	14:04	3	FF Outlet	Fluorides	EPA 13B	1	
13:30	16:00	1	FF Outlet	Mercury	EPA 29	6	
14:07	16:41	1	FF Outlet/SDA Inlet	Particulate/HCl	EPA 5/26A	3	
14:38	15:51	3	FF Outlet	Fluorides	EPA 13B	2	
15:00	16:00	1	Stack	Opacity	EPA 9	3	
16:10	17:18	3	FF Outlet	Fluorides	EPA 13B	3	
<u>March 12</u>							
8:06	10:50	Ash System	Various	Fugitive Emissions	EPA 22	1	
10:45	12:15	Lime Silo	FF Outlet	Opacity	EPA 9	1	

Note: Mercury runs 4-6 were collected as a contingency and not analyzed.

WHEELABRATOR SOUTH BROWARD
FT. LAUDERDALE, FL

Client Reference No: 11400057
CleanAir Project No: 9511-2

1-6

PROJECT OVERVIEW

**Table 1-2:
Summary of Test Results**

Constituent	Average Unit 1	Average Unit 2	Average Unit 3	Permit Limit ¹
Particulate(mg/dscm @ 7% O ₂)	<0.57	<0.63	<0.57	27
Visual Emissions(percent)	0	0	0	10
Fluoride (lb/MMBtu as HF) ²	0.00036	0.00033	0.00029	0.0040
Beryllium (mg/dscm @ 7%O ₂)	<0.00003	<0.00003	<0.00003	0.001
Cadmium (mg/dscm @ 7%O ₂)	0.00030	0.00037	0.00032	0.040
Lead (mg/dscm @ 7%O ₂)	0.0034	0.0035	0.00086	0.44
Mercury(µg/dscm @ 7%O ₂)	21	13	7.8	70
Total PCDDs/PCDFs (ng/dscm @7%O ₂)			3.0	30
Hydrogen Chloride (ppm @ 7%O ₂)	7.7	3.9	4.4	29 or
Hydrogen Chloride Removal (%) ³	99	99	99	>95
Maximum Demonstrated Combustor Load (Klbs/hr) ⁴	185.3 ⁴	186.2 ⁵	181.7 ⁶	
Maximum Particulate Control Device Inlet Temperature (°F) ⁵	320 ⁴	332 ⁵	320 ⁷	

¹ Limits obtained from 40 Code of Federal Register part 60 Subpart Cb - Emission Guidelines and Compliance Times for Large Municipal Waste Combustors That Are Constructed on or Before September 20, 1994 published in Federal Register as 62 FR 45123 on December 19, 1995 as modified on August 25, 1997 and applicable sections of the facilities Title V Permit No. 0112119-006-AV.

² lb/MMBtu calculations used Fd of 9,570 for MSW as per Method 19.

³ Removal for hydrogen chloride was calculated in the units of its standard (ppmdv @ 7% O₂). Unit 3 removal is based on Runs 1 and 2 only.

⁴ From 2003 Cb test report dated April 22, 2003.

⁵ From 2003 Cb test report dated April 4, 2002.

⁶ From 40CFR60.58b (i) (8) the maximum demonstrated load during PCDDs/PCDFs testing, four hour average.

⁷ From 40CFR60.58b (i) (9) the highest four hour average during PCDDs/PCDFs testing.

WHEELABRATOR SOUTH BROWARD
FT. LAUDERDALE, FL

Client Reference No: 11400057
CleanAir Project No: 9511-2

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PROJECT OVERVIEW

**Table 1-3:
Subpart Cb Required Operating Data**

Process Condition

Unit 1 Maximum Demonstrated Combustor Load (Klbs/hr) ¹	185.3 ¹
Unit 2 Maximum Demonstrated Combustor Load (Klbs/hr) ¹	186.2 ²
Unit 3 Maximum Demonstrated Combustor Load (Klbs/hr) ¹	181.7 ³
Unit 1 Maximum Particulate Control Device Inlet Temperature (°F) ²	320 ¹
Unit 2 Maximum Particulate Control Device Inlet Temperature (°F) ²	332 ²
Unit 3 Maximum Particulate Control Device Inlet Temperature (°F) ²	320 ⁴

¹ From 2003 Cb test report dated April 22, 2003.

² From 2002 Cb test report dated April 4, 2002.

³ From 40CFR60.58b (i) (8) the maximum demonstrated load during PCDDs/PCDFs testing, four hour average.

⁴ From 40CFR60.58b (i) (9) the highest four hour average during PCDDs/PCDFs testing.

**Table 1-4:
Opacity and Fugitive Emission Test Results**

<u>Source</u> Constituent	<u>Sampling</u> Method	<u>Results</u>	<u>Permit</u> Limit ¹
<u>Ash Handling System²</u>			
Fugitive Emissions (%)	EPA M22	0	5 % of observation time
Fugitive Emissions (minutes)		0	9 minutes
<u>Lime Silo³</u>			
Visual Emissions (%)	EPA M9	0	5%

¹ Limits obtained from 40 Code of Federal Register part 60 Subpart Cb - Emission Guidelines and Compliance Times for Large Municipal Waste Combustors That Are Constructed on or Before September 20, 1994 published in Federal Register as 62 FR 45123 on December 19, 1995 as modified on August 25, 1997, Florida's Rule 62-296.416, F.A.C. and PSD-FL-105.

² The Ash Handling System was observed at various locations for a total of 3 hours. All the observed emissions were from the ash trucks diesel exhaust.

³ The Lime Silo was observed for one complete truck unloading.

The test conditions, results of analysis and quality assurance/quality control results are presented in Tables 2-1 through 2-19 on pages 2-1 through 2-17.

RESULTS

2-1

**Table 2-1:
 Unit 1 FF Outlet - Particulate and Visible Emissions**

Run No.	1	2	3	Average
Date (2004)	Mar 11	Mar 11	Mar 11	
Start Time (approx.)	07:38	11:05	14:07	
Stop Time (approx.)	09:53	13:18	16:41	
Process Conditions				
R _p Steam Production Rate (Klb/hour)	180	181	176	179
P ₁ Fabric Filter Inlet Temperature (°F)	318	313	310	314
Gas Conditions				
O ₂ Oxygen (dry volume %)	9.8	9.5	9.5	9.6
CO ₂ Carbon dioxide (dry volume %)	9.4	9.7	9.4	9.5
T _s Sample temperature (°F)	295	293	292	293
B _w Actual water vapor in gas (% by volume)	20.0	20.5	20.2	20.2
Gas Flow Rate				
Q _a Volumetric flow rate, actual (acfm)	191,557	185,945	183,400	186,967
Q _{std} Volumetric flow rate, dry standard (dscfm)	105,327	102,069	101,550	102,982
Sampling Data				
V _{std} Volume metered, standard (dscf)	86.47	81.70	80.76	82.98
%I Isokinetic sampling (%)	105.0	102.4	101.7	103.0
Laboratory Data				
m _{filter} Matter collected on filter(s) (g)	0.00000	0.00000	0.00000	
m _{rinse} Matter collected in solvent rinse(s) (g)	0.00115	0.00047	0.00113	
m _{net} Net matter collected (g)	0.00115	<0.00100	0.00113	
Particulate Results				
C _{std} Particulate Concentration (lb/dscf)	2.9E-08	<2.7E-08	3.1E-08	<2.9E-08
C _{std} Particulate Concentration (gr/dscf)	0.00021	<0.00019	0.00022	<0.00020
C _{std} Particulate Concentration (mg/dscm)	0.47	<0.43	0.50	<0.47
C _{std} Particulate Concentration @7% O ₂ (mg/dscm)	0.59	<0.53	0.60	<0.57
E _{std} Particulate Rate (lb/hr)	0.19	<0.17	0.19	<0.18
E _{Fd} Particulate Rate - F ₂ -based (lb/MMBtu)	0.00053	<0.00047	0.00054	<0.00051
Visible Emissions (%)				
Start Time (approx.)	08:52	12:12	15:00	
Stop Time (approx.)	09:52	13:12	16:00	
Average Opacity (1 hour)	0	0	0	0
Maximum Reading (15 second)	0	0	0	0
Maximum Average (6 minute)	0	0	0	0
No. of readings >10% (15 second)	0	0	0	0

RESULTS

**Table 2-2:
 Unit 1 FF Outlet - Fluorides**

Run No. ¹		2	3	4	Average
Date (2004)		Mar 10	Mar 10	Mar 11	
Start Time (approx.)		13:55	15:23	16:32	
Stop Time (approx.)		15:03	16:40	17:39	
Process Conditions					
F _p	Steam rate (Klb/hr)	177.5	180.4	180.7	179.5
P ₁	Fabric Filter Inlet Temperature (°F)	312	311	330	318
F _d	Oxygen-based F-factor (dscf/MMBtu)	9,570	9,570	9,570	9,570
Gas Conditions					
O ₂	Oxygen (dry volume %)	9.4	9.9	9.9	9.7
CO ₂	Carbon dioxide (dry volume %)	9.7	9.4	9.6	9.6
T _s	Sample temperature (°F)	292	291	299	294
B _w	Actual water vapor in gas (% by volume)	19.2	19.5	19.7	19.5
Gas Flow Rate					
Q _a	Volumetric flow rate, actual (acfm)	181,478	175,790	177,751	178,340
Q _{std}	Volumetric flow rate, dry standard (dscfm)	100,770	97,273	97,879	98,641
Sampling Data					
V _{meas}	Volume metered, standard (dscf)	39.20	38.53	37.50	38.41
%I	Isokinetic sampling (%)	101.0	102.8	99.5	101.1
Laboratory Data					
m _h	Total HF collected (mg)	0.3308	0.3428	0.2634	
Hydrogen Fluoride (HF) Results					
C _{std}	HF Concentration (ppmdv)	0.36	0.38	0.32	0.35
C _{std7}	HF Concentration @ 7% O ₂ (ppmdv)	0.43	0.48	0.41	0.48
C _{std}	HF Concentration (mg/dscm)	0.30	0.31	0.27	0.28
C _{std7}	HF Concentration @ 7% O ₂ (mg/dscm)	0.36	0.40	0.34	0.40
E _{std}	HF Rate (lb/hr)	0.11	0.11	0.10	0.10
E _{std}	HF Rate - Fd-based (lb/MMBtu)	0.00032	0.00036	0.00030	0.00036

¹ The Run 1 sample train developed a leak, therefore a fourth sample run was conducted.

RESULTS

2-3

**Table 2-3:
 Unit 1 FF Outlet and SDA Inlet - Hydrogen Chloride**

Run No.	1	2	3	Average
Date (2004)	Mar 11	Mar 11	Mar 11	
Start Time (approx.)	07:38	11:05	14:07	
Stop Time (approx.)	09:53	13:18	16:41	
Process Conditions				
R _p Steam Production Rate (Kib/hour)	180.2	181.2	176.0	179.1
P ₁ Fabric Filter Inlet Temperature (°F)	318	313	310	314
FF Outlet Gas Conditions				
O ₂ Oxygen (dry volume %)	9.8	9.5	9.5	9.6
CO ₂ Carbon dioxide (dry volume %)	9.4	9.7	9.4	9.5
T _s Sample temperature (°F)	295	293	292	293
B _w Actual water vapor in gas (% by volume)	20.0	20.5	20.2	20.2
FF Outlet Gas Flow Rate				
Q _a Volumetric flow rate, actual (acfm)	191,557	185,945	183,400	186,967
Q _{std} Volumetric flow rate, dry standard (dscfm)	105,327	102,069	101,550	102,982
FF Outlet Sampling Data				
V _{std} Volume metered, standard (dscf)	86.47	81.70	80.76	82.98
%i Isokinetic sampling (%)	105.0	102.4	101.7	103.0
FF Outlet Laboratory Data				
m _h Total HCl collected (mg)	26.173	21.374	19.509	
FF Outlet Hydrogen Chloride (HCl) Results				
C _{std} HCl Concentration (ppmdv)	7.1	6.1	5.6	6.3
C _{std7} HCl Concentration @7% O ₂ (ppmdv)	8.8	7.4	6.9	7.7
SDA Inlet Gas Conditions				
O ₂ Oxygen (dry volume %)	9.7	9.3	9.4	9.5
CO ₂ Carbon dioxide (dry volume %)	9.6	9.8	10.0	9.8
T _s Sample temperature (°F)	482	478	480	480
B _w Actual water vapor in gas (% by volume)	18.9	16.2	16.4	17.2
SDA Inlet Sampling Data				
V _{std} Volume metered, standard (dscf)	62.34	62.12	62.23	62.23
SDA Inlet Laboratory Data				
m _h Total HCl collected (mg)	1092.888	1119.016	1197.118	
SDA Inlet Hydrogen Chloride (HCl) Results				
C _{std} HCl Concentration (ppmdv)	409	420	448	426
C _{std7} HCl Concentration @7% O ₂ (ppmdv)	507	503	542	518
RE Reduction Efficiency (% Removal)	98%	99%	99%	99%

RESULTS

2-4

**Table 2-4:
Unit 1 FF Outlet - Metals and Mercury**

Run No.		1	2	3	Average
Date (2004)		Mar 10	Mar 10	Mar 10	
Start Time (approx.)		07:12	09:52	12:44	
Stop Time (approx.)		09:25	12:05	15:02	
Process Conditions					
R _p	Steam Production Rate (Klb/hour)	180.6	179.0	179.2	179.6
P ₁	Fabric Filter Inlet Temperature (°F)	310	311	312	311
Gas Conditions					
O ₂	Oxygen (dry volume %)	9.3	10.3	9.7	9.8
CO ₂	Carbon dioxide (dry volume %)	10.0	9.2	9.5	9.6
T _s	Sample temperature (°F)	290	290	290	290
B _w	Actual water vapor in gas (% by volume)	20.4	20.0	19.6	20.0
Gas Flow Rate					
Q _a	Volumetric flow rate, actual (acfm)	168,690	167,508	175,638	170,612
Q _{std}	Volumetric flow rate, dry standard (dscfm)	92,606	92,376	97,351	94,111
Sampling Data					
V _{std}	Volume metered, standard (dscf)	72.30	71.51	75.54	73.11
%I	Isokinetic sampling (%)	101.3	100.5	100.7	100.8
Mercury Laboratory Data					
m _h	Total matter corrected for allowable blanks (µg)	32.951	34.747	36.091	
Mercury Results - Total					
C _{std}	Concentration (µg/dscm)	16.1	17.2	16.9	16.7
C _{std7}	Concentration @7% O ₂ (µg/dscm)	19	22	21	21
Beryllium Laboratory Data					
m _h	Total matter corrected for allowable blanks (µg)	<0.0500	<0.0500	<0.0500	
Beryllium Results - Total					
C _{std}	Concentration (mg/dscm)	<0.000024	<0.000025	<0.000023	<0.000024
C _{std7}	Concentration @7% O ₂ (mg/dscm)	<0.00003	<0.00003	<0.00003	<0.00003
Cadmium Laboratory Data					
m _h	Total matter corrected for allowable blanks (µg)	0.679	0.413	0.420	
Cadmium Results - Total					
C _{std}	Concentration (mg/dscm)	0.00033	0.00020	0.00020	0.00024
C _{std7}	Concentration @7% O ₂ (mg/dscm)	0.00040	0.00027	0.00024	0.00030
Lead Laboratory Data					
m _h	Total matter corrected for allowable blanks (µg)	7.209	4.759	4.794	
Lead Results - Total					
C _{std}	Concentration (mg/dscm)	0.0035	0.0024	0.0022	0.0027
C _{std7}	Concentration @7% O ₂ (mg/dscm)	0.0042	0.0031	0.0028	0.0034

RESULTS

2-5

**Table 2-5:
Unit 2 FF Outlet - Particulate and Visible Emissions**

Run No.	1	2	3	Average
Date (2004)	Mar 9	Mar 9	Mar 9	
Start Time (approx.)	08:23	11:27	15:05	
Stop Time (approx.)	10:40	13:42	17:22	
Process Conditions				
R _p Steam Production Rate (Kib/hour)	180.4	180.8	180.1	180.4
P ₁ Fabric Filter Inlet Temperature (°F)	310	310	310	310
Gas Conditions				
O ₂ Oxygen (dry volume %)	9.2	9.4	9.4	9.3
CO ₂ Carbon dioxide (dry volume %)	9.5	9.1	9.2	9.3
T _s Sample temperature (°F)	290	293	293	292
B _w Actual water vapor in gas (% by volume)	21.5	22.1	21.6	21.7
Gas Flow Rate				
Q _a Volumetric flow rate, actual (acfm)	181,341	183,044	186,527	183,637
Q _{std} Volumetric flow rate, dry standard (dscfm)	98,234	97,931	100,337	98,834
Sampling Data				
V _{std} Volume metered, standard (dscf)	79.37	79.76	81.52	80.21
%I Isokinetic sampling (%)	103.3	104.2	103.9	103.8
Laboratory Data				
m _{filter} Matter collected on filter(s) (g)	0.00000	0.00000	0.00030	
m _s Matter collected in solvent rinse(s) (g)	0.00077	0.00065	0.00127	
m _n Net matter collected (g)	<0.00100	<0.00100	0.00157	
Particulate Results				
C _{sd} Particulate Concentration (lb/dscf)	<2.8E-08	<2.8E-08	4.2E-08	<3.3E-08
C _{sd} Particulate Concentration (gr/dscf)	<0.00019	<0.00019	0.00030	<0.00023
C _{sd} Particulate Concentration (mg/dscm)	<0.44	<0.44	0.68	<0.52
C _{sd7} Particulate Concentration @7% O ₂ (mg/dscm)	<0.53	<0.54	0.82	<0.63
E _{rate} Particulate Rate (lb/hr)	<0.16	<0.16	0.26	<0.19
E _{Fd} Particulate Rate - F _d -based (lb/MMBtu)	<0.00047	<0.00048	0.00074	<0.00056
Visible Emissions (%)				
Start Time (approx.)	09:13	12:41	16:30	
Stop Time (approx.)	10:13	13:41	17:30	
Average Opacity (1 hour)	0	0	0	0
Maximum Reading (15 second)	0	0	0	0
Maximum Average (6 minute)	0	0	0	0
No. of readings >10% (15 second)	0	0	0	0

RESULTS

2-6

**Table 2-6:
 Unit 2 FF Outlet - Fluorides**

Run No.	1	2	3	Average
Date (2004)	Mar 11	Mar 11	Mar 11	
Start Time (approx.)	07:36	09:17	11:04	
Stop Time (approx.)	08:49	10:30	12:16	
Process Conditions				
R _p Steam rate (Klb/hr)	179.6	181.0	179.5	180.0
P ₁ Fabric Filter Inlet Temperature (°F)	310	310	310	310
F _d Oxygen-based F-factor (dscf/MMBtu)	9,570	9,570	9,570	9,570
Gas Conditions				
O ₂ Oxygen (dry volume %)	10.6	10.5	10.5	10.5
CO ₂ Carbon dioxide (dry volume %)	8.7	8.9	8.9	8.8
T _s Sample temperature (°F)	289	290	292	290
B _w Actual water vapor in gas (% by volume)	20.3	21.3	20.8	20.8
Gas Flow Rate				
Q _a Volumetric flow rate, actual (acfm)	181,863	183,210	183,298	182,790
Q _{std} Volumetric flow rate, dry standard (dscfm)	100,825	100,169	100,595	100,530
Sampling Data				
V _{std} Volume metered, standard (dscf)	37.90	38.14	37.99	38.01
%I Isokinetic sampling (%)	97.6	98.9	98.0	98.2
Laboratory Data				
m _h Total HF collected (mg)	0.3104	0.3012	0.2829	0.2981
Hydrogen Fluoride (HF) Results				
C _{std} HF Concentration (ppmdv)	0.35	0.34	0.32	0.33
C _{std} HF Concentration @7% O ₂ (ppmdv)	0.47	0.45	0.42	0.45
C _{std} HF Concentration (mg/dscm)	0.29	0.28	0.26	0.28
C _{std} HF Concentration @7% O ₂ (mg/dscm)	0.39	0.37	0.35	0.37
E _{std} HF Rate (lb/hr)	0.11	0.10	0.10	0.10
E _{std} HF Rate - F _d -based (lb/MMBtu)	0.00035	0.00033	0.00032	0.00033

RESULTS

2-7

**Table 2-7:
Unit 2 FF Outlet and SDA Inlet - Hydrogen Chloride**

Run No.	1	2	3	Average
Date (2004)	Mar 9	Mar 9	Mar 9	
Start Time (approx.)	08:23	11:27	15:05	
Stop Time (approx.)	10:40	13:42	17:22	
Process Conditions				
R _p Steam Production Rate (Kib/hour)	180.4	180.8	180.1	180.4
P _i Fabric Filter Inlet Temperature (°F)	310	310	310	310
FF Outlet Gas Conditions				
O ₂ Oxygen (dry volume %)	9.2	9.4	9.4	9.3
CO ₂ Carbon dioxide (dry volume %)	9.5	9.1	9.2	9.3
T _s Sample temperature (°F)	290	293	293	292
B _w Actual water vapor in gas (% by volume)	21.5	22.1	21.6	21.7
FF Outlet Gas Flow Rate				
Q _a Volumetric flow rate, actual (acfm)	181,341	183,044	186,527	183,637
Q _{std} Volumetric flow rate, dry standard (dscfm)	98,234	97,931	100,337	98,834
FF Outlet Sampling Data				
V _{meas} Volume metered, standard (dscf)	79.37	79.76	81.52	80.21
%I Isokinetic sampling (%)	103.3	104.2	103.9	103.8
FF Outlet Laboratory Data				
m _n Total HCl collected (mg)	10.415	10.644	12.816	
FF Outlet Hydrogen Chloride (HCl) Results				
C _{std} HCl Concentration (ppmdv)	3.1	3.1	3.7	3.3
C _{act} HCl Concentration @7% O ₂ (ppmdv)	3.6	3.8	4.4	3.9
SDA Inlet Gas Conditions				
O ₂ Oxygen (dry volume %)	10.5	10.8	11.7	11.0
CO ₂ Carbon dioxide (dry volume %)	8.9	8.5	7.9	8.4
T _s Sample temperature (°F)	516	516	520	517
B _w Actual water vapor in gas (% by volume)	17.8	18.3	17.3	17.8
SDA Inlet Sampling Data				
V _{meas} Volume metered, standard (dscf)	62.10	62.41	64.25	62.92
SDA Inlet Laboratory Data				
m _n Total HCl collected (mg)	1251.209	1323.768	1378.853	
SDA Inlet Hydrogen Chloride (HCl) Results				
C _{std} HCl Concentration (ppmdv)	470	494	500	488
C _{act} HCl Concentration @7% O ₂ (ppmdv)	628	681	756	688
RE Reduction Efficiency (% Removal)	99%	99%	99%	99%

RESULTS

2-8

**Table 2-8:
Unit 2 FF Outlet - Metals and Mercury**

Run No.		1	2	3	Average
Date (2004)		Mar 9	Mar 9	Mar 9	
Start Time (approx.)		08:23	11:27	14:21	
Stop Time (approx.)		10:40	13:42	16:33	
Process Conditions					
R _p	Steam Production Rate (Klb/hour)	180.4	180.8	179.9	180.4
P ₁	Fabric Filter Inlet Temperature (°F)	310	310	310	310
Gas Conditions					
O ₂	Oxygen (dry volume %)	9.2	9.4	9.5	9.4
CO ₂	Carbon dioxide (dry volume %)	9.5	9.1	9.1	9.2
T _s	Sample temperature (°F)	290	291	291	291
B _w	Actual water vapor in gas (% by volume)	21.6	22.1	21.8	21.8
Gas Flow Rate					
Q _a	Volumetric flow rate, actual (acfm)	182,115	181,720	184,064	182,633
Q _{std}	Volumetric flow rate, dry standard (dscfm)	98,470	97,444	98,974	98,296
Sampling Data					
V _{std}	Volume metered, standard (dscf)	74.506	75.126	74.605	74.746
%I	Isokinetic sampling (%)	99.7	101.6	99.3	100.2
Mercury Laboratory Data					
m _h	Total matter corrected for allowable blanks (µg)	25.277	20.611	20.987	
Mercury Results - Total					
C _{std}	Concentration (µg/dscm)	12.0	9.7	9.9	10.5
C _{std}	Concentration @7% O ₂ (µg/dscm)	14	12	12	13
Beryllium Laboratory Data					
m _h	Total matter corrected for allowable blanks (µg)	<0.0500	<0.0500	<0.0500	
Beryllium Results - Total					
C _{std}	Concentration (mg/dscm)	<0.000024	<0.000024	<0.000024	<0.000024
C _{std}	Concentration @7% O ₂ (mg/dscm)	<0.00003	<0.00003	<0.00003	<0.00003
Cadmium Laboratory Data					
m _h	Total matter corrected for allowable blanks (µg)	0.765	0.826	0.364	
Cadmium Results - Total					
C _{std}	Concentration (mg/dscm)	0.00036	0.00039	0.00017	0.00031
C _{std}	Concentration @7% O ₂ (mg/dscm)	0.00043	0.00047	0.00021	0.00037
Lead Laboratory Data					
m _h	Total matter corrected for allowable blanks (µg)	12.240	3.194	3.246	
Lead Results - Total					
C _{std}	Concentration (mg/dscm)	0.0058	0.0015	0.0015	0.0029
C _{std}	Concentration @7% O ₂ (mg/dscm)	0.0069	0.0018	0.0019	0.0035

WHEELABRATOR SOUTH BROWARD
FT. LAUDERDALE, FL

Client Reference No: 11400057
CleanAir Project No: 9511-2

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RESULTS

Table 2-9:
Unit 3 FF Outlet - Particulate and Visible Emissions

Run No.	1	2	3	Average
Date (2004)	Mar 10	Mar 10	Mar 10	
Start Time (approx.)	07:55	10:54	13:53	
Stop Time (approx.)	10:09	13:08	16:05	
Process Conditions				
R _p Steam Production Rate (Klb/hour)	179.0	179.7	180.5	179.7
P ₁ Fabric Filter Inlet Temperature (°F)	320	320	320	320
Gas Conditions				
O ₂ Oxygen (dry volume %)	9.5	10.0	9.4	9.6
CO ₂ Carbon dioxide (dry volume %)	9.7	9.4	9.8	9.6
T _s Sample temperature (°F)	300	300	300	300
B _w Actual water vapor in gas (% by volume)	20.5	19.3	19.6	19.8
Gas Flow Rate				
Q _a Volumetric flow rate, actual (acfm)	183,475	188,006	179,627	183,702
Q _{std} Volumetric flow rate, dry standard (dscfm)	99,814	103,711	98,854	100,793
Sampling Data				
V _{total} Volume metered, standard (dscf)	76.96	78.83	75.00	76.93
%I Isokinetic sampling (%)	98.6	97.2	97.0	97.6
Laboratory Data				
m _{filter} Matter collected on filter(s) (g)	0.00000	0.00000	0.00000	
m _s Matter collected in solvent rinse(s) (g)	0.00095	0.00055	0.00047	
m _n Net matter collected (g)	<0.00100	<0.00100	<0.00100	
Particulate Results				
C _{sd} Particulate Concentration (lb/dscf)	<2.9E-08	<2.8E-08	<2.9E-08	<2.9E-08
C _{sd} Particulate Concentration (gr/dscf)	<0.00020	<0.00020	<0.00021	<0.00020
C _{sd} Particulate Concentration (mg/dscm)	<0.46	<0.45	<0.47	<0.46
C _{sd7} Particulate Concentration @7% O ₂ (mg/dscm)	<0.56	<0.57	<0.57	<0.57
E _{phr} Particulate Rate (lb/hr)	<0.17	<0.17	<0.17	<0.17
E _{pd} Particulate Rate - F _c -based (lb/MMBtu)	<0.00050	<0.00051	<0.00051	<0.00051
Visible Emissions (%)				
Start Time (approx.)	09:04	11:40	15:05	
Stop Time (approx.)	10:04	12:40	16:05	
Average Opacity (1 hour)	0	0	0	0
Maximum Reading (15 second)	0	0	0	0
Maximum Average (6 minute)	0	0	0	0
No. of readings >10% (15 second)	0	0	0	0

WHEELABRATOR SOUTH BROWARD
FT. LAUDERDALE, FL

Client Reference No: 11400057
CleanAir Project No: 9511-2

RESULTS

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Table 2-10:
Unit 3 FF Outlet - PCDDs/PCDFs

Run No.		1	2	3	Average
Date (2004)		Mar 9	Mar 9	Mar 10	
Start Time (approx.)		07:27	12:19	07:23	
Stop Time (approx.)		11:46	16:38	11:39	
Process Conditions					
R _p	Steam Production Rate - (Klbs/hour)	181.7	180.2	180.5	180.8
P ₁	Fabric Filter Inlet Temperature - (°F)	320	320	320	320
Gas Conditions					
O ₂	Oxygen (dry volume %)	8.9	9.0	10.1	9.3
CO ₂	Carbon dioxide (dry volume %)	10.3	10.0	9.3	9.9
T _s	Sample temperature (°F)	298	299	299	299
B _w	Actual water vapor in gas (% by volume)	21.5	21.4	20.4	21.1
Gas Flow Rate					
Q _a	Volumetric flow rate, actual (acfm)	169,463	172,864	179,275	173,868
Q _{std}	Volumetric flow rate, dry standard (dscfm)	91,044	92,992	97,860	93,965
Sampling Data					
V _{std}	Volume metered, standard (dscf)	136.35	138.94	147.02	140.77
%I	Isokinetic sampling (%)	97.2	97.0	97.5	97.2
Laboratory Data from USEPA Method 23					
	Total PCDDs (ng)	4.76	4.71	4.16	
	Total PCDFs (ng)	5.60	5.86	4.93	
m _h	Total PCDDs & PCDFs (ng)	10.40	10.60	9.09	
m _{h,TEQ}	Total TEQ PCDDs & PCDFs (ng)	0.191	0.189	0.165	
Total PCDD/F Results					
C _{std}	PCDD/F Concentration (ng/dscm)	2.7	2.7	2.2	2.5
C _{std7}	PCDD/F Concentration @7% O ₂ (ng/dscm)	3.1	3.1	2.8	3.0
E _{std}	PCDD/F Rate (lb/hr)	9.2E-07	9.4E-07	8.0E-07	8.9E-07
E _{std}	PCDD/F Rate - F _g -based (lb/MMBtu)	2.8E-09	2.8E-09	2.5E-09	2.7E-09
Total PCDD/F TEQ Results (using USEPA/INTL 1989 TEFs)					
C _{stdTEQ}	TEQ Concentration (ng/dscm)	0.049	0.048	0.040	0.046
C _{std7TEQ}	TEQ Concentration @7% O ₂ (ng/dscm)	0.057	0.056	0.051	0.053
E _{stdTEQ}	TEQ Rate (lb/hr)	1.7E-08	1.7E-08	1.5E-08	1.6E-08
E _{stdTEQ}	TEQ Rate - F _g -based (lb/MMBtu)	5.1E-11	5.0E-11	4.6E-11	4.9E-11

WHEELABRATOR SOUTH BROWARD
FT. LAUDERDALE, FL

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RESULTS

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**Table 2-11:
Unit 3 FF Outlet - Fluorides**

Run No.		1	2	3	Average
Date (2004)		Mar 11	Mar 11	Mar 11	
Start Time (approx.)		12:53	14:38	16:10	
Stop Time (approx.)		14:04	15:51	17:18	
Process Conditions					
R _p	Steam rate (Klb/hr)	180.5	179.7	178.6	179.6
P ₁	Fabric Filter Inlet Temperature (°F)	321	319	320	320
F _d	Oxygen-based F-factor (dscf/MMBtu)	9,570	9,570	9,570	9,570
Gas Conditions					
O ₂	Oxygen (dry volume %)	9.7	10.7	9.7	10.0
CO ₂	Carbon dioxide (dry volume %)	9.5	8.9	9.6	9.3
T _s	Sample temperature (°F)	298	296	296	297
B _w	Actual water vapor in gas (% by volume)	20.3	21.3	19.6	20.4
Gas Flow Rate					
Q _a	Volumetric flow rate, actual (acfm)	171,153	169,844	181,695	174,231
Q _{std}	Volumetric flow rate, dry standard (dscfm)	94,017	92,549	101,089	95,885
Sampling Data					
V _{meter}	Volume metered, standard (dscf)	35.78	35.41	38.19	36.46
%I	Isokinetic sampling (%)	98.8	99.3	98.1	98.7
Laboratory Data					
m _h	Total HF collected (mg)	0.24918	0.27061	0.27174	0.26384
Hydrogen Fluoride (HF) Results					
C _{std}	HF Concentration (ppm _{dv})	0.30	0.32	0.30	0.31
C _{std7}	HF Concentration @7% O ₂ (ppm _{dv})	0.37	0.44	0.38	0.39
C _{std}	HF Concentration (mg/dscm)	0.25	0.27	0.25	0.26
C _{std7}	HF Concentration @7% O ₂ (mg/dscm)	0.31	0.37	0.31	0.33
E _{h/hr}	HF Rate (lb/hr)	0.087	0.094	0.095	0.092
E _{fd}	HF Rate - F _d -based (lb/MMBtu)	0.00027	0.00033	0.00028	0.00029

WHEELABRATOR SOUTH BROWARD
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RESULTS

2-12

**Table 2-12:
Unit 3 FF Outlet and SDA Inlet - Hydrogen Chloride**

Run No.		1	2	3	Average ¹
Date (2004)		Mar 10	Mar 10	Mar 10	
Start Time (approx.)		07:55	10:54	13:53	
Stop Time (approx.)		10:09	13:08	16:05	
Process Conditions					
R _p	Steam Production Rate (Klb/hour)	179.0	179.7	180.5	179.7
P ₁	Fabric Filter Inlet Temperature (°F)	320	320	320	320
FF Outlet Gas Conditions					
O ₂	Oxygen (dry volume %)	9.5	10.0	9.4	9.6
CO ₂	Carbon dioxide (dry volume %)	9.7	9.4	9.8	9.6
T _s	Sample temperature (°F)	300	300	300	300
B _w	Actual water vapor in gas (% by volume)	20.5	19.3	19.6	19.8
FF Outlet Gas Flow Rate					
Q _a	Volumetric flow rate, actual (acfm)	183,475	188,006	179,627	183,702
Q _{sd}	Volumetric flow rate, dry standard (dscfm)	99,814	103,711	98,854	100,793
FF Outlet Sampling Data					
V _{meas}	Volume metered, standard (dscf)	76.96	78.83	75.00	76.93
%I	Isokinetic sampling (%)	98.6	97.2	97.0	97.6
FF Outlet Laboratory Data					
m _h	Total HCl collected (mg)	12.777	11.443	11.053	
FF Outlet Hydrogen Chloride (HCl) Results					
C _{sd}	HCl Concentration (ppmdv)	3.9	3.4	3.4	3.6
C _{sd7}	HCl Concentration @7% O ₂ (ppmdv)	4.7	4.3	4.2	4.4
SDA Inlet Gas Conditions					
O ₂	Oxygen (dry volume %)	8.5	9.9	15.7	9.2
CO ₂	Carbon dioxide (dry volume %)	10.6	9.5	4.6	10.1
T _s	Sample temperature (°F)	489	491	489	490
B _w	Actual water vapor in gas (% by volume)	16.9	15.1	8.5	16.0
SDA Inlet Sampling Data					
V _{meas}	Volume metered, standard (dscf)	63.25	62.86	63.49	63.06
SDA Inlet Laboratory Data					
m _h	Total HCl collected (mg)	1224.026	1066.349	620.080	
SDA Inlet Hydrogen Chloride (HCl) Results					
C _{sd}	HCl Concentration (ppmdv)	451	395	228	423
C _{sd7}	HCl Concentration @7% O ₂ (ppmdv)	506	500	609	503
RE	Reduction Efficiency (% Removal)	99%	99%	NA	99%

¹ Run 3 SDA Inlet HCl results were not utilized for Reduction Efficiency due to a leak in the sample train.

WHEELABRATOR SOUTH BROWARD
FT. LAUDERDALE, FL

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RESULTS

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**Table 2-13:
Unit 3 FF Outlet - Metals and Mercury**

Run No.	1	2	3	Average
Date (2004)	Mar 9	Mar 9	Mar 9	
Start Time (approx.)	07:27	10:07	12:53	
Stop Time (approx.)	09:42	12:24	15:07	
Process Conditions				
R _p Steam Production Rate (Kib/hour)	180.6	180.4	180.2	180.4
P ₁ Fabric Filter Inlet Temperature (°F)	320	320	320	320
Gas Conditions				
O ₂ Oxygen (dry volume %)	8.8	8.9	9.1	8.9
CO ₂ Carbon dioxide (dry volume %)	10.3	10.2	10.0	10.2
T _s Sample temperature (°F)	300	300	300	300
B _w Actual water vapor in gas (% by volume)	20.8	21.9	21.1	21.3
Gas Flow Rate				
Q _a Volumetric flow rate, actual (acfm)	163,371	167,066	166,482	165,640
Q _{std} Volumetric flow rate, dry standard (dscfm)	88,400	89,351	89,785	89,179
Sampling Data				
V _{meas} Volume metered, standard (dscf)	67.11	68.03	67.51	67.55
%I Isokinetic sampling (%)	98.5	98.8	97.6	98.3
Mercury Laboratory Data				
m _h Total matter corrected for allowable blanks (µg)	15.8968	11.7186	11.1736	
Mercury Results - Total				
C ₁₀ Concentration (µg/dscm)	8.4	6.1	5.8	6.8
C ₁₀₇ Concentration @7% O ₂ (µg/dscm)	9.6	7.0	6.9	7.8
Beryllium Laboratory Data				
m _h Total matter corrected for allowable blanks (µg)	<0.0500	<0.0500	<0.0500	
Beryllium Results - Total				
C ₁₀ Concentration (mg/dscm)	<0.000024	<0.000024	<0.000024	<0.000024
C ₁₀₇ Concentration @7% O ₂ (mg/dscm)	<0.00003	<0.00003	<0.00003	<0.00003
Cadmium Laboratory Data				
m _h Total matter corrected for allowable blanks (µg)	0.414	0.296	0.843	
Cadmium Results - Total				
C ₁₀ Concentration (mg/dscm)	0.00022	0.00015	0.00044	0.00027
C ₁₀₇ Concentration @7% O ₂ (mg/dscm)	0.00025	0.00018	0.00052	0.00032
Lead Laboratory Data				
m _h Total matter corrected for allowable blanks (µg)	1.681	1.609	0.945	
Lead Results - Total				
C ₁₀ Concentration (mg/dscm)	0.00088	0.00084	0.00049	0.00074
C ₁₀₇ Concentration @7% O ₂ (mg/dscm)	0.0010	0.00097	0.00058	0.00086

WHEELABRATOR SOUTH BROWARD
 FT. LAUDERDALE, FL

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RESULTS

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**Table 2-14:
 Ash Handling System - Fugitive Emissions**

Source Constituent	Date (2004)	Start Time (approx.)	Stop Time (approx.)	Accumulated Emission Duration (minutes) / (%)	Permit Limit
<u>Ash Conveyor System</u>					
Visual Opacity (%)	March 11	8:10	9:25	0 / 0	< 5% of the observation Time
<u>Ash Unloading Area</u>					
Visual Opacity (%)	March 12	8:06	9:23	0 / 0	< 9 minutes
<u>Open Door</u>					
Visual Opacity (%)	March 12	9:39	10:50	0 / 0	

**Table 2-15:
 Lime Silo Fabric Filter Outlet - Visible Emissions**

Source	Lime Silo Vent
Run No.	1
Date (2004)	March 12
Start Time (approx.)	10:45
Stop Time (approx.)	12:15
<u>Process Conditions</u>	
Lime unloaded (tons)	26.01
Rate of unloading (tons/hour)	17.3
<u>Visible Emissions</u>	
Average (percent opacity)	0
Maximum reading (percent opacity)	0

RESULTS

2-15

**Table 2-16:
Quality Control and Quality Assurance
PCDDs - Extraction Standard Percent Recoveries**

Sample Number	Extraction Standard Percent Recoveries, %						
	¹³ C-TCDD	¹³ C-PeCDD	¹³ C-HxCDD	¹³ C-HxCDD	¹³ C-HxCDD	¹³ C-HpCDD	¹³ C-OCDD
0 2044 MB001	92	90.5	93.6	93.8	94.4	91.9	92.1
Field Blank	88.6	90.6	89.1	90.4	90.7	86.2	82.4
Unit 3 FF Outlet Run 1	83.9	86.1	84.5	86.4	86.4	85.8	83.1
Unit 3 FF Outlet Run 2	92.3	93.2	92.9	95.1	95.8	95.2	89.8
Unit 3 FF Outlet Run 3	87.4	86.2	84.6	85.7	85.6	80.7	82.3

Average	89	89	89	90	91	88	86
SD	3	3	4	4	5	6	5

**Table 2-17:
Quality Control and Quality Assurance
PCDFs - Extraction Standard Percent Recoveries**

Sample Number	Extraction Standard Percent Recoveries, %									
	¹³ C-TCDF	¹³ C-PeCDF	¹³ C-PeCDF	¹³ C-HxCDF	¹³ C-HxCDF	¹³ C-HxCDF	¹³ C-HxCDF	¹³ C-HpCDF	¹³ C-HpCDF	¹³ C-OCDF
0 2044 MB001	94.5	92.9	92.8	91.7	91.1	93.6	90.1	89	91.9	90.3
Field Blank	88	91.8	89.4	85.5	85.6	90	86.5	86.5	83.4	82.4
Unit 3 FF Outlet Run 1	85.6	88.1	86.5	83	80.8	84.1	82.2	82	82.7	82.4
Unit 3 FF Outlet Run 2	90	94.4	92.9	91	91.1	92.5	89.8	91.4	92.9	89
Unit 3 FF Outlet Run 3	85.7	86.2	86.4	83.5	84.2	85.4	82.5	80.8	79.3	81.9

Average	89	91	90	87	87	89	86	86	86	85
SD	4	3	3	4	4	4	4	5	6	4

RESULTS

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**Table 2-18:
Quality Control and Quality Assurance - Metals
RPD RESULTS**

Mercury Run Number	Front Half	H ₂ O ₂ /HNO ₃	Empty Impinger	KMnO ₄	HCl
U1 FF Out R1	NA	1.7%	NA	NA	4.3%
U1 FF Out R2	NA	0.5%	NA	NA	1.2%
U1 FF Out R3	NA	1.0%	NA	NA	6.3%
U2 FF Out R1	NA	0.2%	NA	NA	1.1%
U2 FF Out R2	NA	1.1%	NA	NA	4.4%
U2 FF Out R3	NA	0.2%	NA	NA	6.1%
U3 FF Out R1	NA	1.1%	NA	NA	NA
U3 FF Out R2	NA	0.6%	NA	NA	NA
U3 FF Out R3	NA	0.1%	NA	NA	NA
Field Blank	NA	NA	NA	NA	NA
Reagent Blank	NA	NA	NA	NA	NA
KMnO ₄ #2	NA	NA		NA	NA

Element	U1 FF Out	U2 FF Out	U3 FF Out
Beryllium	NA	NA	NA
Cadmium	1.3%	1.0%	0.2%
Lead	2.9%	0.6%	1.4%

Sample Spike and Recovery

Run Number		Front Half	H ₂ O ₂ /HNO ₃	Empty Impinger	KMnO ₄	HCl
U1 FF Out R3	# 1	113%	103%	93%	95%	101%
	# 2	114%	103%	96%	92%	102%
U2 FF Out R3	# 1	114%	104%	96%	94%	100%
	# 2	115%	105%	97%	94%	100%
U3 FF Out R3	# 1	113%	94%	96%	93%	103%
	# 2	113%	94%	96%	93%	103%

Element	U1 FF Out Run 3	U2 FF Out Run 3	U3 FF Out Run 3
Beryllium	105%	107%	106%
Cadmium	83%	88%	86%
Lead	105%	104%	105%

Element	0.25 ppb	1 ppb	10 ppb	50 ppb	500 ppb
Beryllium	114%	102%	96%	107%	108%
Cadmium		102%	97%	97%	96%
Lead		101%	101%	103%	89%

RESULTS

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**Table 2-19:
Quality Control and Quality Assurance - Field and Reagent Blanks**

Mercury	Average Total					
	Catch ug	Front Half	H ₂ O ₂ /HNO ₃	Empty Impinger	KMnO ₄	HCl
Field Blank # 1	< 0.6	< 0.1	< 0.3	< 0.2	< 0.6	< 0.4
Field Blank # 2	< 0.6	< 0.1	< 0.3	< 0.2	< 0.6	< 0.4
Reagent Blank # 1	< 0.4	< 0.1	< 0.2	< 0.2	< 0.4	< 0.4
Reagent Blank # 2	< 0.4	< 0.1	< 0.2	< 0.2	< 0.4	< 0.4
KMnO ₄ #2 # 1	< 0.4	< 0.1	< 0.2		< 0.4	< 0.1
KMnO ₄ #2 # 2		< 0.1	< 0.2		< 0.4	< 0.1

Element	Field Blank Total µg	Reagent Blank Total µg
Beryllium	< 0.05	< 0.05
Cadmium	0.35	0.26
Lead	0.72	< 0.5

ALTA ANALYTICAL PERSPECTIVES

Analyte	0_2044_MB001 pg	Field Blank pg
Totals		
TCDDs	2.29	8.91
PeCDDs	0	7.22
HxCDDs	0	4.74
HpCDDs	0	13.5
OCDD	0	21.7
TCDFs	0	30.5
PeCDFs	0	2.25
HxCDFs	0	14
HpCDFs	0	5.88
OCDF	0	7.44
Total PCDD/Fs (ND=0; EMPC=0)	2.29	116
Total PCDD/Fs (ND=0; EMPC=EMPC)	4.77	124
Total PCDD/Fs (2378-X ND=DL; EMPC=EMPC)	33.4	150
Total 2378s (ND=0; EMPC=0)	0.00	34.3
Total 2378s (ND=0.5; EMPC=0)	16.0	59.9
Total 2378s (ND=1; EMPC=0)	17.4	85.8
Total 2378s (ND=0; EMPC=1)	0.00	35.4
Total 2378s (ND=0.5; EMPC=1)	16.0	61.1
Total 2378s (ND=1; EMPC=1)	33.6	86.7

ATTACHMENT WSB-EU1-IV1

IDENTIFICATION OF APPLICABLE REQUIREMENTS

Wheelabrator South Broward, Inc.
South Broward Waste-To-Energy Facility
Facility ID No.: 0112119
Broward County

Title V Air Operation Permit Revision

FINAL Permit No.: 0112119-008-AV
Revision to Title V Air Operation Permit No.: 0112119-006-AV

Permitting Authority

State of Florida
Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
Title V Section

Mail Station #5505
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Tallahassee, Florida 32399-2400
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Fax: 850/922-6979

Compliance Authority

State of Florida
Department of Environmental Protection
Southeast District Office
400 North Congress Avenue
West Palm Beach, Florida 33416-5425
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Fax: 561/681-6755

Title V Air Operation Permit Revision

FINAL Permit No.: 0112119-008-AV

Revision to Title V Air Operation Permit No.: 0112119-006-AV

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Permittee:

Wheelabrator South Broward, Inc.
4400 South State Road 7
Ft. Lauderdale, Florida 33314

FINAL Permit No.: 0112119-008-AV**Facility ID No.:** 0112119**SIC Nos.:** 49, 4953**Project:** Title V Air Operation Permit Revision

This permit revision and corresponding air construction permit modification, are to raise the lime storage silo filling rate from 40,000 lb/hr to 50,000 lb/hr of pebble lime at the existing South Broward County Waste-to-Energy Facility. This facility is located at 4400 South State Road 7, Ft. Lauderdale, Broward County. UTM Coordinates: Zone 17, 579.54 km East and 2883.34 km North; Latitude: 26° 04' 07" North and Longitude: 80° 12' 19" West.

This Title V Air Operation Permit Revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:

Appendix I-1, List of Insignificant Emissions Units and/or Activities

Appendix SS-1, Stack Sampling Facilities (version dated 10/7/96)

Appendix TV-4, TITLE V CONDITIONS (version dated 02/12/02)

Figure 1: Summary Report-Gaseous and Opacity Excess Emission and Monitoring
System Performance (40 CFR 60)

Table 297.310-1, Calibration SCHEDULE (version dated 10/07/96)

Initial Effective Date: October 22, 2000**Revision Effective Date:** November 17, 2004**Renewal Application Due Date:** April 25, 2005**Expiration Date:** October 21, 2005

Michael G. Cooke, Director
Division of Air Resource Management

MGC/th

Section I. Facility Information.

Subsection A. Facility Description.

This facility consists of three municipal solid waste combustors (Unit Nos. 1, 2 and 3) with auxiliary burners, lime storage and processing facilities, ash storage and processing facilities, a cooling tower, and ancillary support equipment. The nominal (generator nameplate) electric generating capacity of the facility is 67.6 megawatts (MW), which is sold to the local utility. Also included in this permit are miscellaneous insignificant emissions units and/or activities.

Each of the combustor units at the facility includes an acid gas, air toxics, and particulate emissions control system consisting of a lime spray dryer and baghouse. Nitrogen oxides are controlled by an ammonia injection system that operates under the principle of selective non-catalytic reduction (SNCR). There is a metals recovery system which is a potential source of fugitive emissions.

Construction permit 0112120-007-AC (issued on _____) allowed an increase in the pebble lime fill rate to the 236 ton pebble lime silo used as reagent in the acid gas control system.

Based on the initial Title V permit application received June 17, 1996, this facility is a major source of hazardous air pollutants (HAPs). The facility is subject to requirements of 40 CFR 60, Subpart Cb – Emissions Guidelines and Compliance Times for Large Municipal Waste Combustors That are Constructed on or Before September 20, 1994.

Subsection B. Summary of Emissions Unit ID Numbers and Brief Descriptions.

<u>E.U. ID No.</u>	<u>Brief Description</u>
-001	863 TPD (maximum) Municipal Waste Combustor & Auxiliary Burners - Unit 1
-002	863 TPD (maximum) Municipal Waste Combustor & Auxiliary Burners - Unit 2
-003	863 TPD (maximum) Municipal Waste Combustor & Auxiliary Burners - Unit 3
-004	236 Ton Lime Silo with a Baghouse
-005	Ash Handling System

Please reference the Permit Number, the Facility Identification Number, and the appropriate Emissions Unit(s) ID Number(s) on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents.

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are provided to the permittee for informational purposes:

Table 1-1, Summary of Air Pollutant Standards and Terms

Table 2-1, Summary of Compliance Requirements

Appendix A-1: Abbreviations, Acronyms, Citations, and Identification Numbers

Appendix H-1: Permit History

Appendix BW, Biological Waste Definitions

Statement of Basis

These documents are on file with the permitting authority:

Initial Title V Air Operation Permit issued October 22, 2000.

Revised Title V Air Operation Permit issued January 17, 2003.

Request to reclassify the lime silo as an insignificant source received April 8, 2004.

Request to modify lime silo Air Construction Permit received May 10, 2004.

DRAFT Title V Permit Revision and Air Construction Permit Modification clerked August 6, 2004.

PROPOSED Title V Permit Revision clerked September 22, 2004.

Air Construction Permit Modification issued September 28, 2004.

Subsection D. Miscellaneous.

The use of 'Permitting Notes' throughout this permit is for informational purposes only; the notes are not permit conditions.

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. APPENDIX TV- 4, TITLE V CONDITIONS, (version dated 02/12/02) is a part of this permit. {Permitting note: APPENDIX TV- 4, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided one copy when requested or otherwise appropriate.}

2. **Not federally enforceable.** General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
[Rule 62-296.320(2), F.A.C.]

3. General Particulate Emission Limiting Standards. General Visible Emissions Standard.
Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.
[Rule 62-296.320(4)(b)1. & 4., F.A.C.]

4. Prevention of Accidental Releases (Section 112(r) of CAA).

a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center
Post Office Box 3346
Merrifield, VA 22116-3346
Telephone: 703/816-4434

and,

b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.
[40 CFR 68]

5. Insignificant Emissions Units and or Activities. Appendix I - List of insignificant emission units and/or activities, is a part of this permit. [Rules 62-213.440(1), 62-213.430 (6) and 62-4.040 (1)(b), F.A.C.]

6. **Not federally enforceable.** General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

{Permitting Note: No vapor emissions control devices or systems are deemed necessary nor ordered by the Department as of the issuance date of this permit.}

[Rule 62-296.320(1)(a), F.A.C.]

7. Emissions of Unconfined Particulate Matter. Pursuant to Rules 62-296.320(4)(c)1., 3. & 4., F.A.C., reasonable precautions to prevent emissions of unconfined particulate matter at this facility include the following requirements (see Condition 57. of APPENDIX TV-4, TITLE V CONDITIONS):

The following techniques will be used to prevent unconfined particulate matter emissions on as needed basis:

- a. Chemical or water application to:
 - Unpaved roads
 - Unpaved yard areas
- b. Paving and maintenance of roads, parking areas and yards.
- c. Landscaping or planting of vegetation.
- d. Confining abrasive blasting where possible.

[Rule 62-296.320(4)(c)2., F.A.C.; and, Requested by Applicant in application dated December 23, 2003]

8. Timely Recording, Monitoring and Reporting: When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.

[Rule 62-213.440, F.A.C.]

9. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2., F.A.C., shall be submitted to the Department and EPA within 60 (sixty) days after the end of the calendar year using DEP Form No. 62-213.900(7), F.A.C.

[Rules 62-213.440(3) and 62-213.900, F.A.C.]

{Permitting Note: This condition implements the requirements of Rules 62-213.440(3)(a)2. & 3., F.A.C. (see Condition 51. of APPENDIX TV-4, TITLE V CONDITIONS)}

10. State Compliance Authority: The permittee shall submit all compliance related notifications and reports required of this permit to the Department's South District office:

State of Florida
Department of Environmental Protection
Southeast District Office
400 North Congress Avenue
West Palm Beach, Florida 33416-5425
Telephone: 561/681-6600, Fax: 561/681-6755

11. EPA Compliance Authority: Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency
Region 4
Air, Pesticides & Toxics Management Division
Air and EPCRA Enforcement Branch
Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303

Telephone: 404/562-9155, Fax: 404/562-9164

12. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information.

[Rule 62-213.420(4), F.A.C.]

Section III. Emissions Units and Conditions.

Subsection A. This section addresses the following emissions units.

(RESERVED)

Subsection B. This section addresses the following emissions units.

E.C. ID No.	Brief Description
-001	863 TPD (maximum) Municipal Waste Combustor & Auxiliary Burners - Unit 1
-002	863 TPD (maximum) Municipal Waste Combustor & Auxiliary Burners - Unit 2
-003	863 TPD (maximum) Municipal Waste Combustor & Auxiliary Burners - Unit 3

{Note: Each of the three municipal waste combustors (MWCs) has a *nominal* design rate capacity of 750 tons MSW per day and 281 MMBtu per hour heat input (with MSW having a heating value of 4,500 Btu per pound). A maximum (short-term) capacity of 863 tons of waste per day and 323.6 mmBtu per hour heat input (115% rated capacity) is allowed. Short-term capacity is limited by limiting steam production, which effectively limits heat input. The maximum steam production rate is 192,000 lbs/hr, with a net steam energy of 5,600 Btu/lb of steam (the net steam energy may be calculated as the difference in enthalpy between the steam at the superheater outlet and the feedwater at the inlet).

Emissions units numbers -001, -002 and -003 are Babcock and Wilcox manufactured municipal solid waste (MSW) combustors designated as "Unit 1", "Unit 2" and "Unit 3", respectively. Each unit consists of an integrated mass-burn furnace and multi-pass waterwall type boiler with a rated (nominal) capacity of 750 tons MSW per day (TPD) and 281 million British thermal units per hour (MMBtu/hr) heat input when burning solid waste with a heat content of 4,500 British thermal units per pound (Btu/lb). Therefore, the facility has a nameplate (nominal) waste processing rate of 2,250 TPD (@4,500 Btu/lb). Two auxiliary distillate fuel oil or natural gas fired burners are associated with each MSW combustor. The burners are used to fire the MSW combustors during start-up, shutdown, and at other times when necessary and consistent with good combustion practices. The maximum permitted steam production rate of each unit is 192,000 lbs/hr when firing municipal solid waste. Steam flow is the main process throughput parameter to be monitored for these units.

Units 1, 2, and 3 began commercial operation April 5, April 20 and April 26, 1991, respectively. Particulate matter, some metals (Pb, Hg, Be), SO₂ and acid gas emissions from Units 1, 2 and 3 are controlled by separate baghouses and spray dry absorbers, while CO and NO_x emissions are controlled by good combustion controls. Mercury emissions are reduced by pre-combustion waste separation. Odor is controlled by drawing combustion air from the refuse tipping area. Units 1, 2 and 3 share a common stack and turbine containing one flue for each unit. Stack height = 195 feet, exit diameter = 7.5 feet, actual volumetric flow rate = 169,000 acfm. The particulate matter control device temperature requirement of 40 CFR 60, Subpart Cb will replace a maximum 300°F control equipment temperature requirement and an 1800°F final combustion chamber temperature requirement listed in the State Conditions of Certification (PA 85-21).

All three units are being retrofitted with Selective Non-Catalytic Reduction (SNCR) NO_x controls to comply with NSPS - 40 CFR 60, Subpart Cb requirements. The new limits imposed in Subpart Cb are more stringent than PSD-FL-105 limits for SO₂, PM, VE, NO_x and Pb emissions from each unit. Pollutants regulated by Subpart Cb that were not regulated in PSD-FL-105 for all three units are Cd, HCl, Hg, and dioxins/furans. Pollutants regulated in PSD-FL-105 that are not regulated by Subpart Cb are Be and Fl.

{Permitting notes. These emissions units are regulated under NSPS - 40 CFR 60, Subpart Cb, Emissions Guidelines and Compliance Times for Large Municipal Waste Combustors That Are Constructed on or Before September 20, 1994, adopted and incorporated by reference, subject to provisions, in Rule 62-204.800(8)(b), F.A.C.; NSPS - 40 CFR 60, Subpart E, Standards of Performance for Incinerators, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.; Rule 62-212.400(5), F.A.C., Prevention of Significant Deterioration (PSD) (PSD-FL-105(B)); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT); Rule 62-296.401(2), F.A.C., Incinerators; Rule 62-296.416, F.A.C., Waste-to-

Energy Facilities; and, PA 85-21(B). Also, please note that conditions in 40 CFR 60, Subpart Cb, are contained in 40 CFR 60, Subpart Eb.}

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

{Permitting note: The following specific conditions will apply to Units 1, 2 and 3 following completion of retrofit with new air pollution controls and compliance testing in accordance with the approved compliance schedule (see specific condition **Error! Reference source not found.**)}

General

B.1. The Standards of Performance for New Stationary Sources adopted by reference in Rule 62-204.800(7), F.A.C. and the Emission Guidelines for Existing Sources adopted by reference in Rule 62-204.800(8), F.A.C. shall be controlling over other standards in the air pollution rules of the Department, except that any emissions limiting standard contained in or determined pursuant to the air pollution rules of the Department which is more stringent than one contained in a Standard of Performance or an Emission Guideline, or which regulates emissions of pollutants or emissions units not regulated by an applicable Standard of Performance or Emission Guideline, shall apply.
[Rules 62-204.800(7)(c) and (8)(a)1., F.A.C.]

B.2. Definitions. For the purposes of Rules 62-204.800(7) and (8), F.A.C., the definitions contained in the various provisions of 40 CFR Part 60, adopted herein shall apply except that the term "Administrator" when used in 40 CFR Part 60, shall mean the Secretary or the Secretary's designee.
[40 CFR 60.2; and, Rules 62-204.800(7)(a) and (8)(a)2., F.A.C.]

B.3. Definitions – Subpart Cb. For purposes of Rule 62-204.800(8)(b), F.A.C., the definitions in 40 CFR 60.51b shall apply except for the term "municipal waste combustor plant" which shall have the same meaning as defined in 40 CFR 60.31b.
[Rule 62-204.800(8)(b)2., F.A.C.]

B.4. Circumvention. No owner or operator subject to the provisions of 40 CFR 60 shall 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. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.
[40 CFR 60.12]

B.5. Notification and Reporting Requirements. For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be delivered or postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery, including the use of electronic media, agreed to by the permitting authority, is acceptable.
[40 CFR 60.19(b)]

B.6. Each incinerator boiler shall have a metal name plate affixed in a conspicuous place on the shell showing manufacturer, model number, type waste, rated capacity and certification number.
[PSD-FL-105]

B.7. Air Pollution Control Equipment. The permittee shall have installed, shall continuously operate, and shall maintain the following air pollution controls to minimize emissions. Controls listed shall be fully operational upon startup of the equipment.

- a. Each boiler is equipped with a particulate emission control device for the control of particulates.
 - b. Each boiler is equipped with an acid gas control device designed to remove at least 90% of the acid gases.
 - c. Each boiler shall be equipped with a selective non-catalytic reduction system to control nitrogen oxides emissions.
 - d. Mercury is controlled by source separation techniques pursuant to Rule 62-296.416, F.A.C.
- [PSD-FL-105(B)]

B.8. Reserved

B.9. Reserved

B.10. These units are subject to all applicable requirements of 40 CFR 60 Subpart Cb, Emissions Control Guidelines and Compliance Schedules for Municipal Solid Waste Combustors; Subpart E, NSPS for Incinerators; and, Rule 62-296.416 F.A.C., Waste-to-Energy Facilities, except that where requirements in this permit are more restrictive, the requirements in this permit shall apply.
[PSD-FL-105(B)]

Essential Potential to Emit (PTE) Parameters

B.11. Capacity.

(a) Each municipal waste combustor (MWC) unit shall have a maximum capacity of 192,000 pounds of steam produced per hour based on a 4-hour block averaged measurement. The maximum individual MWC throughput shall not exceed 863 tons MSW per day (2,589 tons per day entire facility) and 323.6 MMBtu/hr (115% rated capacity), as determined monthly (see specific condition **B.109**).

(b) The procedures specified in paragraphs (1) and (2) shall be used for calculating municipal waste combustor unit capacity as defined under 40 CFR 60.51b.

(1) For municipal waste combustor units capable of combusting municipal solid waste continuously for a 24-hour period, municipal waste combustor unit capacity shall be calculated based on 24 hours of operation at the maximum charging rate. The maximum charging rate shall be determined as specified in paragraphs (i) and (ii) as applicable.

(i) For combustors that are designed based on heat capacity, the maximum charging rate shall be calculated based on the maximum design heat input capacity of the unit and a heating value of 12,800 kilojoules per kilogram for combustors firing refuse-derived fuel and a heating value of 10,500 kilojoules per kilogram for combustors firing municipal solid waste that is not refuse-derived fuel.

(ii) For combustors that are not designed based on heat capacity, the maximum charging rate shall be the maximum design charging rate.

(2) For batch feed municipal waste combustor units, municipal waste combustor unit capacity shall be calculated as the maximum design amount of municipal solid waste that can be charged per batch multiplied by the maximum number of batches that could be processed in a 24-hour period. The maximum number of batches that could be processed in a 24-hour period is calculated as 24 hours

divided by the design number of hours required to process one batch of municipal solid waste, and may include fractional batches (e.g., if one batch requires 16 hours, then 24/16, or 1.5 batches, could be combusted in a 24-hour period). For batch combustors that are designed based on heat capacity, the design heating value of 12,800 kilojoules per kilogram for combustors firing refuse-derived fuel and a heating value of 10,500 kilojoules per kilogram for combustors firing municipal solid waste that is not refuse-derived fuel shall be used in calculating the municipal waste combustor unit capacity. [40 CFR 60.31b and 40 CFR 60.58b(j); Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, PSD-FL-105(B)]

{Permitting note: Nothing in the following two conditions shall be construed to imply that maximum capacity, as defined in specific condition B.11., can be exceeded.}

B.12. Emissions Unit Operating Rate Limitation After Testing. See specific condition B.69.
[Rule 62-297.310(2), F.A.C.]

B.13. Unit Load. Unit load means the steam load of the municipal waste combustor (MWC) measured as specified in 40 CFR 60.58b(i)(6). Each MWC unit shall not operate at a load level greater than 110 percent of the unit's "maximum demonstrated unit load." The maximum demonstrated unit load is the highest 4-hour arithmetic averaged MWC unit load achieved during four consecutive hours during the most recent dioxin/furan performance stack test in which compliance with the dioxin/furan emission limit (see specific condition B.34.) was achieved. Higher loads are allowed for testing purposes as specified at 40 CFR 60.53b(b).
[40 CFR 60.34b(b) and 40 CFR 60.51b; and, PSD-FL-105(B)]

B.14. Maximum Demonstrated Particulate Matter Control Device Temperature. Maximum demonstrated particulate matter control device temperature means the highest 4-hour arithmetic average flue gas temperature measured at the particulate matter control device inlet during four consecutive hours during the most recent dioxin/furan performance test demonstrating compliance with the applicable limit for municipal waste combustor organics specified in specific condition B.34.
[40 CFR 60.34b(b) and 40 CFR 60.51b]

B.15. Methods of Operation - Fuels.

a. **Municipal Solid Waste Combustors.**

(1) **Municipal Solid Waste.** The primary fuel for this 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), F.S.

(2) **Unauthorized Fuel.** Subject to the limitations contained in this permit, the authorized fuels for the facility also include the other solid wastes that are not MSW which are described in (4), (5) and (6), below. However, the facility

(a) **shall not burn:**

- (i) those materials that are prohibited by state or federal law;
- (ii) those materials that are prohibited by this permit;
- (iii) those materials that are not authorized by this permit;
- (iv) lead acid batteries;
- (v) hazardous waste;
- (vi) nuclear waste;
- (vii) radioactive waste;
- (viii) sewage sludge;
- (ix) explosives;

- (x) asbestos containing materials;
- (xi) beryllium-containing waste, as defined in 40 CFR 61, Subpart C.
- (b) and shall not knowingly burn:
 - (i) untreated biomedical waste from biomedical waste generators regulated pursuant to Chapter 64E-16, F.A.C., and from other similar generators (or sources);
 - (ii) segregated loads of biological waste.

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

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

The facility owner/operator shall prepare and maintain records concerning the description and quantities of all segregated loads of non-MSW material which are received and used as fuel at the facility, and subject to a percentage weight limitation, below [(5) and (6)]. For the purposes of this permit, a segregated load is defined to mean a container or truck that is almost completely or exclusively filled with a single item or homogeneous composition of waste material, as determined by visual inspection.

(4) Other Solid Waste. Subject to the conditions and limitations contained in this permit, the following other solid waste may be used as fuel at the facility:

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

(5) Waste Tires. Subject to the conditions and limitations contained in this permit, waste tires may be used as fuel at the facility. The total quantity of waste tires received as segregated loads and burned at the facility shall not exceed 3%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30 day average in accordance with specific condition **B.110.**, below.

(6) Other Solid Waste/Segregated Loads. Subject to the conditions and limitations contained in this permit, the following other solid waste materials may be used as fuel at the facility (i.e. the following are authorized fuels that are non-MSW material). The total quantity of the following non-MSW material received as segregated loads and burned at the facility shall not exceed 5%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30 day average in accordance with specific condition **B.110.**, below.

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

pharmaceuticals, medications, health and personal care products, cosmetics, foodstuffs, nutritional supplements, returned goods, and controlled substances.

(d) Consumer-packaged products intended for human or domesticated animal use or application but not consumption. Such items or materials include but are not limited to carpet cleaners, household or bathroom cleaners, polishes, waxes and detergents.

(e) Waste materials that:

(i) are generated in the manufacture of items in categories (c) or (d), above and are functionally or commercially useless (expired, rejected or spent); or

(ii) are not yet formed or packaged for commercial distribution. Such items or materials must be substantially similar to other items or materials routinely found in MSW.

(f) Waste materials that contain oil from:

(i) the routine cleanup of industrial or commercial establishments and machinery; or

(ii) spills of virgin or used petroleum products. Such items or materials include but are not limited to rags, wipes, and absorbents.

(g) Used oil and used oil filters. Used oil containing a PCB concentration equal or greater than 50 ppm shall not be burned, pursuant to the limitations of 40 CFR 761.20(e).

(h) Waste materials generated by manufacturing, industrial or agricultural activities, provided that these items or materials are substantially similar to items or materials that are found routinely in MSW, subject to prior approval of the Department.

b. Auxiliary Burners. Only distillate fuel oil or natural gas shall be used in the startup burners. Natural gas may be used as fuel during warm-up, startup, shutdown, and malfunction periods, and at other times when necessary and consistent with good combustion practices. The annual capacity factor for use of natural gas and oil shall be less than 10%. The annual capacity factor for natural gas/distillate fuel oil is the ratio between the heat input to the unit from natural gas/distillate fuel oil during a calendar year and the potential heat input to the unit had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity.

c. Other fuels or wastes shall not be burned in the MSW combustors without prior specific written approval of the Secretary of the Department of Environmental Protection.

[Rules 62-4.160(2), 62-210.200, and 62-213.440(1), F.A.C.; and, PSD-FL-105(B)]

B.16. To ensure that the facility's fuel does not adversely affect the facility's combustion process or emissions, the facility operator shall:

(1) comply with good combustion operating practices in accordance with 40 CFR 60.53b;

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

(3) record and maintain the CEMS data in accordance with 40 CFR 60.59b.

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

[PSD-FL-105(B)]

B.17. Hours of Operation. MWC units 1, 2 and 3 are allowed to operate continuously, i.e., 8,760 hours/year, each.

[Rule 62-210.200(PTE), F.A.C.]

Operating Practices and Requirements

B.18. No owner or operator of an affected facility shall cause such facility to operate at a load level greater than 110 percent of the maximum demonstrated municipal waste combustor unit load as defined in specific condition **B.13.**, except as specified below. The averaging time is specified in specific condition **B.20.**

(1) During the annual dioxin/furan performance test and the two weeks preceding the annual dioxin/furan performance test, no municipal waste combustor unit load limit is applicable.

(2) The municipal waste combustor unit load limit may be waived in accordance with permission granted by the Administrator or delegated State regulatory authority for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

[40 CFR 60.34b(b) and 40 CFR 60.53b(b)]

B.19. No owner or operator of an affected facility shall cause such facility to operate at a temperature, measured at the particulate matter control device inlet, exceeding 17°C above the maximum demonstrated particulate matter control device temperature as defined in specific condition **B.14.**, except as specified below. The averaging time is specified in specific condition **B.20.** These requirements apply to each particulate matter control device utilized at the affected facility.

(1) During the annual dioxin/furan performance test and the two weeks preceding the annual dioxin/furan performance test, no particulate matter control device temperature limitations are applicable.

(2) The particulate matter control device temperature limits may be waived in accordance with permission granted by the Administrator or delegated State regulatory authority for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

[40 CFR 60.34b(b) and 40 CFR 60.53b(c)]

B.20. Operating Requirements. The procedures specified in paragraphs (1) through (12) shall be used for determining compliance with the operating requirements under 40 CFR 60.53b.

(1) Compliance with the carbon monoxide emission limits in 40 CFR 60.53b(a) shall be determined using a 4-hour block arithmetic average for all types of affected facilities except mass burn rotary waterwall municipal waste combustors and refuse-derived fuel stokers.

(2) For affected mass burn rotary waterwall municipal waste combustors and refuse-derived fuel stokers, compliance with the carbon monoxide emission limits in 40 CFR 60.53b(a) shall be determined using a 24-hour daily arithmetic average.

(3) The owner or operator of an affected facility shall install, calibrate, maintain, and operate a continuous emission monitoring system for measuring carbon monoxide at the combustor outlet and record the output of the system and shall follow the procedures and methods specified in paragraphs(i) through(iii).

(i) The continuous emission monitoring system shall be operated according to Performance Specification 4A in Appendix B of 40 CFR 60.

(ii) During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 4A in Appendix B of 40 CFR 60, carbon monoxide and oxygen (or carbon dioxide) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in paragraphs (A) and(B).

(A) For carbon monoxide, EPA Reference Method 10, 10A, or 10B shall be used.

- (B) For oxygen (or carbon dioxide), EPA Reference Method 3, 3A, or 3B, as applicable shall be used.
- (iii) The span value of the continuous emission monitoring system shall be 125 percent of the maximum estimated hourly potential carbon monoxide emissions of the municipal waste combustor unit.
- (4) The 4-hour block and 24-hour daily arithmetic averages specified in paragraphs (1) and (2) shall be calculated from 1-hour arithmetic averages expressed in parts per million by volume corrected to 7 percent oxygen (dry basis). The 1-hour arithmetic averages shall be calculated using the data points generated by the continuous emission monitoring system. At least two data points shall be used to calculate each 1-hour arithmetic average.
- (5) The owner or operator of an affected facility may request that compliance with the carbon monoxide emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in 40 CFR 60.58b(b)(6).
- (6) The procedures specified in paragraphs (i) through (v) shall be used to determine compliance with load level requirements under 40 CFR 60.53b(b).
- (i) The owner or operator of an affected facility with steam generation capability shall install, calibrate, maintain, and operate a steam flow meter or a feedwater flow meter; measure steam (or feedwater) flow in kilograms per hour (or pounds per hour) on a continuous basis; and record the output of the monitor. Steam (or feedwater) flow shall be calculated in 4-hour block arithmetic averages.
- (ii) The method included in the "American Society of Mechanical Engineers Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1-1964 (R1991)" section 4 (incorporated by reference, see 40 CFR 60.17) shall be used for calculating the steam (or feedwater) flow required under paragraph (6)(i). The recommendations in "American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters, 6th edition (1971)," chapter 4 (incorporated by reference-see 40 CFR 60.17) shall be followed for design, construction, installation, calibration, and use of nozzles and orifices except as specified in (iii).
- (iii) Measurement devices such as flow nozzles and orifices are not required to be recalibrated after they are installed.
- (iv) All signal conversion elements associated with steam (or feedwater flow) measurements must be calibrated according to the manufacturer's instructions before each dioxin/furan performance test, and at least once per year.
- (7) To determine compliance with the maximum particulate matter control device temperature requirements under 40 CFR 60.53b(c), the owner or operator of an affected facility shall install, calibrate, maintain, and operate a device for measuring on a continuous basis the temperature of the flue gas stream at the inlet to each particulate matter control device utilized by the affected facility. Temperature shall be calculated in 4-hour block arithmetic averages.
- (8) The maximum demonstrated municipal waste combustor unit load shall be determined during the initial performance test for dioxins/furans and each subsequent performance test during which compliance with the dioxin/furan emission limit specified in 40 CFR 60.52b(c) is achieved. The maximum demonstrated municipal waste combustor unit load shall be the highest 4-hour arithmetic average load achieved during four consecutive hours during the most recent test during which compliance with the dioxin/furan emission limit was achieved.
- (9) For each particulate matter control device employed at the affected facility, the maximum demonstrated particulate matter control device temperature shall be determined during the initial performance test for dioxins/furans and each subsequent performance test during which compliance with the dioxin/furan emission limit specified in 40 CFR 60.52b(c) is achieved. The maximum demonstrated particulate matter control device temperature shall be the highest 4-hour arithmetic average temperature

achieved at the particulate matter control device inlet during four consecutive hours during the most recent test during which compliance with the dioxin/furan limit was achieved.

(10) At a minimum, valid continuous emission monitoring system hourly averages shall be obtained as specified in paragraphs (i) and (ii) for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter that the affected facility is combusting municipal solid waste.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) At a minimum, each carbon monoxide 1-hour arithmetic average shall be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

(11) All valid continuous emission monitoring system data must be used in calculating the parameters specified under 40 CFR 60.58b(i) even if the minimum data requirements of paragraph (10) are not met. When carbon monoxide continuous emission data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained using other monitoring systems as approved by the Administrator or EPA Reference Method 10 to provide, as necessary, the minimum valid emission data.

(12) Quarterly accuracy determinations and daily calibration drift tests for the carbon monoxide continuous emission monitoring system shall be performed in accordance with procedure 1 in Appendix F of 40 CFR 60.

{Permitting Note: CO and O₂ are monitored downstream of the combustor outlet at the fabric filter exit, as approved by EPA.}

[40 CFR 60.38b and 40 CFR 60.58b(i)]

Operator Training and Certification

B.21. Standards for municipal waste combustor operator training and certification.

(a) No later than the date 6 months after the date of startup of an affected facility or 12 months after State plan approval [40 CFR 60.39b(c)(4)(ii)], whichever is later, each chief facility operator and shift supervisor shall obtain and maintain a current provisional operator certification from either the American Society of Mechanical Engineers [QRO-1-1994 (incorporated by reference - see 40 CFR 60.17 of Subpart A)] or a State certification program.

(b) No later than the date 6 months after the date of startup of an affected facility or 12 months after State plan approval [40 CFR 60.39b(c)(4)(ii)], whichever is later, each chief facility operator and shift supervisor shall have completed full certification or shall have scheduled a full certification exam with either the American Society of Mechanical Engineers [QRO-1-1994 (incorporated by reference - see 40 CFR 60.17 of Subpart A)] or a State certification program.

(c) No owner or operator of an affected facility shall allow the facility to be operated at any time unless one of the following persons is on duty and at the affected facility: A fully certified chief facility operator, a provisionally certified chief facility operator who is scheduled to take the full certification exam according to the schedule specified in paragraph (b), a fully certified shift supervisor, a provisionally certified shift supervisor who is scheduled to take the full certification exam according to the schedule specified in paragraph (b).

(1) The requirement specified in paragraph (c) shall take effect 6 month after the date of startup of the affected facility or 12 months after State plan approval [40 CFR 60.39b(c)(4)(ii)], whichever is later.

(2) If one of the persons listed in paragraph (c) must leave the affected facility during their operating shift, a provisionally certified control room operator who is onsite at the affected facility may fulfill the requirement in paragraph (c).

(d) All chief facility operators, shift supervisors, and control room operators at affected facilities must complete the EPA or State municipal waste combustor operator training course no later than the date 6

months after the date of startup of the affected facility, or by 12 months after State plan approval [40 CFR 60.39b(c)(4)(iii)], whichever is later.

(e) The owner or operator of an affected facility shall develop and update on a yearly basis a site-specific operating manual that shall, at a minimum, address the elements of municipal waste combustor unit operation specified in paragraph (e)(1) through (e)(11).

- (1) A summary of the applicable standards;
- (2) A description of basic combustion theory applicable to a municipal waste combustor unit;
- (3) Procedures for receiving, handling, and feeding municipal solid waste;
- (4) Municipal waste combustor unit startup, shutdown, and malfunction procedures;
- (5) Procedures for maintaining proper combustion air supply levels;
- (6) Procedures for operating the municipal waste combustor unit within the standards established;
- (7) Procedures for responding to periodic upset or off-specification conditions;
- (8) Procedures for minimizing particulate matter carryover;
- (9) Procedures for handling ash;
- (10) Procedures for monitoring municipal waste combustor unit emissions; and
- (11) Reporting and recordkeeping procedures.

(f) The owner or operator of an affected facility shall establish a training program to review the operating manual according to the schedule specified in paragraphs (f)(1) and (f)(2) with each person who has responsibilities affecting the operation of an affected facility including, but not limited to, chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers.

(1) Each person specified in paragraph (f) shall undergo initial training no later than the date specified in paragraph (f)(1)(i), (f)(1)(ii), or (f)(1)(iii), whichever is later.

(i) The date 6 months after the date of startup of the affected facility;

(ii) The date prior to the day the person assumes responsibilities affecting municipal waste combustor unit operation; or

(iii) 12 months after State plan approval [40 CFR 60.39b(c)(4)(iii)].

(2) Annually, following the initial review required by paragraph (f)(1).

(g) The operating manual required by paragraph (e) shall be kept in a readily accessible location for all persons required to undergo training under paragraph (f). The operating manual and records of training shall be available for inspection by the EPA or its delegated enforcement agency upon request.

[40 CFR 60.35b, 40 CFR 60.39b(c)(4)(ii) & (iii), and 40 CFR 60.54b]

B.22. The requirement specified in 40 CFR 60.54b(d) does not apply to chief operators, shift supervisors, and control room operators who have obtained full certification from the American Society of Mechanical Engineers on or before the date of State plan approval.

[40 CFR 60.39b(c)(4)(iii)(A)]

B.23. The owner or operator of a designated facility may request that the EPA Administrator waive the requirement specified in 40 CFR 60.54b(d) for chief operators, shift supervisors, and control room operators who have obtained provisional certification from the American Society of Mechanical Engineers on or before the date of State plan approval.

[40 CFR 60.39b(c)(4)(iii)(B)]

B.24. The initial training requirements specified in 40 CFR 60.54b(f)(1) shall be completed no later than the date specified in (1), (2) or (3), whichever is later.

(1) The date six (6) months after the date of startup of the affected facility;

(2) Twelve (12) months after State plan approval; or

(3) The date prior to the day when the person assumes responsibilities affecting municipal waste combustor unit operation.

[40 CFR 60.39b(c)(4)(iii)(C)]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit. Also, Subpart Cb does not impose limits for Be and total fluorides, which are limited by PSD-FL-105(B)}

Particulate Matter

B.25. The emission limit for particulate matter contained in the gases discharged to the atmosphere is 27 milligrams per dry standard cubic meter, corrected to 7 percent oxygen.

[40 CFR 60.33b(a)(1)(i) and PSD-FL-105(B)]

Visible Emissions

B.26. The emission limit for opacity exhibited by the gases discharged to the atmosphere is 10 percent (6-minute average).

[40 CFR 60.33b(a)(1)(iii) and PSD-FL-105(B)]

Cadmium

B.27. The emission limit for cadmium contained in the gases discharged to the atmosphere is 0.040 milligrams per dry standard cubic meter, corrected to 7 percent oxygen.

[40 CFR 60.33b(a)(2)(i) and PSD-FL-105(B)]

Mercury

B.28. The emission limit for mercury contained in the gases discharged to the atmosphere is 0.070 milligrams per dry standard cubic meter or 15 percent of the potential mercury emission concentration (85-percent reduction by weight), corrected to 7 percent oxygen, whichever is less stringent.

[40 CFR 60.33b(a)(3) and Rule 62-296.416(3)(b)1.b., F.A.C.; and, PSD-FL-105(B)]

B.29. Emissions Standards for Facilities Using Waste Separation. The Department recognizes that reduction of mercury emissions from waste-to-energy facilities may be achieved by implementation of mercury waste separation programs. Such programs would require removal of objects containing mercury from the waste stream before the waste is used as a fuel.

1. Facilities with sulfur dioxide and hydrogen chloride control equipment in place or under construction as of July 1, 1993, and which choose to control mercury emissions exclusively through the use of a waste separation program, shall submit a program plan to the Department by March 1, 1994, and shall comply with the following emissions limiting schedule.

a. After July 1, 1995, mercury emissions shall not exceed 140 micrograms per dry standard cubic meter of flue gas, corrected to 7 percent O₂.

b. After July 1, 1997, mercury emissions shall not exceed 70 micrograms per dry standard cubic meter of flue gas, corrected to 7 percent O₂.

2. Beginning no later than July 1, 1994, facilities subject to Rule 62-296.416(3)(b)1., F.A.C., shall perform semiannual individual emissions unit mercury emissions tests. Facilities shall stagger the semiannual testing of individual emissions units such that at least one test is performed quarterly. All

tests conducted after July 1, 1995, shall be used to demonstrate compliance with the mercury emissions limiting standards of Rule 62-296.416(3)(b)1., F.A.C.
[Rule 62-296.416(3)(b), F.A.C.]

Lead

B.30. The emission limit for lead contained in the gases discharged to the atmosphere is 0.44 milligrams per dry standard cubic meter, corrected to 7 percent oxygen.
[40 CFR 60.33b(a)(4) and PSD-FL-105(B)]

Sulfur Dioxide

B.31. The emission limit for sulfur dioxide contained in the gases discharged to the atmosphere is 29 parts per million by volume or 25 percent of the potential sulfur dioxide emission concentration (75-percent reduction by weight or volume), corrected to 7 percent oxygen (dry basis), whichever is less stringent. Compliance with this emission limit is based on a 24-hour daily geometric mean.
[40 CFR 60.33b(b)(3)(i) and PSD-FL-105(B)]

B.32. Not federally enforceable. Sulfur Content. The sulfur content of the distillate fuel oil or natural gas for the auxiliary burners shall not exceed 0.3%, by weight.
[PA-85-21]

Hydrogen Chloride

B.33. The emission limit for hydrogen chloride contained in the gases discharged to the atmosphere is 29 parts per million by volume or 5 percent of the potential hydrogen chloride emission concentration (95-percent reduction by weight or volume), corrected to 7 percent oxygen (dry basis), whichever is less stringent.
[40 CFR 60.33b(b)(3)(ii) and PSD-FL-105(B)]

Dioxins/Furans

B.34. The emission limit for dioxins/furans contained in the gases discharged to the atmosphere that do not employ an electrostatic precipitator-based emission control system is 30 nanograms per dry standard cubic meter (total mass of tetra- through octa chlorinated dibenzo-p-dioxins and dibenzofurans), corrected to 7 percent oxygen.
[40 CFR 60.33b(c)(1)(ii) and PSD-FL-105(B)]

Nitrogen Oxides

B.35. The emission limit for nitrogen oxides contained in the gases discharged to the atmosphere is 205 parts per million by volume, corrected to 7 percent oxygen, dry basis. The permittee may request authorization from the Department to conduct nitrogen oxides emissions averaging pursuant to 40 CFR 60.33b.
[40 CFR 60.33b(d) and PSD-FL-105(B)]

{Permitting Note: Listed below are equivalent emissions for the MWC units:

Pollutant	lbs/MMBtu/unit	lbs/hr/unit	tons/year/unit
Particulate Matter (PM/PM ₁₀)	0.0243	7.85	34.4
Cadmium (Cd)	3.7 x 10 ⁻⁵	0.012	0.051
Mercury (Hg)	6.2 x 10 ⁻⁵	0.02	0.09
Lead (Pb)	4.4 x 10 ⁻⁴	0.142	0.62
Sulfur Dioxide (SO ₂)	0.11	35.1	153.7
Hydrogen Chloride (HCl)	0.04	12.6	55
Dioxins/Furans	2.7 x 10 ⁻⁸	8.7 x 10 ⁻⁶	3.8 x 10 ⁻⁵
Nitrogen Oxides (NO _x)	0.352	114	499
Carbon Monoxide (CO)	0.105	33.9	148.5
Beryllium (Be)	9.3 x 10 ⁻⁷	0.0003	0.0013
Fluorides (F)	0.0040	1.29	5.66

These values are given in PSD-FI-105(B) and are determined using the F factor of 14,389 dscf @ 7% O₂ /MMBtu and a maximum heat input of 323.6 MMBtu/hr.}

Excess Emissions

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

B.41. The opacity standards set forth in 40 CFR 60 shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.
 [40 CFR 60.11(c)]

B.42. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
 [40 CFR 60.11(d)]

B.43.a. Startup, Shutdown and Malfunction. Except as provided by 40 CFR 60.56b, the standards under 40 CFR 60, Subpart Cb, as incorporated in Rule 62-204.800(8)(b), F.A.C., apply at all times except during periods of startup, shutdown, or malfunction. Duration of startup or shutdown periods are limited to 3 hours per occurrence, except as provided in 40 CFR 60.58b(a)(1)iii.
 (i) The startup period commences when the affected facility begins the continuous burning of municipal solid waste and does not include any warm-up period when the affected facility is combusting fossil fuel or other nonmunicipal solid waste fuel, and no municipal solid waste is being fed to the combustor.
 (ii) Continuous burning is the continuous, semicontinuous, or batch feeding of municipal solid waste for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of municipal solid waste solely to provide thermal protection of the grate or hearth during the startup period when municipal solid waste is not being fed to the grate is not considered to be continuous burning.
 [40 CFR 60.38b and 40 CFR 60.58b(a)]

B.43.b. For the purpose of compliance with the carbon monoxide emission limits in 40 CFR 60.53b(a), if a loss of boiler water level control (e.g., loss of combustion air fan, induced draft fan, combustion grate bar failure) is determined to be a malfunction, the duration of the malfunction period is limited to 15 hours per occurrence.

[40 CFR 60.58b(a)(1)iii]

B.44. Excess emissions indicated by the CEM systems shall be considered violations of the applicable opacity limit or operating emission limits (in ppm) for the purposes of this permit provided the data represents accurate emission levels and the CEMs do not exceed the calibration drift (as specified in the respective performance specification tests) on the day when initial and subsequent compliance is determined. The burden of proof to demonstrate that the data does not reflect accurate emission readings shall be the responsibility of the permittee.

[PSD-FL-105]

B.45. Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed three hours in any 24 hour period.

[Rule 62-210.700(1), F.A.C.; and, authorized by Department on June 21, 2000]

B.46. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited.

[Rule 62-210.700(4), F.A.C.; and, PSD-FL-105(B)]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

B.47. 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 and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

[40 CFR 60.8(a)]

B.48. Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

[40 CFR 60.8(b)]

B.49. Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

[40 CFR 60.8(c)]

B.50. The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present.

[40 CFR 60.8(d)]

B.51. The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such facility. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

(2) Safe sampling platform(s).

(3) Safe access to sampling platform(s).

(4) Utilities for sampling and testing equipment.

{Permitting note: See specific condition **B.72.** and Appendix SS-1, Stack Sampling Facilities (version dated 10/7/96) for State of Florida Stack Sampling Requirements.}

[40 CFR 60.8(e)]

B.52. Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

[40 CFR 60.8(f)]

Particulate Matter and Opacity

B.53. The procedures and test methods specified in paragraphs (1) through (11) shall be used to determine compliance with the emission limits for particulate matter and opacity.

(1) The EPA Reference Method 1 shall be used to select sampling site and number of traverse points.

(2) The EPA Reference Method 3, 3A, or 3B, as applicable shall be used for gas analysis.

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

- (4) The owner or operator of an affected facility may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in paragraph 40 CFR 60.58b(b)(6).
- (5) As specified under 40 CFR 60.8, all performance tests shall consist of three test runs. The average of the particulate matter emission concentrations from the three test runs is used to determine compliance.
- (6) In accordance with paragraphs (7) and (11), EPA Reference Method 9 shall be used for determining compliance with the opacity limit except as provided under 40 CFR 60.11(e)
- (7) The owner or operator of an affected facility shall conduct an initial performance test for particulate matter emissions and opacity as required under 40 CFR 60.8.
- (8) The owner or operator of an affected facility shall install, calibrate, maintain, and operate a continuous opacity monitoring system for measuring opacity and shall follow the methods and procedures specified in paragraphs (8)(i) through (8)(iv).
 - (i) The output of the continuous opacity monitoring system shall be recorded on a 6-minute average basis.
 - (ii) The continuous opacity monitoring system shall be installed, evaluated, and operated in accordance with 40 CFR 60.13.
 - (iii) The continuous opacity monitoring system shall conform to Performance Specification 1 in Appendix B of 40 CFR 60.
 - (iv) The initial performance evaluation shall be completed no later than 180 days after the date of the initial startup of the municipal waste combustor unit, as specified under 40 CFR 60.8.
- (9) Following the date that the initial performance test for particulate matter is completed or is required to be completed under 40 CFR 60.8 for an affected facility, the owner or operator shall conduct a performance test for particulate matter on an annual basis (no more than 12 calendar months following the previous performance test).
- (10) [reserved]
- (11) Following the date that the initial performance test for opacity is completed or is required to be completed under 40 CFR 60.8 for an affected facility, the owner or operator shall conduct a performance test for opacity on an annual basis (no more than 12 calendar months following the previous performance test) using the test method specified in paragraph (6).
[40 CFR 60.38b and 40 CFR 60.58b(c)]

Cadmium, Lead and Mercury

B.54. The procedures and test methods specified in paragraphs (1) and (2) shall be used to determine compliance with the emission limits for cadmium, lead, and mercury.

(1) The procedures and test methods specified in paragraphs (1)(i) through (1)(ix) shall be used to determine compliance with the emission limits for cadmium and lead.

- (i) The EPA Reference Method 1 shall be used for determining the location and number of sampling points.
- (ii) The EPA Reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis.
- (iii) The EPA Reference Method 29 shall be used for determining compliance with the cadmium and lead emission limits.
- (iv) An oxygen or carbon dioxide measurement shall be obtained simultaneously with each Method 29 test run for cadmium and lead required under paragraph (1)(iii).
- (v) The owner or operator of an affected facility may request that compliance with the cadmium or lead emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7

percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in paragraph 40 CFR 60.58b(b)(6).

(vi) All performance tests shall consist of a minimum of three test runs conducted under representative full load operating conditions. The average of the cadmium or lead emission concentrations from three test runs or more shall be used to determine compliance.

(vii) Following the date of the initial performance test or the date on which the initial performance test is required to be completed under 40 CFR 60.8, the owner or operator of an affected facility shall conduct a performance test for compliance with the emission limits for cadmium and lead on an annual basis (no more than 12 calendar months following the previous performance test).

(viii)[reserved]

(ix) [reserved]

(2) The procedures and test methods specified in paragraphs (2)(i) through (2)(xi) shall be used to determine compliance with the mercury emission limit.

(i) The EPA Reference Method 1 shall be used for determining the location and number of sampling points.

(ii) The EPA Reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis.

(iii) The EPA Reference Method 29 shall be used to determine the mercury emission concentration. The minimum sample volume when using Method 29 for mercury shall be 1.7 cubic meters.

(iv) An oxygen (or carbon dioxide) measurement shall be obtained simultaneously with each Method 29 test run for mercury required under paragraph (2)(iii).

(v) The percent reduction in the potential mercury emissions (%PHG) is computed using equation 1:

$$[\%PHG] = \left[\frac{E_i - E_o}{E_i} \right] \times 100 \quad (\text{equation 1})$$

where:

%PHG = percent reduction of the potential mercury emissions achieved.

E_i = potential mercury emission concentration measured at the control device inlet, corrected to 7 percent oxygen (dry basis).

E_o = controlled mercury emission concentration measured at the mercury control device outlet, corrected to 7 percent oxygen (dry basis).

(vi) All performance tests shall consist of a minimum of three test runs conducted under representative full load operating conditions. The average of the mercury emission concentrations or percent reductions from three test runs or more is used to determine compliance.

(vii) The owner or operator of an affected facility may request that compliance with the mercury emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in paragraph 40 CFR 60.58b(b)(6).

(viii) The owner or operator of an affected facility shall conduct an initial performance test for mercury emissions as required under 40 CFR 60.8.

(ix) Following the date that the initial performance test for mercury is completed or is required to be completed under 40 CFR 60.8, the owner or operator of an affected facility shall conduct a

performance test for mercury emissions on a annual basis (no more than 12 calendar months from the previous performance test).

(x) [reserved]

[40 CFR 60.38b and 40 CFR 60.58b(d)]

B.55. Mercury Emissions Test Method and Procedures. All mercury emissions tests performed pursuant to the requirements of this rule shall comply with the following provisions.

1. The test method for mercury shall be EPA Method 29 adopted in Rule 62-297, F.A.C.

2. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

[Rule 62-296.416(3)(d), F.A.C.]

B.56. Mercury emissions testing shall be conducted semiannually. Mercury stack tests shall be performed downstream of control devices or upstream and downstream of the control devices when determining compliance with the alternative removal requirement.

[PSD-FL-105(B)]

Sulfur Dioxide

B.57. The procedures and test methods specified in paragraphs (1) through (14) shall be used for determining compliance with the sulfur dioxide emission.

(1) The EPA Reference Method 19, section 4.3, shall be used to calculate the daily geometric average sulfur dioxide emission concentration.

(2) The EPA Reference Method 19, section 5.4, shall be used to determine the daily geometric average percent reduction in the potential sulfur dioxide emission concentration.

(3) The owner or operator of an affected facility may request that compliance with the sulfur dioxide emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in 40 CFR 60.58b(b)(6).

(4) The owner or operator of an affected facility shall conduct an initial performance test for sulfur dioxide emissions as required under 40 CFR 60.8. Compliance with the sulfur dioxide emission limit (concentration or percent reduction) shall be determined by using the continuous emission monitoring system specified in paragraph (5) to measure sulfur dioxide and calculating a 24-hour daily geometric average emission concentration or a 24-hour daily geometric average percent reduction using EPA Reference Method 19, sections 4.3 and 5.4, as applicable.

(5) The owner or operator of an affected facility shall install, calibrate, maintain, and operate a continuous emission monitoring system for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system.

(6) Following the date that the initial performance test for sulfur dioxide is completed or is required to be completed under 40 CFR 60.8, compliance with the sulfur dioxide emission limit shall be determined based on the 24-hour daily geometric average of the hourly arithmetic average emission concentrations using continuous emission monitoring system outlet data if compliance is based on an emission concentration, or continuous emission monitoring system inlet and outlet data if compliance is based on a percent reduction.

(7) At a minimum, valid continuous monitoring system hourly averages shall be obtained as specified in paragraphs (7)(i) and (7)(ii) for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter that the affected facility is combusting municipal solid waste.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) Each sulfur dioxide 1-hour arithmetic average shall be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

(8) The 1-hour arithmetic averages required under paragraph (6) shall be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 24-hour daily geometric average emission concentrations and daily geometric average emission percent reductions. The 1-hour arithmetic averages shall be calculated using the data points required under 40 CFR 60.13(e)(2).

(9) All valid continuous emission monitoring system data shall be used in calculating average emission concentrations and percent reductions even if the minimum continuous emission monitoring system data requirements of paragraph (7) are not met.

(10) The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous emission monitoring system.

(11) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the municipal waste combustor as specified under 40 CFR 60.8.

(12) The continuous emission monitoring system shall be operated according to Performance Specification 2 in 40 CFR 60 Appendix B.

(i) During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 2 in 40 CFR 60 Appendix B, sulfur dioxide and oxygen (or carbon dioxide) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in paragraphs (A) and (B).

(A) For sulfur dioxide, EPA Reference Method 6, 6A, or 6C shall be used.

(B) For oxygen (or carbon dioxide), EPA Reference Method 3, 3A, or 3B, as applicable shall be used.

(ii) The span value of the continuous emissions monitoring system at the inlet to the sulfur dioxide control device shall be 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the municipal waste combustor unit. The span value of the continuous emission monitoring system at the outlet of the sulfur dioxide control device shall be 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the municipal waste combustor unit.

(13) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 1 in Appendix F of 40 CFR 60.

(14) When sulfur dioxide emissions data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 to provide, as necessary, valid emissions data for a minimum of 75 percent of the hours per day that the affected facility is operated and combusting municipal solid waste for 90 percent of the days per calendar quarter that the affected facility is operated and combusting municipal solid waste.

[40 CFR 60.38b and 40 CFR 60.58b(e)]

Hydrogen Chloride

B.58. HCl stack tests upstream and downstream of the control device(s) shall be conducted to calculate percent control to demonstrate compliance with the alternate removal limit.

[PSD-FL-105(B)]

B.59. The procedures and test methods specified in paragraphs (1) through (8) shall be used for determining compliance with the hydrogen chloride emission limit.

(1) The EPA Reference Method 26 or 26A, as applicable, shall be used to determine the hydrogen chloride emission concentration. The minimum sampling time for Method 26 shall be 1 hour.

(2) An oxygen (or carbon dioxide) measurement shall be obtained simultaneously with each Method 26 test run for hydrogen chloride required by paragraph (1).

(3) The percent reduction in potential hydrogen chloride emissions (% PHCl) is computed using equation 2:

$$[\%P_{HCl}] = \left[\frac{E_i - E_o}{E_i} \right] \times 100 \quad (\text{equation 2})$$

where:

$\%P_{HCl}$ = percent reduction of the potential hydrogen chloride emissions achieved.

E_i = potential hydrogen chloride emission concentration measured at the control device inlet, corrected to 7 percent oxygen (dry basis).

E_o = controlled hydrogen chloride emission concentration measured at the control device outlet, corrected to 7 percent oxygen (dry basis).

(4) The owner or operator of an affected facility may request that compliance with the hydrogen chloride emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in 40 CFR 60.58b(b)(6).

(5) As specified under 40 CFR 60.8, all performance tests shall consist of three test runs. The average of the hydrogen chloride emission concentrations or percent reductions from the three test runs is used to determine compliance.

(6) The owner or operator of an affected facility shall conduct an initial performance test for hydrogen chloride as required under 40 CFR 60.8.

(7) Following the date that the initial performance test for hydrogen chloride is completed or is required to be completed under 40 CFR 60.8, the owner or operator of an affected facility shall conduct a performance test for hydrogen chloride emissions on an annual basis (no more than 12 calendar months following the previous performance test).

(8) [reserved]

[40 CFR 60.38b and 40 CFR 60.58b(f)]

Dioxin/Furan

B.60. The procedures and test methods specified in paragraphs (1) through (9) shall be used to determine compliance with the limits for dioxin/furan emissions.

(1) The EPA Reference Method 1 shall be used for determining the location and number of sampling points.

(2) The EPA Reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis.

(3) The EPA Reference Method 23 shall be used for determining the dioxin/furan emission concentration.

(i) The minimum sample time shall be 4 hours per test run.

(ii) An oxygen (or carbon dioxide) measurement shall be obtained simultaneously with each Method 23 test run for dioxins/furans.

(4) The owner or operator of an affected facility shall conduct an initial performance test for dioxin/furan emissions in accordance with paragraph (3), as required under 40 CFR 60.8.

(5) Following the date that the initial performance test for dioxins/furans is completed or is required to be completed under 40 CFR 60.8, the owner or operator of an affected facility shall conduct performance tests for dioxin/furan emissions in accordance with paragraph (3), according to one of the schedules specified in paragraphs (i) through (iii).

- (i) For affected facilities, performance tests shall be conducted on an annual basis (no more than 12 calendar months following the previous performance test.)
 - (ii) [reserved]
 - (iii) Where all performance tests over a 2-year period indicate that dioxin/furan emissions are less than or equal to 15 nanograms per dry standard cubic meter (total mass), corrected to 7 percent oxygen, for all affected facilities located within a municipal waste combustor plant, the owner or operator of the municipal waste combustor plant may elect to conduct annual performance tests for one affected facility (i.e., unit) per year at the municipal waste combustor plant. At a minimum, a performance test for dioxin/furan emissions shall be conducted annually (no more than 12 months following the previous performance test) for one affected facility at the municipal waste combustor plant. Each year a different affected facility at the municipal waste combustor plant shall be tested, and the affected facilities at the plant shall be tested in sequence (e.g., Unit 1, Unit 2, Unit 3, as applicable). If each annual performance test continues to indicate a dioxin/furan emission level less than or equal to 15 nanograms per dry standard cubic meter (total mass), corrected to 7 percent oxygen, the owner or operator may continue conducting a performance test on only one affected facility per year. If any annual performance test indicates a dioxin/furan emission level greater than 15 nanograms per dry standard cubic meter (total mass), corrected to 7 percent oxygen, performance tests thereafter shall be conducted annually on all affected facilities at the plant until and unless all annual performance tests for all affected facilities at the plant over a 2-year period indicate a dioxin/furan emission level less than or equal to 15 nanograms per dry standard cubic meter (total mass), corrected to 7 percent oxygen.
- (6) The owner or operator of an affected facility that selects to follow the performance testing schedule specified in paragraph (5)(iii) shall follow the procedures specified in 40 CFR 60.59b(g)(4) for reporting the selection of this schedule.
 - (7) The owner or operator of an affected facility where activated carbon is used to comply with the dioxin/furan emission limits specified in 40 CFR 60.52b(c) or the dioxin/furan emission level specified in paragraph (5)(iii) shall follow the procedures specified in 40 CFR 60.58b(m) for measuring and calculating the carbon usage rate.
 - (8) The owner or operator of an affected facility may request that compliance with the dioxin/furan emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in 40 CFR 60.58b(b)(6).
 - (9) As specified under 40 CFR 60.8, all performance tests shall consist of three test runs. The average of the dioxin/furan emission concentrations from the three test runs is used to determine compliance.
[40 CFR 60.38b and 40 CFR 60.58b(g)]

Nitrogen Oxides

B.61. The procedures and test methods specified in paragraphs (1) through (12) shall be used to determine compliance with the nitrogen oxides emission limit for affected facilities under 40 CFR 60.52b(d).

- (1) The EPA Reference Method 19, section 4.1, shall be used for determining the daily arithmetic average nitrogen oxides emission concentration.
- (2) The owner or operator of an affected facility may request that compliance with the nitrogen oxides emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in 40 CFR 60.58b(b)(6).
- (3) The owner or operator of an affected facility subject to the nitrogen oxides limit shall conduct an initial performance test for nitrogen oxides as required under 40 CFR 60.8. Compliance with the nitrogen

oxides emission limit shall be determined by using the continuous emission monitoring system specified in paragraph (4) for measuring nitrogen oxides and calculating a 24-hour daily arithmetic average emission concentration using EPA Reference Method 19, section 4.1.

(4) The owner or operator of an affected facility subject to the nitrogen oxides emission shall install, calibrate, maintain, and operate a continuous emission monitoring system for measuring nitrogen oxides discharged to the atmosphere, and record the output of the system.

(5) Following the date that the initial performance test for nitrogen oxides is completed or is required to be completed under 40 CFR 60.8, compliance with the emission limit for nitrogen oxides shall be determined based on the 24-hour daily arithmetic average of the hourly emission concentrations using continuous emission monitoring system outlet data.

(6) At a minimum, valid continuous emission monitoring system hourly averages shall be obtained as specified in paragraphs (i) and (ii) for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter that the affected facility is combusting municipal solid waste.

(i) At least 2 data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) Each nitrogen oxides 1-hour arithmetic average shall be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

(7) The 1-hour arithmetic averages required by paragraph (5) shall be expressed in parts per million by volume (dry basis) and used to calculate the 24-hour daily arithmetic average concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under 40 CFR 60.13(e)(2).

(8) All valid continuous emission monitoring system data must be used in calculating emission averages even if the minimum continuous emission monitoring system data requirements of paragraph (6) are not met.

(9) The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous emission monitoring system. The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the municipal waste combustor unit, as specified under 40 CFR 60.8.

(10) The owner or operator of an affected facility shall operate the continuous emission monitoring system according to Performance Specification 2 in Appendix B of 40 CFR 60 and shall follow the procedures and methods specified in paragraphs(i) and (ii).

(i) During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 2 of Appendix B of 40 CFR 60, nitrogen oxides and oxygen (or carbon dioxide) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in paragraphs(A) and (B).

(A) For nitrogen oxides, EPA Reference Method 7, 7A, 7C, 7D, or 7E shall be used.

(B) For oxygen (or carbon dioxide), EPA Reference Method 3, 3A, or 3B, as applicable shall be used.

(ii) The span value of the continuous emission monitoring system shall be 125 percent of the maximum estimated hourly potential nitrogen oxide emissions of the municipal waste combustor unit.

(11) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 1 in Appendix F of 40 CFR 60.

(12) When nitrogen oxides continuous emissions data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained using other monitoring systems as approved by the Administrator or EPA Reference Method 19 to provide, as necessary, valid emissions data for a minimum of 75 percent of the hours per day for 90 percent of the days per calendar quarter the unit is operated and combusting municipal solid waste.

[40 CFR 60.38b and 40 CFR 60.58b(h)]

Carbon Monoxide

B.62. See specific condition **B.20.**
[Rule 62-213.440, F.A.C.]

Fugitive Ash

B.63. The procedures specified in paragraphs (1) through (4) shall be used for determining compliance with the fugitive ash emission limit under 40 CFR 60.55b.

(1) The EPA Reference Method 22 shall be used for determining compliance with the fugitive ash emission limit under 40 CFR 60.55b. The minimum observation time shall be a series of three 1-hour observations. The observation period shall include times when the facility is transferring ash from the municipal waste combustor unit to the area where ash is stored or loaded into containers or trucks.

(2) The average duration of visible emissions per hour shall be calculated from the three 1-hour observations. The average shall be used to determine compliance with 40 CFR 60.55b.

(3) The owner or operator of an affected facility shall conduct an initial performance test for fugitive ash emissions as required under 40 CFR 60.8.

(4) Following the date that the initial performance test for fugitive ash emissions is completed or is required to be completed under 40 CFR 60.8 for an affected facility, the owner or operator shall conduct a performance test for fugitive ash emissions on an annual basis (no more than 12 calendar months following the previous performance test).

[40 CFR 60.38b and 40 CFR 60.58b(k)]

Beryllium

B.64. The test method for beryllium emissions shall be EPA Method 29, adopted and incorporated by reference in Rule 62-204.800, F.A.C. One sample shall constitute one test run.

[PSD-FL-105(B)]

Total Fluoride

B.65. The test method for total fluoride emissions shall be EPA Method 13A, 13B, or modified Method 5 for fluorides, adopted and incorporated by reference in Rule 62-204.800, F.A.C. One sample shall constitute one test run.

[PSD-FL-105(B); and, PSD amendment 0112119-001-AC]

B.66. Reserved

B.67. Reserved

B.68. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run

cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.

[Rule 62-297.310(1), F.A.C.]

B.69. Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

[Rules 62-297.310(2) & (2)(b), F.A.C.]

B.70. Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule.

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

B.71. Applicable Test Procedures.

(a) Required Sampling Time.

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

a. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.

b. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

(b) Minimum Sample Volume. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet. (See specific conditions B.53. and B.54.)

(c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

(d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, attached as part of this permit.

(e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

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

B.72. Required Stack Sampling Facilities. When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.

[Rule 62-297.310(6), F.A.C.]

B.73. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

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

a. Did not operate; or

b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.

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

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

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

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

5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.

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

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

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable

weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

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

Compliance With Standards and Maintenance Requirements

B.74. Compliance with standards in 40 CFR 60, other than opacity standards, shall be determined by performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.

[40 CFR 60.11(a)]

B.75. Compliance with opacity standards in 40 CFR 60 shall be determined by conducting observations in accordance with Reference Method 9 in Appendix A of 40 CFR 60, any alternative method that is approved by the Administrator, or as provided in 40 CFR 60.11(e)(5).

[40 CFR 60.11(b)]

B.76. The owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under 40 CFR 60.8 in lieu of EPA Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he or she shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under 40 CFR 60.8 is conducted. Once the owner or operator of an affected facility has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under 40 CFR 60.8 until the owner or operator notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under 40 CFR 60.8 using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under 60.8. The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in 40 CFR 60.13(c), that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which EPA Method 9 data indicates noncompliance, the EPA Method 9 data will be used to determine opacity compliance.

[40 CFR 60.11(e)(5)]

B.77. Compliance with the emission limit in lb/mmBtu (see specific condition **B.39.**) shall be determined by calculating an EPA F-Factor using 40 CFR 60 Appendix A, Method 19.

[Rule 62-213.440, F.A.C.]

B.78. Continuous compliance with the emission limits for opacity, carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO₂) and the operational parameters steam production (lb/hr) or feedwater flow rate (lb/hr) and fabric filter inlet flue gas temperature shall be demonstrated by continuous emission monitoring systems (CEMS) operated in accordance with 40 CFR 60.58b and 60.59b(f). SO₂ monitors shall be located both upstream of the scrubber and downstream of the baghouse, in order to calculate percent removal efficiency. (See specific condition **B.57.**)

[PSD-FL-105(B)]

B.79. Each MWC unit is required to continuously monitor and record the flue gas temperature at the inlet to the PM control device in accordance with the requirements at 40 CFR 60.58b(i)(7). The PM control device inlet temperature and the steam (or feedwater) flow for each unit during the stack test shall be continuously monitored and recorded in accordance with 40 CFR 60, Subpart Cb. Higher temperatures are allowed for testing purposes, as specified at 40 CFR 60.53b(c).

[PSD-FL-105(B)]

Monitoring Requirements

B.80. For the purposes of 40 CFR 60.13, all continuous monitoring systems (CMS) required under applicable subparts shall be subject to the provisions of 40 CFR 60.13 upon promulgation of performance specifications for continuous monitoring systems under Appendix B of 40 CFR 60 and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, Appendix F of 40 CFR 60, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.

[40 CFR 60.13(a)]

B.81. If the owner or operator of an affected facility elects to submit continuous opacity monitoring system (COMS) data for compliance with the opacity standard as provided under 40 CFR 60.11(e)(5), he shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, Appendix B, of 40 CFR 60 before the performance test required under 40 CFR 60.8 is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under 40 CFR 60.8 or within 30 days thereafter in accordance with the applicable performance specification in Appendix B of 40 CFR 60. The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.

(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under 40 CFR 60.8, and as described in 40 CFR 60.11(e)(5), shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in 40 CFR 60.13(c) at least 10 days before the performance test required under 40 CFR 60.8 is conducted.

[40 CFR 60.13(c)(1)]

B.82. (1) Owners and operators of all continuous emission monitoring systems (CEMS) installed in accordance with the provisions of this part shall check the zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications in Appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. For continuous monitoring systems measuring opacity of emissions, the optical surfaces exposed to the effluent gases shall be cleaned prior to performing the zero and span drift adjustments except that for systems using automatic zero adjustments. The optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.

(2) Unless otherwise approved by the Administrator, the following procedures shall be followed for continuous monitoring systems measuring opacity of emissions. Minimum procedures shall include a

method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photo detector assembly.

[40 CFR 60.13(d)(1) and (2)]

B.83. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), all continuous monitoring systems (CMS) shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(1) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(2) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

[40 CFR 60.13(e)(1) and (2)]

B.84. All continuous monitoring systems (CMS) or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of Appendix B of 40 CFR 60 shall be used.

[40 CFR 60.13(f)]

B.85. When the effluents from a single affected facility or two or more affected facilities subject to the same emission standards are combined before being released to the atmosphere, the owner or operator may install applicable continuous monitoring systems (CMS) on each effluent or on the combined effluent. When the affected facilities are not subject to the same emission standards, separate continuous monitoring systems shall be installed on each effluent. When the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install an applicable continuous monitoring system on each separate effluent unless the installation of fewer systems is approved by the Administrator. When more than one continuous monitoring system is used to measure the emissions from one affected facility (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required from each continuous monitoring system.

[40 CFR 60.13(g)]

B.86. Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to 6-minute averages and for continuous monitoring systems other than opacity to 1-hour averages for time periods as defined in 40 CFR 60.2. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period. For continuous monitoring systems other than opacity, 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or non reduced form (e.g., ppm pollutant and percent O₂ or ng/J of pollutant). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).

[40 CFR 60.13(h)]

B.87. Determination of Process Variables.

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

(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

CEM for Oxygen or Carbon Dioxide

B.88. The owner or operator of an affected facility shall install, calibrate, maintain, and operate a continuous emission monitoring system and record the output of the system for measuring the oxygen or carbon dioxide content of the flue gas at each location where carbon monoxide, sulfur dioxide, or nitrogen oxides emissions are monitored and shall comply with the test procedures and test methods specified in paragraphs (1) through (7).

(1) The span value of the oxygen (or carbon dioxide) monitor shall be 25 percent oxygen (or carbon dioxide).

(2) The monitor shall be installed, evaluated, and operated in accordance with 40 CFR 60.13.

(3) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under 40 CFR 60.8.

(4) The monitor shall conform to Performance Specification 3 in Appendix B of 40 CFR 60, except for section 2.3 (relative accuracy requirement).

(5) The quality assurance procedures of Appendix F of 40 CFR 60, except for section 5.1.1 (relative accuracy test audit) shall apply to the monitor.

(6) If carbon dioxide is selected for use in diluent corrections, the relationship between oxygen and carbon dioxide levels shall be established during the initial performance test according to the procedures and methods specified in paragraphs(i) through(iv). This relationship may be reestablished during performance compliance tests.

(i) The fuel factor equation in Method 3B shall be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Method 3, 3A, or 3B, as applicable, shall be used to determine the oxygen concentration at the same location as the carbon dioxide monitor.

(ii) Samples shall be taken for at least 30 minutes in each hour.

(iii) Each sample shall represent a 1-hour average.

(iv) A minimum of three runs shall be performed.

(7) The relationship between carbon dioxide and oxygen concentrations that is established in accordance with paragraph (6) shall be submitted to the EPA Administrator as part of the initial performance test report and, if applicable, as part of the annual test report if the relationship is reestablished during the annual performance test.

[40 CFR 60.38b and 40 CFR 60.58b(b)]

Recordkeeping and Reporting Requirements

B.89. The owner or operator subject to the provisions of 40 CFR 60 shall furnish the Administrator written notification as follows:

(4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.

[40 CFR 60.7(a)(4)]

B.90. The owner or operator subject to the provisions of 40 CFR 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or, any periods during which a continuous monitoring system or monitoring device is inoperative.

[40 CFR 60.7(b)]

B.91. Excess Emissions Report. An excess emissions report shall be submitted to EPA for every calendar quarter. The report shall include the following:

(1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h) (see specific condition **B.86.**), 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)).

(2) 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 preventative measures adopted shall also be reported (40 CFR 60.7(c)(2)).

(3) 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)(3)).

(4) 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)).

(5) Permittee shall maintain a file of all measurements, including continuous monitoring systems performance evaluations; all continuous 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)).

(6) Excess emissions shall be defined as any applicable period during which the average emissions of CO, NO_x, and/or SO₂, as measured by the continuous monitoring system, exceeds the CO, NO_x, and/or SO₂ maximum emission limit (in ppm) or percent removal efficiency, as applicable, set for each pollutant in specific conditions **B.31.**, **B.35.** and **B.36.** above.

[PSD-FL-105(B); Rule 62-213.440, F.A.C.]

B.92. The summary report form shall contain the information and be in the format shown in Figure 1 (attached) unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and

the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.

(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

{See attached Figure 1: Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance}

[40 CFR 60.7(d)(1) and (2)]

B.93. (1) Notwithstanding the frequency of reporting requirements specified in 40 CFR 60.7(c), an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;

(ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in 40 CFR 60, Subpart A, and the applicable standard; and

(iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in 40 CFR 60.7(e)(2).

(2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in 40 CFR 60.7(e)(1) and (e)(2).

[40 CFR 60.7(e)(1), (2), and (3)]

B.94. Any owner or operator subject to the provisions of 40 CFR 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and, all other information required by 40 CFR 60 recorded in a permanent form

suitable for inspection. The file shall be retained for at least 5 (five) years following the date of such measurements, maintenance, reports, and records.

[40 CFR 60.7(f); Rule 62-213.440(1)(b)2.b., F.A.C.]

B.95. Notification of Construction or Reconstruction. The owner or operator of an affected facility with a capacity to combust greater than 250 tons per day shall submit a notification of construction, which includes the information specified in paragraphs (1) through (4).

- (1) Intent to construct.
 - (2) Planned initial startup date.
 - (3) The types of fuels that the owner or operator plans to combust in the affected facility.
 - (4) The municipal waste combustor unit capacity and supporting capacity calculations prepared in accordance with 40 CFR 60.58b(j).
- [40 CFR 60.39b and 40 CFR 60.59b(b)]

B.96. The owner or operator of an affected facility subject to the standards under 40 CFR. 60.53b, 60.54b, and 60.55b shall maintain records of the information specified in paragraphs (1) through (15), as applicable, for each affected facility for a period of at least 5 years.

- (1) The calendar date of each record.
- (2) The emission concentrations and parameters measured using continuous monitoring systems as specified under paragraphs (i) and (ii).
 - (i) The measurements specified in paragraphs (A) through (D) shall be recorded and be available for submittal to the Administrator or review onsite by an inspector.
 - (A) All 6-minute average opacity levels as specified under 40 CFR 60.58b(c).
 - (B) All 1-hour average sulfur dioxide emission concentrations as specified under 40 CFR 60.58b(e).
 - (C) All 1-hour average nitrogen oxides emission concentrations as specified under 40 CFR 60.58b(h).
 - (D) All 1-hour average carbon monoxide emission concentrations, municipal waste combustor unit load measurements, and particulate matter control device inlet temperatures as specified under 40 CFR 60.58b(i).
 - (ii) The average concentrations and percent reductions, as applicable, specified in paragraphs (2)(ii)(A) through (2)(ii)(D) shall be computed and recorded, and shall be available for submittal to the Administrator or review on-site by an inspector.
 - (A) All 24-hour daily geometric average sulfur dioxide emission concentrations and all 24-hour daily geometric average percent reductions in sulfur dioxide emissions as specified under 40 CFR 60.58b(e).
 - (B) All 24-hour daily arithmetic average nitrogen oxides emission concentrations as specified under 40 CFR 60.58b(h).
 - (C) All 4-hour block or 24-hour daily arithmetic average carbon monoxide emission concentrations, as applicable, as specified under 40 CFR 60.58b(i).
 - (D) All 4-hour block arithmetic average municipal waste combustor unit load levels and particulate matter control device inlet temperatures as specified under 40 CFR 60.58b(i).
- (3) Identification of the calendar dates when any of the average emission concentrations, percent reductions, or operating parameters recorded under paragraphs (2)(ii)(A) through (2)(ii)(D), or the opacity levels recorded under paragraph (2)(i)(A) are above the applicable limits, with reasons for such exceedances and a description of corrective actions taken.
- (5) [Reserved]

(6) Identification of the calendar dates for which the minimum number of hours of any of the data specified in paragraphs (i) through (v) have not been obtained including reasons for not obtaining sufficient data and a description of corrective actions taken.

- (i) Sulfur dioxide emissions data;
- (ii) Nitrogen oxides emissions data;
- (iii) Carbon monoxide emissions data;
- (iv) Municipal waste combustor unit load data; and
- (v) Particulate matter control device temperature data.

(7) Identification of each occurrence that sulfur dioxide emissions data, nitrogen oxides emissions data (large municipal waste combustors only), or operational data (i.e., carbon monoxide emissions, unit load, and particulate matter control device temperature) have been excluded from the calculation of average emission concentrations or parameters, and the reasons for excluding the data.

(8) The results of daily drift tests and quarterly accuracy determinations for sulfur dioxide, nitrogen oxides, and carbon monoxide continuous emission monitoring systems, as required under Appendix F of 40 CFR 60, procedure 1.

(9) The test reports documenting the results of the initial performance test and all annual performance tests listed in paragraphs (i) and (ii) shall be recorded along with supporting calculations.

(i) The results of the initial performance test and all annual performance tests conducted to determine compliance with the particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission limits.

(ii) For the initial dioxin/furan performance test and all subsequent dioxin/furan performance tests recorded under paragraph (9)(i), the maximum demonstrated municipal waste combustor unit load and maximum demonstrated particulate matter control device temperature (for each particulate matter control device).

(10) [Reserved]

(12) The records specified in paragraphs (i) through (iii).

(i) Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have been provisionally certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program as required by 40 CFR 60.54b(a) including the dates of initial and renewal certifications and documentation of current certification.

(ii) Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have been fully certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program as required by 40 CFR 60.54b(b) including the dates of initial and renewal certifications and documentation of current certification.

(iii) Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have completed the EPA municipal waste combustor operator training course or a State-approved equivalent course as required by 40 CFR 60.54b(d) including documentation of training completion.

(13) Records showing the names of persons who have completed a review of the operating manual as required by 40 CFR 60.54b(f) including the date of the initial review and subsequent annual reviews.

(14) For affected facilities that apply activated carbon for mercury or dioxin/furan control, identification of the calendar dates when the average carbon mass feed rates recorded under (4)(iii) were less than either of the hourly carbon feed rates estimated during performance tests for mercury or dioxin/furan emissions and recorded under paragraphs (4)(i) and (4)(ii), respectively, with reasons for such feed rates and a description of corrective actions taken.

[40 CFR 60.39b and 40 CFR 60.59b(d)]

B.97. The owner or operator of an affected facility shall submit the information specified in paragraphs (1) through (6) in the initial performance test report.

(1) The initial performance test data as recorded under 40 CFR 60.59b(d)(2)(ii)(A) through (d)(2)(ii)(D) for the initial performance test for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load level, and particulate matter control device inlet temperature.

(2) The test report documenting the initial performance test recorded under 40 CFR 60.59b(d)(9) for particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emissions.

(3) The performance evaluation of the continuous emission monitoring system using the applicable performance specifications in Appendix B of this part.

(4) The maximum demonstrated municipal waste combustor unit load and maximum demonstrated particulate matter control device inlet temperature(s) established during the initial dioxin/furan performance test as recorded under 40 CFR 60.59b(d)(9).

[40 CFR 60.39b and 40 CFR 60.59b(f)]

B.98. Following the first year of municipal combustor operation, the owner or operator of an affected facility shall submit an annual report including the information specified in paragraphs (1) through (4), as applicable, no later than February 1 of each year following the calendar year in which the data were collected (once the unit is subject to permitting requirements under Title V of the Act, the owner or operator of an affected facility must submit these reports semiannually).

(1) A summary of data collected for all pollutants and parameters regulated under this subpart, which includes the information specified in paragraphs (i) through (v).

(i) A list of the particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission levels achieved during the performance tests recorded under 40 CFR 60.59b (d)(9).

(ii) A list of the highest emission level recorded for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load level, and particulate matter control device inlet temperature based on the data recorded under 40 CFR 60.59b(d)(2)(ii)(A) through (d)(2)(ii)(D).

(iii) List the highest opacity level measured, based on the data recorded under 40 CFR 60.59b(d)(2)(i)(A).

(iv) The total number of days that the minimum number of hours of data for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load, and particulate matter control device temperature data were not obtained based on the data recorded under 40 CFR 60.59b(d)(6).

(v) The total number of hours that data for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load, and particulate matter control device temperature were excluded from the calculation of average emission concentrations or parameters based on the data recorded under 40 CFR 60.59b(d)(7).

(2) The summary of data reported under paragraph (1) shall also provide the types of data specified in paragraphs (1)(i) through (1)(vi) for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

(3) The summary of data including the information specified in paragraphs (1) and (2) shall highlight any emission or parameter levels that did not achieve the emission or parameter limits specified under this subpart.

(4) A notification of intent to begin the reduced dioxin/furan performance testing schedule specified in 40 CFR 60.58b(g)(5)(iii) during the following calendar year.

[40 CFR 60.39b and 40 CFR 60.59b(g)]

B.99. The owner or operator of an affected facility shall submit a semiannual report that includes the information specified in paragraphs (1) through (5) for any recorded pollutant or parameter that does not comply with the pollutant or parameter limit specified under this subpart, according to the schedule specified under paragraph (6).

(1) The semiannual report shall include information recorded under 40 CFR 60.59b(d)(3) for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load level, particulate matter control device inlet temperature, and opacity.

(2) For each date recorded as required by 40 CFR 60.59b(d)(3) and reported as required by paragraph (1), the semiannual report shall include the sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load level, particulate matter control device inlet temperature, or opacity data, as applicable, recorded under 40 CFR 60.59b(d)(2)(ii)(A) through (d)(2)(ii)(D) and (d)(2)(i)(A), as applicable.

(3) If the test reports recorded under 40 CFR 56.59b(d)(9) document any particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission levels that were above the applicable pollutant limits, the semiannual report shall include a copy of the test report documenting the emission levels and the corrective actions taken.

(4) The semiannual report shall include the information recorded under 40 CFR 60.59b(d)(15) for the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate.

(5) For each operating date reported as required by paragraph (4), the semiannual report shall include the carbon feed rate data recorded under 40 CFR 60.59b(d)(4)(iii).

(6) Semiannual reports required by this condition shall be submitted according to the schedule specified in paragraphs (i) and (ii).

(i) If the data reported in accordance with paragraphs (1) through (5) were collected during the first calendar half, then the report shall be submitted by August 1 following the first calendar half.

(ii) If the data reported in accordance with paragraphs (1) through (5) were collected during the second calendar half, then the report shall be submitted by February 1 following the second calendar half.

[40 CFR 60.39b and 40 CFR 60.59b(h)]

B.100. All reports specified under 40 CFR 60.59b(a), (b), (c), (f), (g), (h), and (i) shall be submitted as a paper copy, postmarked on or before the submittal dates specified under these paragraphs, and maintained onsite as a paper copy for a period of 5 years.

[40 CFR 60.39b and 40 CFR 60.59b(j)]

B.101. All records specified under 40 CFR 60.59b(d) and (e) shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the Administrator.

[40 CFR 60.39b and 40 CFR 60.59b(k)]

B.102. If the owner or operator of an affected facility would prefer a different annual or semiannual date for submitting the periodic reports required by 40 CFR 60.59b(g), (h) and (i), then the dates may be changed by mutual agreement between the owner or operator and the Administrator according to the procedures specified in 40 CFR 60.19(c) of subpart A of this part.

[40 CFR 60.39b and 40 CFR 60.59b(l)]

B.103. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the DEP Southeast District Office in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the DEP Southeast District Office.

Rule 62-210.700(6), F.A.C.]

B.104. Submit to the Department a written report of emissions in excess of emission limiting standard for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Source for a period of five years.

[Rule 62-213.440, F.A.C.]

B.105. CEM Data

(1) Continuous emission monitoring (CEM) systems shall measure stack gas opacity and SO₂, NO_x, CO, and O₂ concentrations for each unit. Continuous monitors for SO₂ shall be installed after the acid gas control device for each unit. The systems shall meet the EPA Monitoring performance specifications of 40 CFR 60.13 and 40 CFR 60, Appendix B, during initial compliance testing and annually thereafter. Additionally CEMS shall meet the quality control requirements of 40 CFR 60, Appendix F.

(2) CEM data recorded during periods of startup, shutdown, and malfunction shall be reported but excluded from compliance averaging periods for CO, NO_x, and opacity.

(3) CEM data recorded during periods of startup and shutdown shall be excluded from compliance averaging periods for SO₂.

(4) CEM data recorded during periods of acid gas control device malfunctions shall be excluded from compliance averaging periods for SO₂ provided that the preceding thirty day period which ends on the last day of the malfunction period meets an average SO₂ emission limit equal to the SO₂ limit specified in condition . CEM data must be available for 90% of the operating time for this exemption to apply. A malfunction as used in this permit means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

[PSD-FL-105(B)]

B.106. Continuous emissions monitoring data shall be reported to the DEP Southeast District Office and EPA Region 4 on a quarterly basis in accordance with Rule 62-204.800(8), F.A.C. and 40 CFR 60.7 (see specific condition B.91.).

[PSD-FL-105]

B.107. Test Reports.

(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the DEP Southeast District Office on the results of each such test.

(b) The required test report shall be filed with the DEP Southeast District Office as soon as practical but no later than 45 days after the last sampling run of each test is completed.

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

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.

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

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

B.108. Monthly records shall be maintained of the amount of natural gas and distillate fuel oil used by the auxiliary burners of each MSW unit, the equivalent heat input from natural gas and distillate fuel oil (calculated using the heat value for natural gas/fuel oil provided by the natural gas/fuel oil supplier), and the distillate fuel oil sulfur content (provided by fuel oil supplier). On an annual basis (no later than 30 days after the end of the calendar year), a demonstration must be performed based on the monthly records showing that the capacity factor for natural gas and distillate fuel oil for each unit was 10% or less.

[Rule 62-213.440, F.A.C.]

B.109. Charging Rate Monitoring. The daily solid waste charging rate and hours of operation shall be determined and recorded for each MWC unit. The daily charging rate shall be determined each month on an average daily basis for each MWC unit using the Facility's truck scale weight data, refuse pit inventory and MWC operating data for the preceding calendar month. Monthly truck scale weight records on the weight of solid waste received and processed at the Facility and refuse pit inventory shall be used to determine the amount of solid waste charged during the preceding calendar month on an average daily basis. The MWC load level measurements or other operating data shall be used to determine the number of operating hours per MWC unit for each day during the preceding calendar month.

[40 CFR 60.53(a); and, PSD-FL-105(B)]

B.110. Segregated Solid Waste Record Keeping. The following records shall be made and kept to demonstrate compliance with the segregated non-MSW percentage limitations of specific condition **B.15.**

(1) Each segregated load of non-MSW materials, that is subject to the percentage weight limitations of specific condition **B.15.**, which is received for processing shall be documented as to waste description and weight. The weight of all waste materials received for processing shall be measured using the facility truck scale and recorded.

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

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

[PSD-FL-105(B)]

B.111. Acid Rain Part Application. For any unit which was a solid waste incinerator, burning less than 20 percent fossil fuel as described in 40 CFR 72.6(b)(7), adopted and incorporated by reference at Rule 62-204.800, F.A.C. the designated representative of the source containing the unit shall submit a complete Acid Rain Part application governing such unit to the Department before the later of January 1, 1998, or March 1 of the year following the three calendar year period in which the incinerator consumed 20 percent or more fossil fuel on a British thermal unit (BTU) basis.

[Rule 62-214.320(1)(h), F.A.C.]

Subsection C. This section addresses the following emissions units.

EUE ID No.	Brief Description
-004	236 Ton Lime Silo with Baghouse
-005	Ash Handling System

Emissions unit -004 is a 236 ton capacity silo for storage of pebble lime. It is part of the spray dry absorber (SDA) system used for control of acid gases and sulfur dioxide emissions from the municipal waste combustion units. A supply truck pneumatically transfers pebble lime to the silo through a fill line. A Wheelabrator Air Pollution Control Jet III baghouse (Model No. 1016, BA-108) is used to control particulate matter emissions during silo filling. The baghouse parameters are as follows: stack height = 102 feet; exit dimensions (rectangular vent) = 2.67 x 1 feet; exit temperature = 40-100 °F, actual volumetric flow rate = 1,500 acfm. The initial startup date of the silo was February, 1992.

Emissions unit -005 is the Ash Handling System. It receives fly ash and spray dryer reaction products (calcium sulfate, calcium chloride, calcium hydroxide, calcium fluoride). Particulate matter and visible emissions from the ash handling system are controlled by wet processing in an enclosed building. The initial startup date of the ash handling system was April 5, 1991.

{Permitting note(s): Emissions units -004 and -005 are minor sources that were permitted under AC06-187000, AC06-187001 (March 12, 1991) and AO06-208864 and are regulated under Rule 62-210.300, F.A.C., Permits Required. Emissions unit -005 is also permitted under 0112120-002-AC.}

{Note: Emissions unit -005 is also subject to requirements of PSD-FL-112(B) and 40 CFR 60, Subpart Cb. The requirements of 40 CFR 60, Subpart Cb are stated in Subsection B. and referenced in this subsection.}

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

Essential Potential to Emit (PTE) Parameters

C.1. Permitted Capacity. The lime storage silo filling rate shall not exceed 50,000 lbs/hr of pebble lime. [Rule 62-4.070(3) F.A.C., and Permit No. 0112120-007-AC (revision of Permit No. AC 06-187000)]

C.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition C.18. [Rule 62-297.310(2), F.A.C.]

C.3. Hours of Operation. Each unit may operate continuously, i.e., 8,760 hrs/yr. [Rules 62-213.440 and 62-210.200(PTE), F.A.C.; and, AC06-187000 & AC06-187001]

Emission Limitations and Standards

{Permitting Note: The attached Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

C.4. Particulate Matter Emissions. Particulate matter emissions from the lime silo baghouse shall not exceed 0.010 gr/dscf, nor 0.021 tons/year. [AC06-187000 & AC06-187001]

C.5. Visible Emissions. Visible emissions from lime silo shall not exceed 5% opacity for this minor sources equipped with a baghouse (see specific condition C.15.)
[Rule 62-297.620(4), F.A.C., and AC06-187000 & AC06-187001]

C.6. Ash Handling Emission Points and Ash Processing Equipment. All conveyor loading points, transfer points and all ash processing equipment shall be properly enclosed. The facility shall be operated by personnel properly trained for the equipment herein. The Department shall have been notified in writing on how the facility staff would be staffed and trained.
[AC06-187000 & AC06-187001]

C.7. Fugitive Ash Emissions. See specific condition B.37.
[Rule 62-213.440, F.A.C.]

C.8. Ash Handling Facilities. The potential for dust generation by ash handling activities will be mitigated by quenching or conditioning the ash prior to loading in ash transport trucks. Ash handling facilities shall be enclosed (including the proposed future metal recovery area). Unprocessed refuse storage areas which must be open for operational purposes (e.g., tipping floor of the refuse bunker while trucks are entering and leaving) will be under negative air pressure. Residue from the grates, and grate siftings shall be discharged into the bottom ash quenching system, and ash from the combustor/boiler and fabric filter hoppers shall be discharged into the fly ash conditioning system during normal operations to minimize visible dust generation. The ash/residue in the Ash Handling Building shall remain sufficiently moist to minimize dust during storage and handling operations. Compliance with this condition shall be determined in accordance with specific condition B.37.
[PSD-FL-105(B)]

Excess Emissions

C.9. Excess Emissions Allowed. Excess emissions resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.
[Rule 62-210.700(1), F.A.C.]

C.10. Excess Emissions Prohibited. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.
[Rule 62-210.700(4), F.A.C.]

Monitoring of Operations

C.11. Determination of Process Variables.

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

(b) **Accuracy of Equipment.** Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be

calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

C.12. Annual Tests Required. Annual visible emissions compliance tests shall be performed for each emissions unit.

[Rule 62-297.310(7), F.A.C.]

C.13. Visible Emissions. The test method for visible emissions shall be EPA Method 9, adopted and incorporated in Rule 62-204.800, F.A.C. The visible emissions tests for the lime silo shall be conducted for the entire truck unloading operation.

[AC06-187000 & AC06-187001]

C.14. Particulate Matter Emissions. The test method for particulate matter emissions for all units shall be EPA Method 5, adopted and incorporated in Rule 62-204.800, F.A.C.

[AC06-187000 & AC06-187001]

C.15. Particulate Matter Emissions. In the case of an emissions unit which has the potential to emit less than 100 tons per year of particulate matter and is equipped with a baghouse, the Department waives any particulate matter compliance test requirements for such emissions unit specified in any otherwise applicable rule, and specifies an alternative standard of 5% opacity.

If the Department has reason to believe that the particulate weight emission standard applicable to such an emissions unit (see specific condition C.4.) is not being met, it shall require that compliance be demonstrated by the test method specified in the applicable rule (see specific condition C.4).

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

C.16. Fugitive Ash. See specific condition B.63.

[Rule 62-213.440, F.A.C.]

C.17. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.

[Rule 62-297.310(1), F.A.C.]

C.18. Operating Rate During Testing. Testing of emissions shall be conducted with each emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.
[Rules 62-297.310(2) & (2)(b), F.A.C.]

C.19. Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the separate test runs unless otherwise specified in a particular test method or applicable rule.
[Rule 62-297.310(3), F.A.C.]

C.20. Applicable Test Procedures.

(a) Required Sampling Time.

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

2. **Opacity Compliance Tests.** When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

a. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.

b. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

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

(c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

(d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, attached to this permit.

(e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

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

C.21. Required Stack Sampling Facilities. When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.

[Rule 62-297.310(6), F.A.C.]

C.22. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

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

a. Did not operate; or

b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.

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

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

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

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

5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.

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

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

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

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

Recordkeeping and Reporting

C.23. Fugitive Ash. See specific conditions B.96.-B.99.
[Rule 62-213.440, F.A.C.]

C.24. Excess Emissions from Malfunctions. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the DEP Southeast District Office in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the DEP Southeast District Office.

[Rule 62-210.700(6), F.A.C.]

C.25. Test Reports.

(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the DEP Southeast District Office on the results of each such test.

(b) The required test report shall be filed with the DEP Southeast District Office as soon as practical but no later than 45 days after the last sampling run of each test is completed.

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

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

18. All measured and calculated data required to be determined by each applicable test procedure for each run.

19. The detailed calculations for one run that relate the collected data to the calculated emission rate.

20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.

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

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

Appendix I-1, List of Insignificant Emissions Units and/or Activities.

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, or that meet the criteria specified in Rule 62-210.300(3)(b)1., F.A.C., Generic Emissions Unit Exemption, are exempt from the permitting requirements of Chapters 62-210, 62-212 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

Brief Description of Emissions Units and/or Activities:

1. Slaker A
2. Slaker B
3. 3 Chemical Feed Tanks (for Boiler Nos 1-3)
4. Diesel Fuel Oil Tank (Ash Unloading)
5. Monofill Diesel Tank
6. Non-Halogenated Solvent Degreaser
7. Monofill
8. Plant Roads

ATTACHMENT WSB-EU1-IV3

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT WSB-EU1-IV3**ALTERNATIVE METHODS OF OPERATION**

The primary fuel for all three boilers is municipal solid waste. The boiler is capable of firing natural gas for startup, shutdown, and flame stabilization. The facility has a 0.10 capacity factor limitation on the use of natural gas.

EMISSIONS UNIT INFORMATION

Section [2]

236-Ton Lime Silo

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application – For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application – For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [2]
236-Ton Lime Silo

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
236-Ton Lime Silo with Baghouse

3. Emissions Unit Identification Number: **004**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: 2/1/1992	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:
236-Ton Lime Silow with a baghouse

EMISSIONS UNIT INFORMATION

**Section [2]
236-Ton Lime Silo**

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Fabric Filter Low Temperature [T < 180 degrees Fahrenheit (°F)]

2. Control Device or Method Code(s): **127**

EMISSIONS UNIT INFORMATIONSection [2]
236-Ton Lime Silo**C. EMISSION POINT (STACK/VENT) INFORMATION**
(Optional for unregulated emissions units.)**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram: TV 004		2. Emission Point Type Code: 1			
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:					
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:					
5. Discharge Type Code:		6. Stack Height: 102 feet		7. Exit Diameter: 2.67 feet	
8. Exit Temperature: 100 °F		9. Actual Volumetric Flow Rate: 1,500 acfm		10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm			12. Nonstack Emission Point Height: feet		
13. Emission Point UTM Coordinates... Zone: 17 East (km): 579.54 North (km): 2883.3			14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) 26/04/08 Longitude (DD/MM/SS) 80/12/13		
15. Emission Point Comment:					

EMISSIONS UNIT INFORMATION

**Section [2]
236-Ton Lime Silo**

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Industrial Processes; Mineral Products; Bulk Materials Loading Operation: Mineral		
2. Source Classification Code (SCC): 30183001		3. SCC Units: Tons Material Processed
4. Maximum Hourly Rate: 25	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Pebble Lime Storage Silo		

Segment Description and Rate: Segment ____ of ____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99
3. Potential Emissions: 0.13 lb/hour 0.021 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.01 gr/dscf Reference: Permit Limit	7. Emissions Method Code: 0
8. Calculation of Emissions: Permits AC06-187000 and AC06-187001	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [2]
236-Ton Lime Silo

POLLUTANT DETAIL INFORMATION

Page [1] of [1]
Particulate Matter Total - PM

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.01 gr/dscf	4. Equivalent Allowable Emissions: 0.13 lb/hour 0.021 tons/year
5. Method of Compliance: Test not required unless VE standard is violated.	
6. Allowable Emissions Comment (Description of Operating Method): Basis: AC06-187000	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [2]
236-Ton Lime Silo

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE05	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 5 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9, Annually	
5. Visible Emissions Comment: Rule 62-297.620(4)	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [2]
236-Ton Lime Silo

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [2]
236-Ton Lime Silo

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: WSB-EU2-11 <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: WSB-EU2-13 <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: WSB-EU2-13 <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: WSB-EU2-13 <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input checked="" type="checkbox"/> Attached, Document ID: WSB-EU1-16 Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [2]

236-Ton Lime Silo

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input checked="" type="checkbox"/> Attached, Document ID: WSB-EU1-IV1 <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

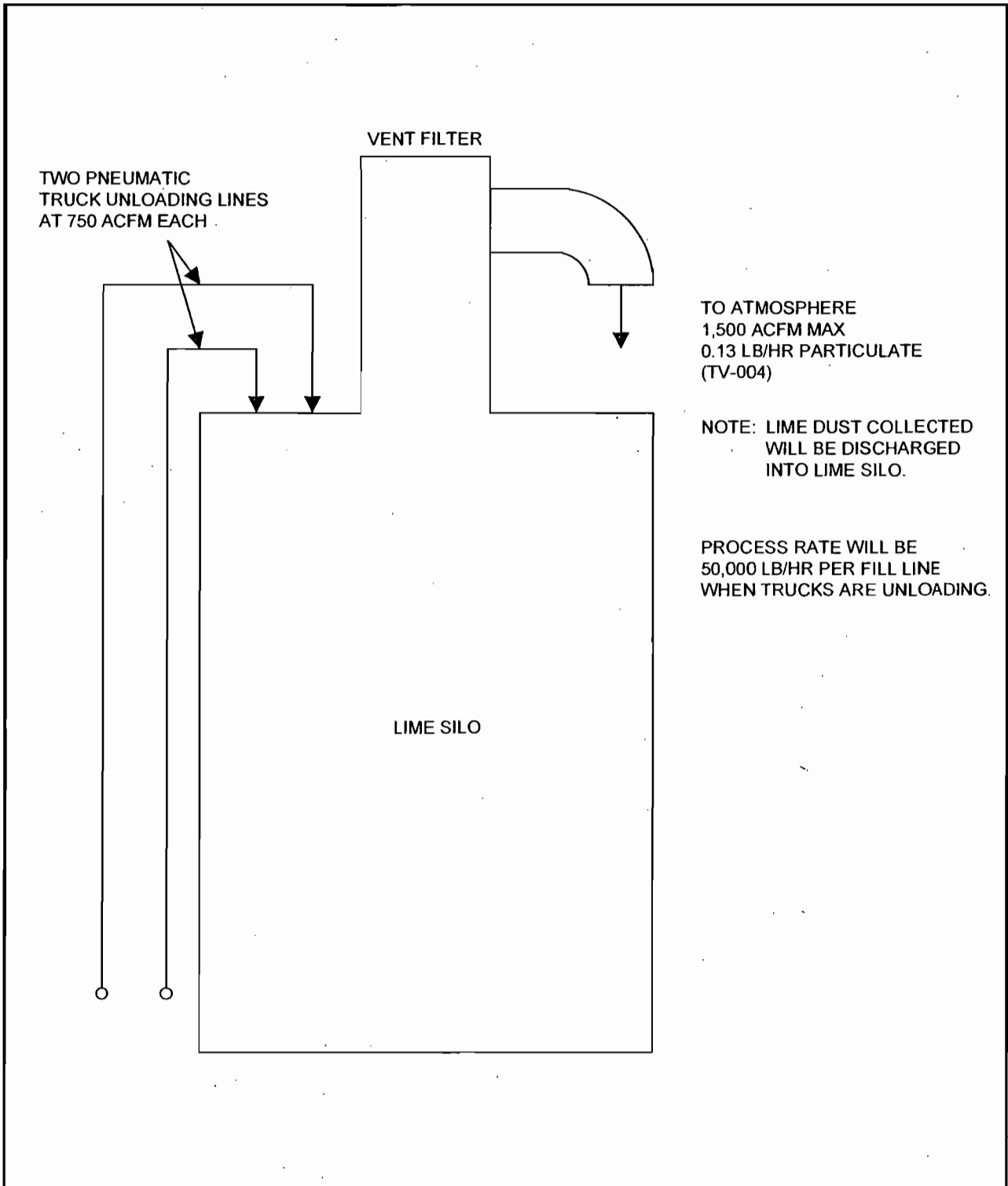
EMISSIONS UNIT INFORMATION

**Section [2]
236-Ton Lime Silo**

Additional Requirements Comment

ATTACHMENT WSB-EU2-11

PROCESS FLOW DIAGRAM



Attachment WSB-EU2-I1
Lime Silo Dust Control Flow Diagram
Wheelabrator South Broward, Pompano Beach, Florida

Filename:
WSB-EU2-I1.vsd

Date: 04/20/05



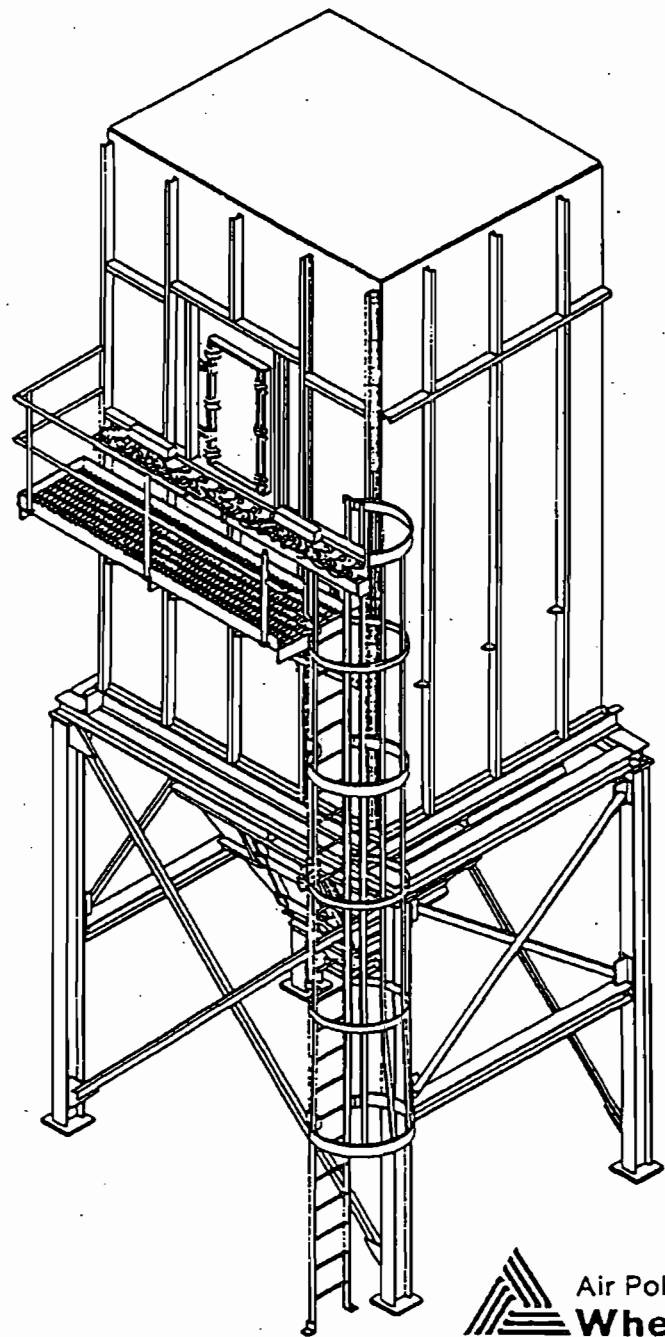
ATTACHMENT WSB-EU2-I3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

1-22-82

JET III™

THE NEW GENERATION OF DUST COLLECTORS



 Air Pollution Control Division
Wheelabrator-Frye Inc.

JET III

The new generation of dust collectors

Someday, all dust collectors may offer the benefits of JET III:

- High collection efficiencies
- Low first cost
- Low maintenance cost
- Low operating cost

Why wait for someday?

JET III is a wholly-new design in pulse-jet dust collectors, offering the high collection efficiencies required by increasingly stringent environmental regulations, plus true economy for the plant owner. Economy is achieved by a new, state-of-the-art system designed to reduce maintenance, labor, parts and energy costs.

Available in a full range of standard cloth areas, JET III also offers flexible sizing and efficient, space-saving installa-

tion. Variation of the tube sheet/bag length can be tailored to a particular application and dust condition. This flexibility enables a relatively small-sized housing to be employed on large-volume jobs, lowering capital costs. Smaller modules (1,140 to 5,570 ft² of cloth area) are square in plan, and large-volume modules (4,910 to 12,800 ft² of cloth area) are rectangular. Both designs feature specially-designed inlet connections for efficient gas flow and long filter bag life.

Access to the unit is provided by an integral, full-height, weather-proof, walk-in, clean air plenum. Where heat or other factors present special problems, or where bags in excess of 144

inches long are used, manually operated, hinged roof doors are available.

JET III housings are constructed of 10-gauge hot rolled sheet steel stiffened for 20" WG. All JET III units are completely fabricated before shipment for easy, economical field erection. Square modules are shipped as assembled, one-piece units, complete with flanged inlet and outlet connections. Due to restrictions in certain geographic areas, the air header and valve assemblies may be shipped as a sub-assembly for field installations. The large-volume modules are shipped in three, pre-matched sections for easy job-site completion.

3 important ways better

While sizing, access and housing construction of a dust collector are important, the critical features are the internals. Inside, JET III shows its superiority in

these exclusive areas:

1. Tube sheet and bag attachment
2. Venturi and cage
3. Pulse cleaning system

The following pages describe these exclusive features of JET III that yield real benefits in operation and economy for you.

JET III—3 important ways better

#1—Tube Sheet & Bag Attachment

- Die-formed cups for added strength
- Positive seal against dust leakage
- Fast bag attachment, without tools
- Simple, one-step bagging
- Improves clean-side work area

Tube Sheet:

JET III uses the Wheelabrator-Frye drawn-cup tube sheet, previously available only in higher-priced collectors. The bag cups are drawn, eliminating welds which could fail or leak. The tube sheet is seal-welded into the housing to effect a positive seal against dust

penetration. Also, the tube sheet's flat, smooth upper surface simplifies maintenance and housekeeping.

Bag Attachment:

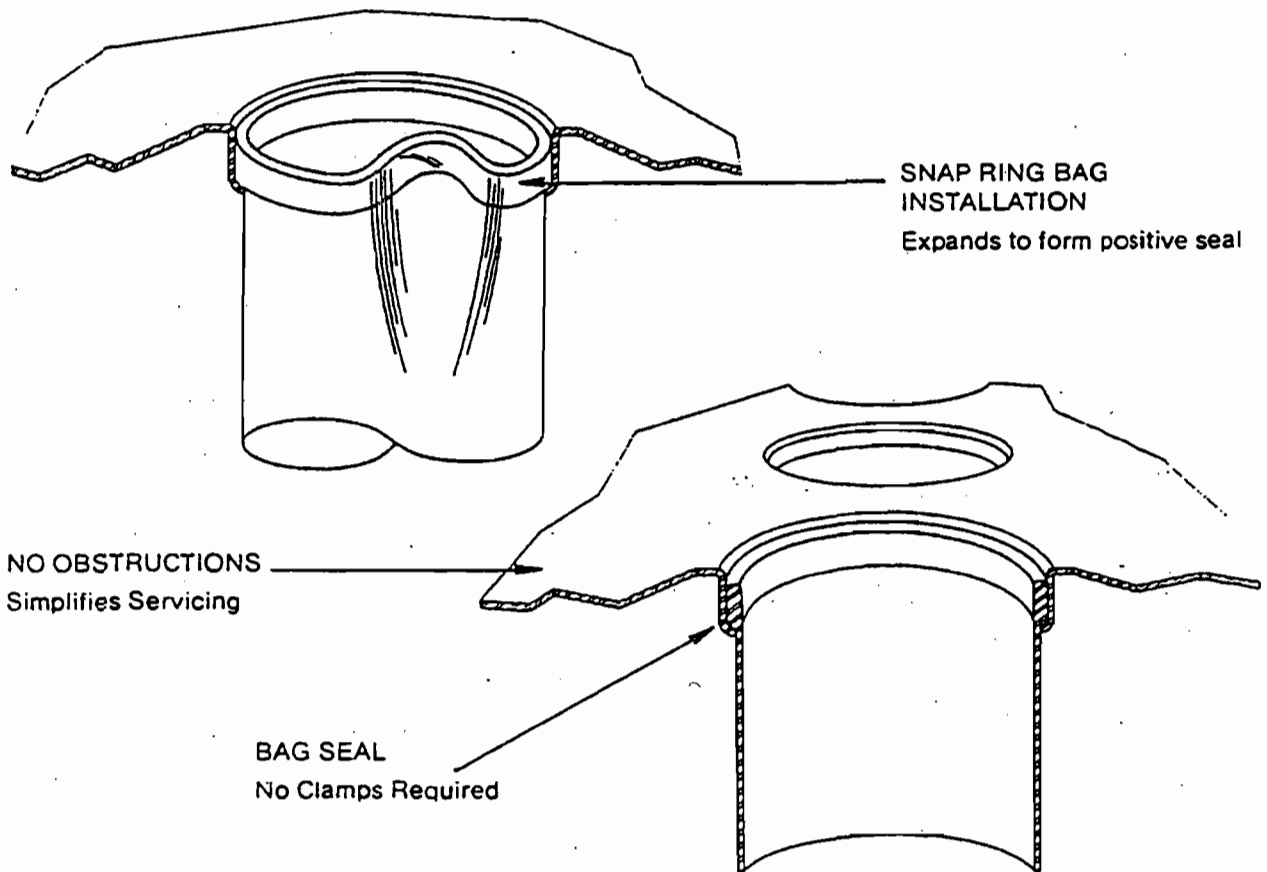
JET III tube sheet features patented Wheelabrator-Frye "snap-ring" bag sealing.

Unlike other designs where bag installation often is a two-man, two-step operation external to the filter, JET III offers a fast, one-man, one-step process. Our tube sheet, acting as a natural bagging fixture, allows cage insertion directly into the tube sheet and bags.

This simple, one-step attach-

ment creates the only seal necessary, eliminating the need for secondary seals such as "O" rings or gaskets. In fact, it would be difficult to install a bag which did not seal properly. On major change-outs, bags can be dropped to the dirty side hopper below, to maintain a true, clean-side work environment.

JET III filter bags are supplied by Wheelabrator-Frye's own W.W. Criswell Division. A complete range of high-quality bags is available in all popular synthetic fibers, including high-temperature fabrics.



JET III— 3 important ways better

#2 — Venturi and Cage

- Designed to save compressed air costs
- Venturi self-aligns for easy installation and efficient pulse cleaning
- Simple interlock for rapid assembly
- Quality bag support cages

The high-gain throat of JET III's newly-designed venturi is capable of cleaning more surface area of filter media with less compressed air. This provides effective cleaning of JET III's 6" diameter bags up to 14' long while the collector is on stream. JET III's venturi

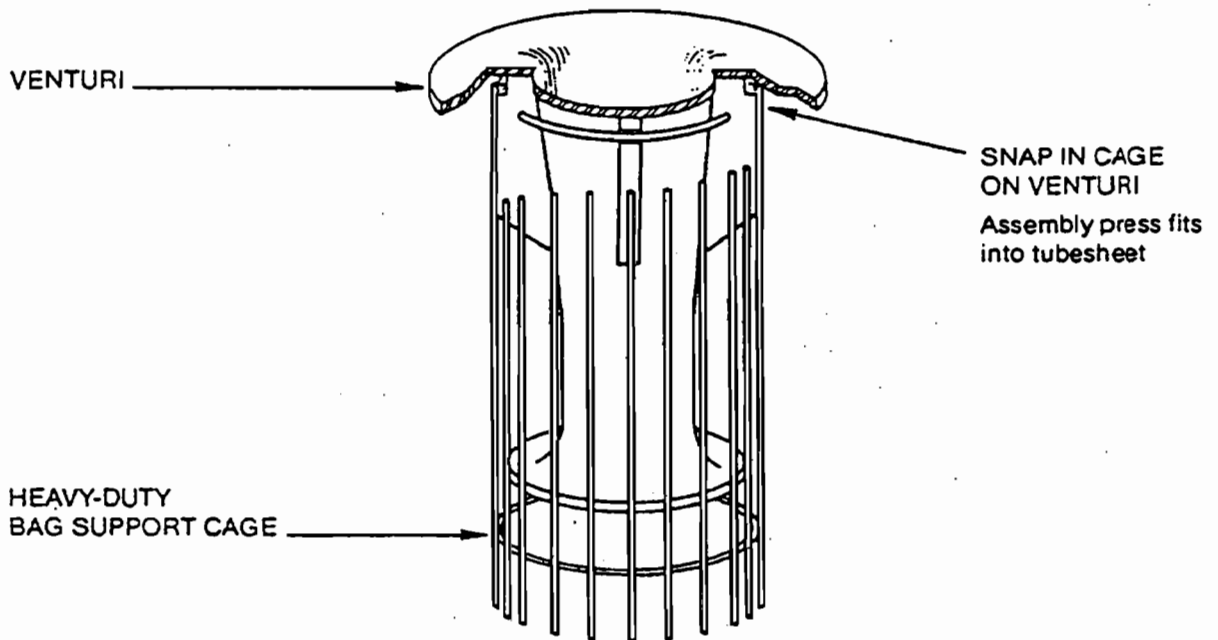
may be supplied in aluminum or cast iron. The venturi is self-aligning in the bag support cage and tube sheet for easy installation and maximum cleaning efficiency. No fittings, clamps, gaskets or attachments are required to secure the assembly.

JET III features the industry's simplest yet most effective venturi and cage assembly. Assembly requires only a single snap interlock of the venturi within the cage. The weight of the cage is then supported by the venturi flange.

The standard bag support

cage is made of heavy-gauge wire to provide maximum support for long filter bag life. This rugged construction maintains alignment and critical dimensional relationship between bag and cage.

Cages are specifically designed to withstand rough handling during installation and subsequent bag change-outs. Carbon steel is standard. Stainless steel cages and corrosion-resistant coatings are available for special applications.



JET III—3 important ways better

#3—Pulse Cleaning System

- Simple design uses few parts
- Easy to maintain
- Saves energy costs

JET III features a uniquely designed pulse-jet cleaning system. Resulting from extensive research, JET III's pulse cleaning hardware is designed to clean with minimum air consumption and maximum energy savings. More filter cloth area is cleaned per horsepower than in previous designs. Field tested on critical industry applications, the JET III cleaning system can also contribute to prolonging filter bag life. JET III's header, air valves and manifold combine to offer a highly effective cleaning system.

1. JET III Header

The compressed air header is square in section for space saving, positive alignment and convenient bolt-on

of air valves. This eliminates leakage common to other designs.

The header assemblies are sectioned to permit local isolation for maintenance without shutting down the total system. These sectioned headers provide rapid depletion of the header pressure. The system requires a maximum line pressure of 90 PSI for energy conservation.

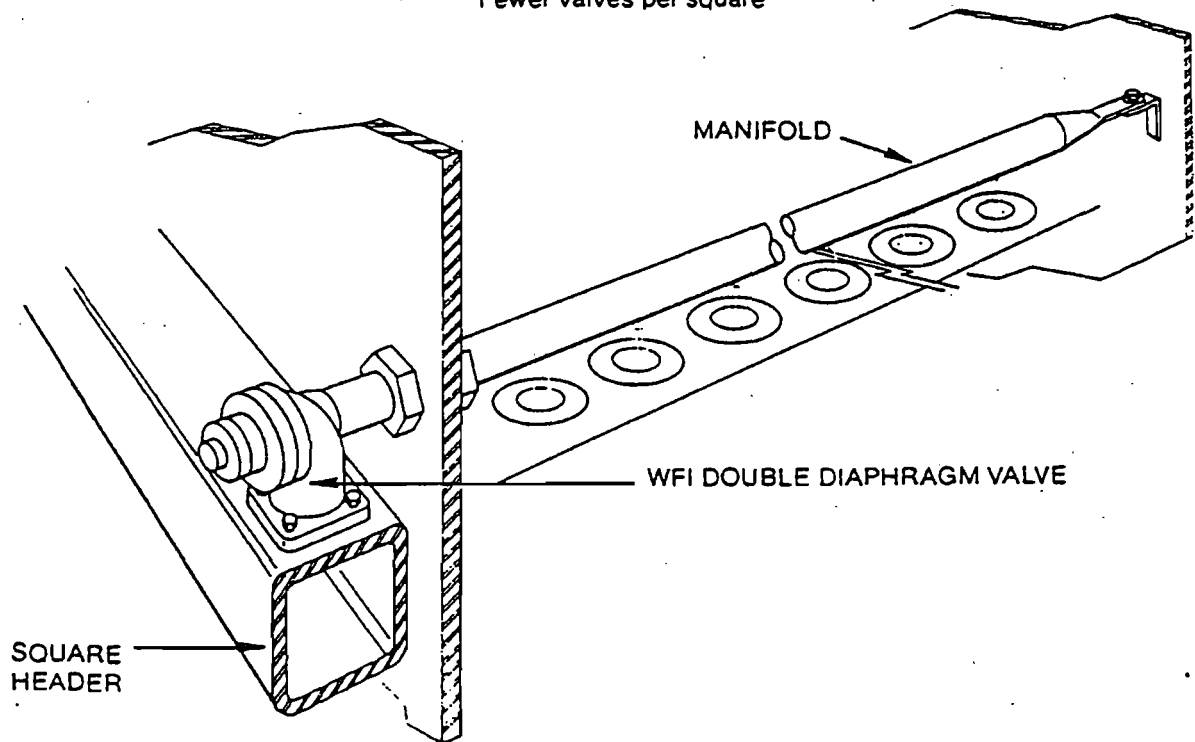
2. JET III Double-Diaphragm Air Valve

Special Wheelabrator-Frye double-diaphragm valves are fitted to square headers. This air dump valve, matched to the new venturi, provides the air for cleaning up to 15 bags per row. Fewer valves per square

foot of cloth mean less maintenance and fewer parts in inventory. The valve also allows the convenience of remote pilot control (for low-cost electrical installation) with no loss of efficiency across the air valve. The air valve is simple to replace should this ever become necessary.

3. JET III Manifold

The 1½"-diameter manifold pipe is jig-drilled for positive alignment of the blow holes with the venturi centers to assure maximum efficiency. Fit of the manifold within the plenum is positive to maintain this alignment. For bag inspection and/or removal, the manifold can be removed with a minimum of effort and no special tools.



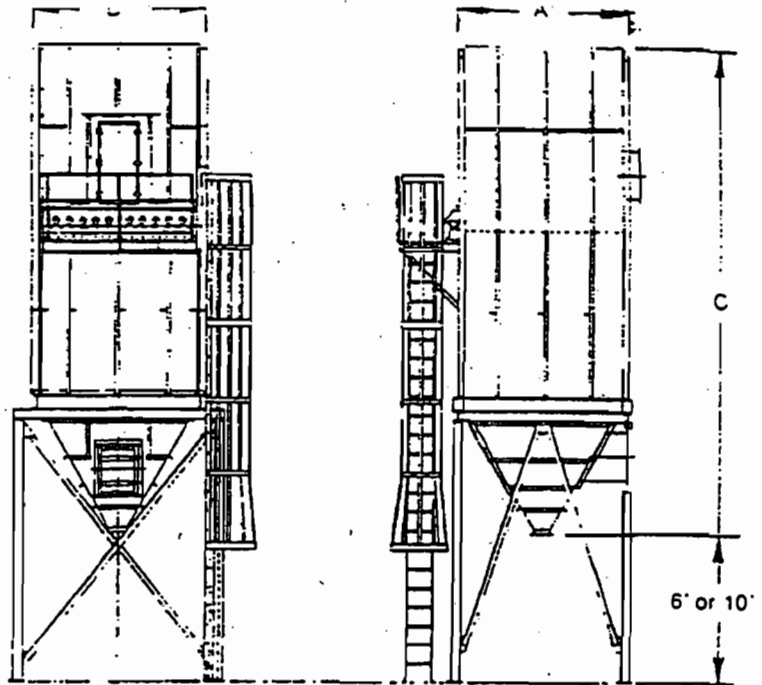
JET III

cloth areas ranging
from 1,140 to
5610 square feet.

Available with full height walk-in
plenums (illustrated) type 'TA' or
with multiple hinged roof doors.
Type 'RA'.

NOTE:

'C' dimensions for all units with
bag lengths up to and including
144" include walk-in plenums. 'C'
dimensions for units with bag
lengths of 156" or 168" include
roof doors. Dimensions subject to
change without notice.



Square Modules (TA & RA) Filter Areas Sq. Ft.

Model	No. of Bags	Filter Area/Module Bag Length In Inches					
		108"	120"	132"	144"	156"	168"
99	81	1140	1270	1390	1520	—	—
1111	121	1700	1900	2080	2270	—	—
1313	169	2380	2650	2910	3170	3450	3720
1515	225	3170	3530	3880	4230	4590	4950
1715	255	3590	4000	4380	4790	5200	5610

Square Modules 'TA' Overall Dimensions

Model	'A'	'B'	'C' — Dimension Based on Bag Length In Inches					
			108	120	132	144	156	168
99	6'-5"	6'-5"	24'-0"	26'-0"	28'-0"	30'-0"	—	—
1111	7'-9"	7'-9"	25'-2"	27'-2"	29'-2"	31'-2"	—	—
1313	9'-1"	9'-1"	26'-4"	28'-4"	30'-4"	32'-4"	27'-6"	28'-6"
1515	10'-5"	10'-5"	27'-5"	29'-5"	31'-5"	33'-5"	28'-7"	29'-9"
1715	11'-8"	10'-5"	28'-6"	30'-6"	32'-6"	34'-6"	29'-8"	30'-8"

Square Modules 'RA' Overall Dimensions

Model	'A'	'B'	'C' — Dimension Based on Bag Length In Inches					
			108	120	132	144	156	168
99	6'-5"	6'-5"	21'-2"	22'-2"	23'-2"	24'-2"	—	—
1111	7'-9"	7'-9"	22'-4"	23'-4"	24'-4"	25'-4"	—	—
1313	9'-1"	9'-1"	23'-6"	24'-6"	25'-6"	26'-6"	27'-6"	28'-6"
1515	10'-5"	10'-5"	24'-7"	25'-7"	26'-7"	27'-7"	28'-7"	29'-7"
1715	11'-8"	10'-5"	25'-8"	26'-8"	27'-8"	28'-8"	29'-8"	30'-8"

NOTE! Dimensions not to be used for construction purposes.

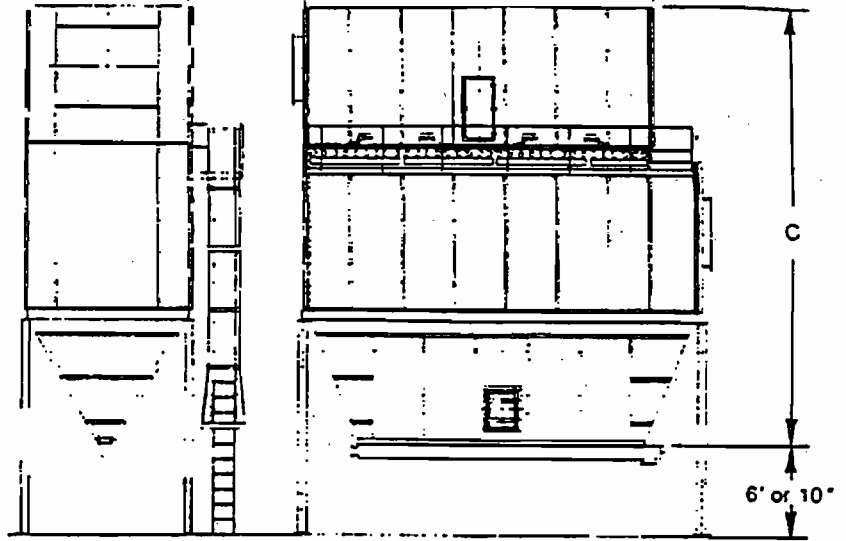
Large Volume JET III

cloth areas ranging
from 4940 to
12870 square feet.

Available with full height walk-in
Plenums (illustrated Type "TA" or
with multiple hinged roof doors
type "RA")

Note:

"C" dimensions for all units with
bag lengths up to and including
144" include walk-in plenums
"C" dimensions for units with bag
lengths of 156" or 168" include
roof doors. Dimensions subject to
change without notice.



Rectangular Modules — 'TA & RA' — Filter Areas in Sq. Ft.

Model	No. of Bags	Filter Area/Module Bag Lengths In Inches		
		120	144	168
2115	315	4940	5920	6930
2415	360	5650	6770	7920
2715	405	6360	7610	8910
3015	450	7060	8460	9900
3315	495	7770	9320	10890
3615	540	847	10150	11880
3915	585	9180	11000	12870

Rectangular Modules 'TA' Overall Dimensions

Module	'A'	'B'	'C' Dimension Based on Bag Length In Inches		
			120	144	168
2115	17'-4"	10'-5"	29'-1"	33'-1"	37'-1"
2415	19'-4"	10'-5"	29'-1"	33'-1"	37'-1"
2715	22'-4"	10'-5"	29'-1"	33'-1"	37'-1"
3015	24'-4"	10'-5"	29'-1"	33'-1"	37'-1"
3315	27'-4"	10'-5"	29'-1"	33'-1"	37'-1"
3615	29'-4"	10'-5"	29'-1"	33'-1"	37'-1"
3915	32'-4"	10'-5"	29'-1"	33'-1"	37'-1"

Rectangular Modules 'RA' Overall Dimensions

Model	A	B	'C' Dimension Based on Bag Length In Inches		
			120	144	168
2115	17'-4"	10'-5"	25'-5"	27'-5"	29'-5"
2415	19'-4"	10'-5"	25'-5"	27'-5"	29'-5"
2715	22'-4"	10'-5"	25'-5"	27'-5"	29'-5"
3015	24'-4"	10'-5"	25'-5"	27'-5"	29'-5"
3315	27'-4"	10'-5"	25'-5"	27'-5"	29'-5"
3615	29'-4"	10'-5"	25'-5"	27'-5"	29'-5"
3915	32'-4"	10'-5"	25'-5"	27'-5"	29'-5"

NOTE! Dimensions not to be used for construction purposes.

TYPE 1000A (ROOF ACCESS)

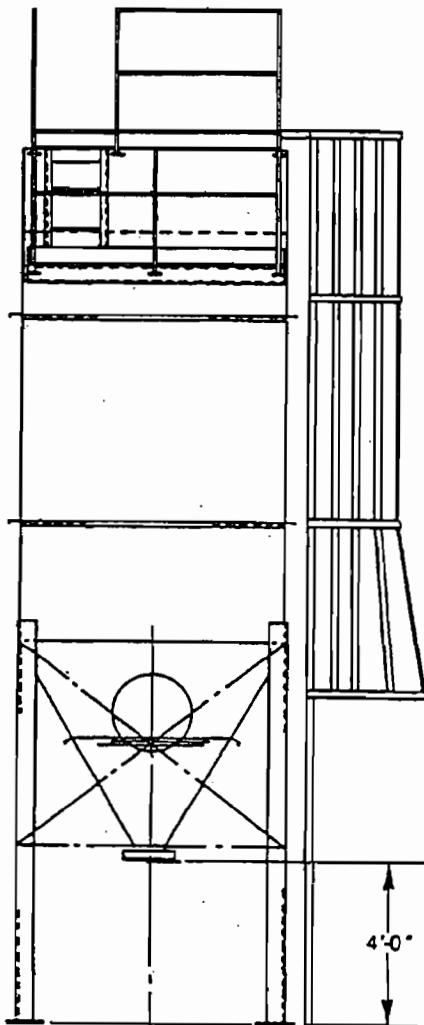
The Type 1000 JET III Pulse-Jet Fabric Filter by Wheelabrator-Frye is available in six different sizes with filter areas between 226 and 1142 square feet. Type 1000 modules are sized for the smaller system volumes.

JET III is a wholly new design in fabric filters, offering high collection efficiency with true economy in terms of initial cost, operation, and maintenance.

Type 1000 collectors are square for convenience in connecting to the

system ductwork. All JET III Pulse-Jet Fabric Filters provide clean side access to the filter section via hinged roof doors.

The JET III design employs a unique tubesheet, filter bag, and support cage assembly which combine to save time when servicing the filter section and to ensure a positive seal against dust penetration in operation. Rebagging is simple, one-man operation performed outside the dust environment and without the use of special tools.



Front elevation.

Equipment Sizes

Model	No. Bags	Filter Area (sq. ft.)	Sq. Housing Size	Hopper Clearance	Overall Height* Incl. Handrailing
1016/108	16	226	36"	4'-0"	21'-0"
1025/108	25	353	44"	4'-0"	21'-6"
1036/108	36	507	52"	4'-0"	22'-2"
1049/108	49	691	60"	4'-0"	22'-10"
1064/108	64	902	68"	4'-0"	23'-5"
1081/108	81	1142	76"	4'-0"	24'-2"

*Includes support legs.

Features

Tubesheet—Wheelabrator-Frye's own integrally drawn bag colors for positive bag sealing.

Snap Ring Bag—With tubesheet, provides simple, one-step bagging operation. No additional sealing required. No tools necessary.

Venturi and Bag Support Cage—High gain throat design venturi improves cleaning efficiency and saves energy. Venturi and cage interlock for single piece assembly into the filter bag, no prior assembly of these components outside the filter housing is necessary. Venturi and cage are self-aligning within the tubesheet and bag. No clamps or hold-down devices are required.

JET III Pulse Cleaning System—The square, space-saving compressed air header employs Wheelabrator-Frye's special bolt on air valves for leakproof

alignment with the air distribution manifolds. JET III utilizes remote pilot valve for low-cost field wiring.

JET III Timer—The Type 1000 employ a solid state electronic timer in Nema 1 enclosure with 110 volt AC solenoids.

Auxiliaries—All modules are supplied with standard access ladders, walkways, and handrail to meet OSHA requirements. A complete range of hopper valves and material handling systems are available.

Standard Construction—JET III Type 1000 modules are all welded and fabricated of 12 gauge carbon steel stiffened for 15" w.g.

Shipment—JET III Type 1000 modules are shipped as one-piece units, including support legs, for simple, low-cost installation.

 Air Pollution Control Division
Wheelabrator-Frye Inc.

600 Grant Street
Pittsburgh, PA 15219
(412) 288-7300

MEMBER


EMISSIONS UNIT INFORMATION

Section [3]
Ash Handling System

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application – For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application – For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

**Section [3]
Ash Handling System**

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Ash Handling System

3. Emissions Unit Identification Number: **005**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: 4/5/1991	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	---	--	--

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:
Wet scrubber was never constructed for this emission unit. Emissions controlled by dust suppression water sprays.

EMISSIONS UNIT INFORMATION

Section [3]

Ash Handling System

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Process Enclosed - Enclosed building

Dust suppression by water - Sprays

2. Control Device or Method Code(s): **153**

EMISSIONS UNIT INFORMATION

**Section [3]
Ash Handling System**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	million Btu/hr
4. Maximum Incineration Rate:	pounds/hr tons/day
5. Requested Maximum Operating Schedule:	24 hours/day 52 weeks/year
	7 days/week 8,760 hours/year
6. Operating Capacity/Schedule Comment:	

EMISSIONS UNIT INFORMATION

**Section [3]
Ash Handling System**

**C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)**

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: TV 005		2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: F	6. Stack Height: feet	7. Exit Diameter: feet	
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Ash conditioning system			

EMISSIONS UNIT INFORMATION

Section [3]
Ash Handling System

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Industrial Processes; Mineral Products; Fugitive Emissions		
2. Source Classification Code (SCC): 30588802		3. SCC Units: Tons Product Produced
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

Segment Description and Rate: Segment ____ of ____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted:		2. Total Percent Efficiency of Control:	
3. Potential Emissions: lb/hour tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code:	
8. Calculation of Emissions:			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

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G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

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H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

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I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: WSB-FI-C1 <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input checked="" type="checkbox"/> Attached, Document ID: WSB-EU1-16 Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

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Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input checked="" type="checkbox"/> Attached, Document ID: WSB-EU1-IV1 <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

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Additional Requirements Comment

[Empty rectangular box for additional requirements comment]