

Memorandum

Florida Department of Environmental Protection

To: Joseph Kahn, Division of Air Resource Management
Through: Trina Vielhauer, Bureau of Air Regulation
Jeffery Koerner, New Source Review Section
From: Bruce Mitchell, New Source Review Section
Date: September 18, 2009
Subject: Project No. 0990234-015-AC (PSD-FL-108H)
Minor Air Construction Permitting Action
Solid Waste Authority of Palm Beach County, North County Resource Recovery Facility
Refurbishment of Municipal Solid Waste Combustor Units 1 and 2

The final permit for this project is attached for your approval and signature. The project requires a minor air construction permit to allow: authorization to refurbish municipal solid waste combustor Units 1 and 2 at the existing North County Resource Recovery Facility: replacing the existing electrostatic precipitators with fabric filters to control particulate matter; installing selective non-catalytic reduction systems to reduce nitrogen oxide emissions; installing new activated carbon injection systems to enhance the removal of metal emissions; improving the over-fire air system to optimize combustion; installing new automated combustion control systems; replacing the existing Spray Dryer Absorber (SDA) systems with new SDA systems for controlling acid gas emissions; and constructing other related maintenance, replacement and repairs. In addition, the applicant requested the following revisions to the original air construction permit: clarification of the permitted unit capacity; replacement of the maximum operating temperature at the dry scrubber outlet with the federal requirements for monitoring the temperature of the particulate matter control device; and removal of the 1-hour emissions standard for carbon monoxide. The Department approved the first two requests, but did not remove the 1-hour emissions standard for carbon monoxide. Instead, the Department increased the averaging period for the carbon monoxide standard from 1-hour to 4-hours to be consistent with other similar municipal waste combustor units. The project will not cause the original project to trigger PSD preconstruction review. The proposed work will be performed at the existing North County Resource Recovery Facility, which is located in Palm Beach County at 6501 North Jog Road in West Palm Beach, Florida. The project is not considered a new source review reform project.

The attached Final Determination summarizes the publication and comment process. There are no pending petitions for administrative hearings or extensions of time in which to file a petition for an administrative hearing. I recommend your approval of the attached final permit for this project.

Attachments

JK/tlv/jfk/rbm

FINAL DETERMINATION

PERMITTEE

Solid Waste Authority of Palm Beach County
7501 North Jog Road
West Palm Beach, Florida 33412

PERMITTING AUTHORITY

Florida Department of Environmental Protection (Department)
Division of Air Resource Management
Bureau of Air Regulation, New Source Review Section
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

PROJECT

Air Permit No. 0990234-015-AC/PSD-FL-108H
Minor Air Construction Permit
North County Resource Recovery Facility

The proposed project is to refurbish Municipal Solid Waste Combustors (MSWC) Nos. 1 and 2 by: replacing the existing electrostatic precipitators with fabric filters to control particulate matter; installing selective non-catalytic reduction systems to reduce nitrogen oxide emissions; installing new activated carbon injection systems to enhance the removal of metal emissions; improving the over-fire air system to optimize combustion; installing new automated combustion control systems; replacing the existing spray dryer absorbers and lime injectors to control sulfur dioxide; and other related maintenance, replacement and repairs.

NOTICE AND PUBLICATION

The Department distributed a draft minor air construction permit package on July 31, 2009. The applicant published the Public Notice in The Palm Beach Post on August 5, 2009. The Department received the proof of publication on August 10, 2009. The Department granted an extension of time to file a petition for an administrative hearing on August 17, 2009. The extension of time expired on September 15, 2009.

COMMENTS

No comments were received from the public, the Air pollution Control Section of the Palm Beach County Health Department or the Department's Southeast District Office. On September 3, 2009, the Department received comments from the applicant. The following summarizes the comments and the Department's response.

Permit

Note that the permit condition numbers refer to the "draft permit" and that the "final permit" was renumbered to add a condition.

1. *Section 3. Subsection A. Description.* Continuous Monitoring Systems. The permittee requests that the reference to a continuous monitoring system (CMS) for "stack gas flow rate" be removed. A reference to the CMS for "steam production rate" should be added.

Response: The permittee uses the F-factor methodology to determine flue gas flow rate in accordance with Rule 62-210.370(2)(b), Florida Administrative Code (F.A.C.), does not operate a CMS for the stack gas flow rate and does operate a CMS to monitor the steam production rate. The Department revised the text as requested.

2. *Section 3. Subsection A. Specific Condition 7. Combustion Control and OFA Air System.* In the first sentence, the permittee requests that the word "unwanted" be inserted before the term "products of combustion".

FINAL DETERMINATION

Response: The Department revised the text to read, "... minimizing the products of incomplete combustion."

3. *Section 3. Subsection A. Specific Condition 8. Activate Carbon Silo Baghouse.* The permittee requests that "Activate" be changed to "Activated".

Response: The Department agrees and revised as requested.

4. *Section 3. Subsection A. Condition 16.d.* The permittee requests that the requirements for performance testing to demonstrate compliance with the nitrogen oxides (NO_x), carbon monoxide (CO) and sulfur dioxide (SO₂) permit limits be the same as those specified in Condition 4 of Permit No. PSD-FL-108A.

Response: Condition 4 in Permit No. PSD-FL-108A specifies the following methods for demonstrating compliance with the emissions standards for these pollutants: EPA Method 10 for CO; EPA Method 7, 7A, 7B, 7C, 7D or 7E for NO_x; and EPA Method 6, 6C or 8 for SO₂. Condition 3 in Permit No. PSD-FL-108A specifies the following averaging periods for these pollutants: 24-hour average for NO_x, 1-hour and 24-hour for CO and 24-hour for SO₂. Therefore, to demonstrate compliance with the emissions standards, data must be collected for at least the required averaging period. Condition 14 in Permit No. PSD-FL-108A also requires installation of continuous emissions monitoring systems (CEMS) to report emissions in excess of the standards for CO, NO_x and SO₂ emissions. The EPA tests methods mentioned above are used during the relative accuracy test assessments to properly maintain the required CEMS. Condition A.4.5 in Title V Permit No. 0990234-010-AV requires the installation, operation and maintenance of CEMS to, "... ensure and verify continuous compliance with the emissions limitations in this permit." Condition 16.d of the draft permit for this project requires, "Compliance with the emissions standards for CO, NO_x and SO₂ shall be demonstrated by data collected from the required CEMS." Since the plant must continuously demonstrate compliance for these pollutants by CEMS, the Department maintains that the draft permit is consistent with all current valid permit requirements and no changes were made.

5. *Section 3. Subsection A. Specific Condition 18. Revised Permit Conditions.* Placard Page for PSD-FL-108. 2nd Paragraph. The permittee requests that additional language be added to this paragraph to reflect that the refuse derived fuel (RDF) has a range of heating values between 4,500 to 6,200 British thermal units (Btu) per pound, which corresponds to heat input rates of 337.5 to 465.0 million Btu/hr, respectively, and that compliance is to be based on steam production rather than heat input.

Response: The revised permit condition now reads, "The North County Regional Resource Recovery Facility is authorized to operate the two existing RDF boilers to the maximum steam production rating of 324,000 lb per hour per unit based on a 4-hour block average, subject to the General and Specific Conditions stated herein. At the municipal waste combustor unit capacity of 900 tons per day and a reference heating value of 5,700 Btu/lb of RDF, the maximum heat input rate is 427.5 MMBtu/hour (24-hour average)." The Department believes that the permitted capacity of each unit is clearly stated in the draft permit as: a maximum steam production rating of 324,000 lb per hour (4-hour block average) and 900 tons per day. As stated earlier, a CMS will be used to determine compliance with the maximum steam production rate. The Department acknowledges the variability of the heating value of RDF, which could even be outside of the suggested range (4,500 to 6,200 Btu/lb) for a given sample. The maximum heat input rate (daily average) depends on the municipal waste combustor unit capacity (900 tons per day) and the actual heating value of the RDF as fired. No changes were made.

6. *Appendix C. Condition 3. Excess Emissions Allowed.* The permittee requests that the generic rule language be clarified to acknowledge the language in Condition E.3.a of current Title V air operation Permit No. 0990234-010-AV.

Response: It is not the Department's intent to add new requirements regarding excess emissions for emissions units 001 and 002. Appendix C (Common Conditions) is a set of common requirements that are generally applicable to all emissions units. To clarify, the Department added the following text to Condition 3 in Appendix C, "Condition E.3.a in Permit No. 0990234-010-AV specifies the allowable excess emissions for emissions units 001 and 002."

FINAL DETERMINATION

7. *Appendix C. Condition 11. Annual Operating Report.* The permittee requests that the due date for the Annual Operating Report (AOR) reflect the new rule language, which is April 1st.

Response: The Department agrees and changed the deadline from March 1st to April 1st.

Technical Evaluation and Preliminary Determination (TEPD)

8. *Page 6 of 13. Selective Non-Catalytic Reduction (SNCR) System.* The permittee requests a change in the ammonia slip value from 10 to 15 ppmvd @ 15% oxygen.

Response: Condition 4 in the draft permit identifies the design target ammonia slip value as 15 ppmvd @ 15% oxygen. The TEPD also identifies 15 ppmvd @ 15% oxygen in the first paragraph describing the SNCR system. The second reference to the design target ammonia slip value being 10 ppmvd @ 15% oxygen is a typographical error. The Department acknowledges the error in this Final Determination and will post a revised TEPD on its web site at: <http://www.dep.state.fl.us/air/emission/apds/default.asp>.

9. *Page 8 of 13. Placard Page for PSD-FL-108. 2nd Paragraph.* The permittee requests that additional language be added to this paragraph to reflect that the RDF has a range of heating values between 4,500 to 6,200 British thermal units (Btu) per pound, which corresponds to heat input rates of 337.5 to 465.0 million Btu/hr, respectively, and that compliance is to be based on steam production rather than heat input.

Response: As discussed above in Response No. 5, the Department acknowledges the comment, but no changes were made.

10. *Page 11 of 13. Attachment A. Air Pollution Control System Upgrade.* The permittee requests a revision to the text describing the proposed work to be done to the Spray Dryer Absorber (SDA). The original scope included two refurbishments of the upper and lower SDA internals, including upper cones, turning vanes, diffusers, internal stiffeners for the supports and 3-foot (conical and cylindrical) bands at the hopper to cylinder weld. The revised scope includes two new SDA with five lime injection nozzles to increase contact efficiency and a live bin activator to enhance fly ash removal. The original lime slaking, tanks and feed equipment will remain.

Response: The Department acknowledges the request and added the changes to Attachment A in Appendix D of the permit. Also, the following text was added as Condition 9 to the final permit and the subsequent conditions were renumbered.

“Spray Dryer Absorber (SDA): The permittee shall construct, operate and maintain a new SDA system on each unit to control acid gases from the process. A live bin activator will be installed to enhance fly ash control. The existing lime slaking, tanks and feed equipment will be utilized. The following is based on the preliminary design information and is subject to change.

Each SDA system will be designed to treat 100% of the flue gas leaving the RDF MSWC. To improve the control efficiency, the new SDA will be equipped with multiple lime injection nozzles and be slightly larger with baffles to provide an increased residence time.

The permittee shall update the Permitting and Compliance Authorities with revised information as necessary during final design and installation. [Application, Design and Rule 62-4.070(3), F.A.C.]”

11. *Page 12 of 13. Attachment A. Balance of Plant/Facility Materials or Equipment.* The permittee requests a minor correction to the listed voltages for the transformer and switch gear.

Response: The Department acknowledges the request and made the changes to Attachment A in Appendix D of the permit.

CONCLUSION

The final action of the Department is to issue the permit with the minor changes, corrections and clarifications as described above.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Solid Waste Authority of Palm Beach County
7501 North Jog Road
West Palm Beach, Florida 33412

Air Permit No. 0990234-015-AC/PSD-FL-108H
North County Resource Recovery Facility
Refurbishment of Municipal Solid Waste
Combustor Units 1 and 2

Authorized Representative:

Mr. Mark Hammond, Executive Director

Enclosed is Final Air Permit No. 0990234-015-AC/PSD-FL-108H, which authorizes the refurbishment of municipal solid waste combustor Units 1 and 2. The new equipment will be installed at 6501 North Jog Road in West Palm Beach, Palm Beach County, Florida. This permit is issued pursuant to Chapter 403, Florida Statutes (F.S.).

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

Executed in Tallahassee, Florida.



Trina Vielhauer, Chief
Bureau of Air Regulation



Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

PERMITTEE

Solid Waste Authority of Palm Beach County
7501 North Jog Road
West Palm Beach, FL 33412

Authorized Representative:

Mark Hammond, Executive Director

North County Resource Recovery Facility
Units 1 and 2 Refurbishment Project

Facility ID No. 0990234

SIC No. 4953

Air Permit No. 0990234-015-AC/PSD-FL-108H

Permit Expires: December 31, 2011

PROJECT AND LOCATION

This permit authorizes the following for existing municipal solid waste combustors Units 1 and 2 at the existing North County Resource Recovery Facility: installation of new selective non-catalytic reduction (SNCR) systems; installation of new activated carbon injection (ACI) systems; replacement of the existing electrostatic precipitator systems with new fabric filter systems; installation of new combustion control systems; installation of improved over-fire air (OFA) systems; replacement of the existing Spray Dryer Absorber (SDA) systems with new SDA systems; and maintenance, replacement and repair of other components. The permit also makes the following revisions to original Permit No. PSD-FL-108 (as modified): clarifies the permitted capacity as the maximum steam production rate; revises the short-term averaging period for the carbon monoxide standard from a 1-hour to a 4-hour average; and replaces the maximum temperature at the dry scrubber outlet with the federal temperature monitoring requirements in Subpart Eb of Part 60, Title 40, Code of Federal Regulations. The existing facility is located at 6501 North Jog Road in West Palm Beach, Palm Beach County, Florida. The map coordinates are: Zone 17; 585.82 km East; and 2960.474 km North.

STATEMENT OF BASIS

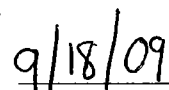
This air pollution construction permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, Florida Administrative Code (F.A.C.). The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department. This air construction permit supplements all other valid air construction and operation permits.

CONTENTS

- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Units Specific Conditions
- Section 4. Appendices



Joseph Kahn, Director
Division of Air Resource Management



(Date)

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the "Final Permit") was sent by electronic mail (with received receipt requested) before the close of business on 9/21/09 to the person(s) listed:

- Mr. Mark Hammond, Solid Waste Authority of Palm Beach County: (mhammond@swa.org)
- Mr. Christopher Tilman, P.E., Malcolm Pirnie, Inc.: (ctilman@pirnie.com)
- Mr. Don Elias, RTP Environmental: (elias@rtpenv.com)
- Mr. Michael Halpin, DEP Siting Coordination Office: (mike.halpin@dep.state.fl.us)
- Mr. James Stormer, Palm Beach County Health Department: (james_stormer@doh.state.fl.us)
- Mr. Lennon Anderson, DEP Southeast District Office: (lennon.anderson@dep.state.fl.us)
- Ms. Heather Abrams, EPA Region 4: (abrams.heather@epamail.epa.gov)
- Ms. Kathleen Forney, EPA Region 4: (forney.kathleen@epamail.epa.gov)
- Ms. Catherine Collins, Fish and Wildlife Service: (catherine_collins@fws.gov)
- Ms. Vickie Gibson, DEP BAR Reading File: (victoria.gibson@dep.state.fl.us)

Clerk Stamp

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



(Clerk)

9/21/09

(Date)

SECTION 2. ADMINISTRATIVE REQUIREMENTS

FACILITY AND PROJECT DESCRIPTION

The existing facility is a municipal solid waste combustor (MSWC) plant designed to process 2,000 tons per day of municipal solid waste. The facility burns processed MSW that is called "refuse derived fuel" (RDF). The RDF plant is equipped with three MSW processing lines, any two of which can handle the 2,000 tons per day of incoming MSW. The boiler plant includes two Babcock & Wilcox boilers (Units 1 and 2), each designed with a steam flow rating of 324,000 lb/hour based on a unit design rate of 900 tons/day of RDF. Currently, emissions from each boiler are controlled by a Babcock & Wilcox spray dryer absorber followed by a Babcock & Wilcox 4-field electrostatic precipitator (ESP). Each ESP has a gas flow rating of 198,000 acfm and is designed to operate in compliance with three of the four fields in service. The turbine-generator rating of 62 MW matches the full output of the boilers.

A Class I Landfill and a Class III Landfill are also located on this property: Each landfill operates its own landfill gas collection system with associated flares. Additional facilities include storage and handling facilities for RDF waste as well as storage and handling facilities for ash and ash treatment. The following units are affected by this air construction permit.

ARMS ID	Emission Unit Description
001	Municipal Solid Waste Boiler Unit 1
002	Municipal Solid Waste Boiler Unit 2

REGULATORY CLASSIFICATIONS

- The facility is a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C., for the Prevention of Significant Deterioration (PSD) of Air Quality.
- The facility is subject to power plant siting certification PA84-20.
- The facility operates one or more units subject to applicable subparts of the New Source Performance Standards (NSPS) in Part 60, Title 40 of the Code of Federal Regulations. (40 CFR 60).
- The facility operates one or more units subject to applicable subpart of the National Emission Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct, modify, or operate emissions units at this facility shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP) at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Copies of all permit applications shall also be sent to the Compliance Authority.
2. Compliance Authority: All documents related to compliance activities such as reports, tests and notifications shall be submitted to the Department's Southeast District Office at 400 North Congress Avenue, West Palm Beach, Florida 33401.
3. Appendices: The following Appendices are attached as part of this permit:
 - a. Appendix A. Citation Formats and Glossary of Common Terms;
 - b. Appendix B. General Conditions;
 - c. Appendix C. Common Conditions; and
 - d. Appendix D: Attachment A.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state or local permitting regulations. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C., and follow the application procedures in Chapter 62-4, F.A.C. [Chapter 62-4 and Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Construction and Expiration: The permit expiration date includes sufficient time to complete construction, perform required testing, submit test reports and submit an application for a Title V air operation permit revision to the Department. Approval to construct shall become invalid if construction is not completed within a reasonable time. The Department may extend the expiration date upon a satisfactory showing that an extension is justified. Such a request shall be submitted to the Department's Bureau of Air Regulation at least 60 days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080 and 62-210.300(1), F.A.C.]
8. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit revision is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit revision at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit revision, the applicant shall submit the appropriate application form, compliance test results and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. MSWC Unit 1 (EU-001) and MSWC Unit 2 (EU-002)

This section of the permit addresses the following emissions units.

MSWC Unit 1 (EU-001) and MSWC Unit 2 (EU-002)

Description: Units 1 and 2 are identical Babcock & Wilcox MSWC units that began commercial operation on November 15, 1989. The following descriptions include the changes being made in this permit.

Boiler Type: The boiler use a moving grate to burn the RDF fuel.

Fuel: RDF

Supplementary Fuel: Natural gas is used for startup, shutdown and during combustion of low Btu waste to maintain combustor temperature.

Capacity: The permitted capacity is 324,000 pounds per hour of steam (4-hour block average) based on a unit design capacity of 900 tons per day of RDF.

Generator Nameplate Rating: 62 Megawatts (MW).

Spray Dryer Absorber (SDA): Each unit uses lime injection to control acid gas emissions.

Fabric Filter System: Each unit uses a fabric filter system to control particulate matter (PM) emissions.

Combustion Control System and OFA System: Each unit optimizes furnace conditions with an automated control system and OFA system for proper combustion while minimizing carbon monoxide (CO), nitrogen oxides (NOx) and volatile organic compounds (VOC).

SNCR System: Each unit injects urea with an SNCR system to control NOx emissions.

ACI System: Each unit injects activated carbon to adsorb metal and dioxin/furan emissions, which are then collected by the fabric filter system.

Continuous Monitors: Each unit uses the following equipment to continuously monitor the following pollutants and parameters: continuous emissions monitoring systems (CEMS) for CO, carbon dioxide (CO₂), NOx and sulfur dioxide (SO₂); continuous opacity monitoring system (COMS) for opacity; and continuous monitoring systems (CMS) for the temperature of the flue gas stream at the fabric filter inlet, the steam production rate and urea injection rate.

Stack Parameters: Units 1 and 2 each have a stack that is 250 feet tall with a diameter of 8 feet and are both surrounded by a single stack shell. The volumetric flow rates of each MSWC at permitted capacity are approximately 191,494 actual cubic feet per minute (acfm) and 116,274 dry standard cubic feet per minute (dscfm) @ 7% oxygen (O₂).

Exit Temperature: Approximately 310 °F, as measured downstream of the SDA.

Primary Regulatory Requirements: Based on the current Title V air operation permit, Units 1 and 2 are regulated under: NSPS 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.; Rule 62-212.400(5), F.A.C., Prevention of Significant Deterioration (PSD) of Air Quality and Permit No. PSD-FL-108 (as modified); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT). Also, note that conditions in NSPS Subpart Cb refer to provisions NSPS Subpart Eb. These emissions units are also subject to Compliance Assurance Monitoring (CAM), adopted and incorporated by reference in Rule 62-204.800, F.A.C.

PREVIOUS APPLICABLE REQUIREMENTS

1. Other Permits: The conditions of this permit supplement all previously issued air construction and operation permits for these emissions units. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulations. [Rule 62-4.070, F.A.C.]

EQUIPMENT AND CONSTRUCTION

2. Final Design Specifications: Upon entering into a contractual commitment with a control equipment vendor, the permittee shall submit the final design specifications for each control equipment system to the Permitting Authority and the Compliance Authority. [Rule 62-4.070(3), F.A.C.]
3. Updated Control Equipment Designs: As necessary, the permittee shall update the Permitting Authority

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. MSWC Unit 1 (EU-001) and MSWC Unit 2 (EU-002)

and the Compliance Authority with final design specifications and any substantial changes made to the final design specifications during the actual construction phase. [Rule 62-4.070(3), F.A.C.]

4. **SNCR System:** The permittee shall construct, tune, operate and maintain a new SNCR system for each MSWC to reduce NO_x emissions. The new SNCR system will inject urea directly into each unit at a location with an optimum temperature range for a urea-based system, typically 1650° F to 2100° F. The reaction must take place within the specified temperature range or it is possible to generate additional NO_x emissions or excess ammonia slip. Increasing the residence time available for mass transfer and chemical reactions generally improves NO_x reduction. The following is based on the preliminary design information and is subject to change.

SNCR systems can achieve NO_x reductions of 50% on some applications. The number of injection ports, locations and the overall piping layout within each MSWC will be designed by the contractor. The SNCR injection system will consist of up to three levels of injectors and up to ten injection nozzles per level. The final location, quantity and elevation of injection points will be determined by the SNCR equipment supplier by performing a computational fluid dynamic (CFD) model of the combustion and temperature profiling within each MSWC. The CFD modeling will be used to determine the temperature zone for ideal introduction of the urea mixture for varying fuel conditions. The SNCR system will be designed for startup, shutdown and monitoring via the MSWC control system. The urea storage system will be designed with 14-day supply and a 150% capacity containment dike. To provide system robustness, there will be a 100% redundancy in all pumping systems. The preliminary design target for ammonia slip is 15 parts per million by volume dry (ppmvd) corrected to 15% oxygen.

The permittee shall update the Permitting and Compliance Authorities with revised information as necessary during final design and installation. [Application, Design and Rule 62-4.070(3), F.A.C.]

5. **ACI System:** The permittee shall construct, tune, operate and maintain a new ACI system for each MSWC to reduce emissions of heavy metals with mercury as the primary target. The ACI system will be designed to inject powdered activated carbon (PAC) into the flue gas ductwork just upstream of the dry scrubber, which is also known as a spray dryer absorber. The PAC acts as a sorbent for heavy metals, specifically mercury, present in the exhaust gas stream. The carbon particulates and the attached heavy metals will be removed from the exhaust gas stream by the fabric filter system downstream of the dry scrubber. The following is based on the preliminary design information and is subject to change.

Each injection system will consist of the feeding device with air lock, seals, an air supply and pneumatic pipes and/or hoses. The projected PAC injection rate is in the range of 0.3 to 1.5 lb/ton of RDF combusted. The optimum injection rate will be determined during the initial performance tests. The PAC injection will be controlled using a rotary valve feeder, which will meter a specific volume of PAC into the blower and injection piping. The controls and feedback signals from the PAC injection system will be integrated into the distributed control system (DCS) and the CEMS. Sufficient blow-out connections will be provided to allow the lines to be quickly cleared should plugging occur. A volumetric feeder with dosage counts (calibrated for weight) or gravimetric feeder will be provided for each MSWC and one spare feeder system will be installed to provide redundancy.

The PAC will be stored in a single silo and fed to the injection point via a pneumatic injection train that will be installed for each MSWC. The silo will be pneumatically loaded from a truck at approximately 20 tons/hour (design fill rate) and is considered to be a batch loading operation. The silo will be equipped with a fabric filter to remove entrained carbon from the air vented during loading operations.

The permittee shall update the Permitting and Compliance Authorities with revised information as necessary during final design and installation. [Application, Design and Rule 62-4.070(3), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. MSWC Unit 1 (EU-001) and MSWC Unit 2 (EU-002)

6. Fabric Filter System: The permittee shall construct, operate and maintain a new fabric filter system for each MSWC to reduce PM. The existing electrostatic precipitators will be removed and replaced with new fabric filter systems, which will improve the ability to collect and remove PM as well as any heavy metals, dioxins, furans and mercury that are attached to the PM. Each MSWC will be outfitted with a new fabric filter system that will be located downstream of the dry scrubber as the final treatment stage before the gases are exhausted to the atmosphere. The following is based on the preliminary design information and is subject to change.

Each fabric filter system will be designed to treat 100% of the flue gas leaving the dry scrubber. Each fabric filter system is designed for a maximum flow rate of 115,000 dry standard cubic feet per minute (dscfm) and an outlet particulate loading of 16 milligrams per dry standard cubic meter (mg/dscm), which is equivalent to an outlet grain (gr) loading of 0.0070 gr/dscf.

The new systems will be pulse-jet fabric filters with six compartments and be designed to operate with one compartment off-line for cleaning and one compartment off-line for maintenance. The pulse-jet cleaning system will be independent from the exhaust gas flow and will have pneumatically actuated isolation valves to permit off-line cleaning and maintenance on any isolated compartment during full load operation of the plant.

Each compartment will be furnished with one pyramid-shaped hopper to promote collection of the captured particulate. The fabric filter systems shall be designed for non-combustibility, abrasion and corrosion resistance and overall durability.

The permittee shall update the Permitting and Compliance Authorities with revised information as necessary during final design and installation. [Application, Design and Rule 62-4.070(3), F.A.C.]

7. Combustion Control and OFA Air System: The permittee shall install new combustion control systems and improved OFA systems on each unit to optimize combustion performance while minimizing the products of incomplete combustion. Staged OFA combustion will be added to enhance complete combustion of the RDF while maintaining relatively low temperatures to prevent excessive thermal NO_x formation. An additional RDF transport fan will be added to convey the RDF into the MSWC providing a separation between the combustion air system and the transport air system to minimize related emissions. The following is based on the preliminary design information and is subject to change.

Each new combustion control system will be designed with 14 OFA air ports located on two injection levels. A combination of proprietary adjustable and fixed nozzles with independent control of air mixing volumes will optimize the combustion process and lower CO and NO_x emissions.

The permittee shall update the Permitting and Compliance Authorities with revised information as necessary during final design and installation. [Application, Design and Rule 62-4.070(3), F.A.C.]

8. Activated Carbon Silo Baghouse: The permittee shall construct, operate, and maintain a new baghouse system to control PM emissions from the activated carbon silo. The equipment shall be designed for an outlet grain loading of 0.01 gr/acf. After the final design is selected, the permittee shall submit vendor information for the baghouse demonstrating compliance with the design outlet grain loading specifications. New and replacement bags shall meet the design outlet grain loading specifications. [Application and Design; and Rule 62-4.070(3), F.A.C.]
9. SDA System: The permittee shall construct, operate and maintain a new SDA system on each unit to control acid gases from the process. A live bin activator will be installed to enhance fly ash control. The existing lime slaking, tanks and feed equipment will be utilized. The following is based on the preliminary design information and is subject to change.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. MSWC Unit 1 (EU-001) and MSWC Unit 2 (EU-002)

Each SDA system will be designed to treat 100% of the flue gas leaving the RDF MSWC. To improve the control efficiency, the new SDA will be equipped with multiple lime injection nozzles and be slightly larger with baffles to provide an increased residence time.

The permittee shall update the Permitting and Compliance Authorities with revised information as necessary during final design and installation. [Application, Design and Rule 62-4.070(3), F.A.C.]

10. CAM Plans: As part of the applications to incorporate this air construction permit into a revised Title V air operation permit, the permittee shall include a revised CAM plan as necessary to address each modified and new air pollution control system. [Rule 62-204.800, F.A.C.]

EMISSIONS STANDARDS

11. Activated Carbon Silo Baghouse: Visible emissions from the baghouse vent on the activated carbon silo shall not exceed 5% opacity as determined by EPA Method 9. [Rules 62-4.070(3) and 62-297.620(4), F.A.C.]
12. MSWC Unit 1 (EU-001) and MSWC Unit 2 (EU-002): These emissions units remain subject to all applicable requirements of valid air construction and operation permits. [Rule 62-4.070(3), F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

13. Urea Injection Rate: The permittee shall install, calibrate, operate and maintain a CMS to continuously monitor and record the urea injection rate of each SNCR system. [Rule 62-4.070(3), F.A.C.]
14. ACI Rate: The permittee shall install, calibrate, operate and maintain a CMS to continuously monitor and record the ACI injection rate of each ACI system. [Rule 62-4.070(3), F.A.C.]

EMISSIONS PERFORMANCE TESTING

15. Tests, Notifications and Reports: When conducting tests required by this permit, the permittee shall follow the test, notification, monitoring and reporting procedures specified in the current Title V air operation permit. [Permit No. 0990234-013-AV]
16. Activated Carbon Silo Baghouse: In accordance with EPA Method 9, the permittee shall conduct initial and annual compliance tests to demonstrate compliance with the visible emissions standard. Initial tests shall be conducted when the activated carbon silo is initially loaded. Annual tests shall be conducted during each fiscal year (October 1st to September 30th). Each test shall be conducted for at least 30 minutes or for the complete loading cycle if less than 30 minutes. The permittee shall notify the Compliance Authority at least 15 days prior to the schedule compliance test date. Test reports shall be submitted within 45 days of completing the test. In addition to the information required in Rule 62-297.310(8), F.A.C., each test report shall include the activated carbon loading rate, the total amount of activated loaded and the line pressure for pneumatic loading. [Rules 62-4.070(3), 62-297.310(7) and 62-297.310(8), F.A.C.]
17. MSWC Units 1 and 2: The permittee shall conduct initial compliance test on MSWC units 1 and 2 using the test methods and procedures described in the current Title V air operation permit.
 - a. Within 60 days of completing construction of each new combustion control system, OFA system, ACI system and fabric filter system for a MSWC unit, the permittee shall conduct stack tests to determine compliance with the cadmium, dioxin/furan, hydrochloric acid, lead, mercury, PM and VOC emissions standards in the current Title V air operation permit. Subsequent compliance tests shall be conducted in accordance with the frequencies specified in the current Title V air operation permit.
 - b. Within 60 days of completing construction of each new SNCR system for a MSWC unit, the permittee

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. MSWC Unit 1 (EU-001) and MSWC Unit 2 (EU-002)

shall conduct performance tests to determine the ammonia slip emissions in accordance with EPA method CTM-027 or EPA Method 320 or other Methods approved by the Department. Subsequent performance tests to determine the ammonia slip emissions shall be conducted during each federal fiscal year (October 1st to September 30th).

- c. Compliance tests for beryllium and fluorides may be conducted at the next regularly scheduled test deadline as specified in the current Title V air operation permit.
- d. Compliance with the emissions standards for CO, NO_x and SO₂ shall be demonstrated by data collected from the required CEMS.
- e. Compliance with the opacity standards shall be demonstrated by data collected from the required COMS.

[Rule 62-4.070(3), F.A.C. and Permit No. 0990234-013-AV]

18. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Rule 62-297.310(8), F.A.C. As part of the reports, the permittee shall also provide:
 - a. For each required test run, the permittee shall record and report the actual steam production rate, heat input rate, CO emissions, NO_x emissions, SO₂ emissions and opacity data.
 - b. For each required cadmium, dioxin/furan, lead, mercury and PM test run, the permittee shall also record and report the actual ACI rate, lime injection rate and temperature data for the fabric filter system.
 - c. For each required VOC and ammonia slip test run, the permittee shall also record and report the actual urea injection rate.
 - d. For each required hydrochloric acid test run, the permittee shall also record and report the actual lime injection rate. [Rule 62-297.310(8), F.A.C.]

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

REVISED CONDITIONS TO PREVIOUS PERMITS

19. Revised Permit Conditions: The following revise specific conditions in Permit No. PSD-FL-108 (as modified). All other permit conditions remain unchanged.

Placard Page, 2nd Paragraph

The North County Regional Resource Recovery Facility is authorized to operate the two (2) existing RDF boilers to their maximum design input rating of 412.5 MMBtu per hour with a maximum steam production rating of 324,000 lbs. per hour per unit based on a 4-hour block average, subject to the General and Specific Conditions stated herein. At the municipal waste combustor unit capacity of 900 tons per day and a reference heating value of 5,700 Btu/lb of RDF, the maximum heat input rate is 427.5 MMBtu/hour (24-hour average). [PSD-FL-108A; and Project No. 0990234-015-AC/PSD-FL-108H]

Specific Condition 3.c.

Carbon Monoxide: 400 ppmvd corrected to 7% O₂ (4-hour average); 200 ppmvd corrected to 7% O₂ (24-hour average). [PSD-FL-108A; and Project No. 0990234-015-AC/PSD-FL-108H]

Specific Condition 6.

~~The temperature at the exit of the dry scrubber shall not exceed 300°F (4 hour block average). Appropriate instrumentation shall be installed, if not already installed, within 180 days of issuance of this permit, at a proper location to continuously monitor and record these operating temperatures In accordance with the~~

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. MSWC Unit 1 (EU-001) and MSWC Unit 2 (EU-002)

provisions of §60.53b(c), the owner or operator shall operate each unit in compliance with the specified particulate matter control device temperatures. In accordance with the provisions of §60.58b(i)(7), the owner or operator shall install, calibrate, maintain and operate equipment to continuously monitor and record the particulate matter control device temperature of each unit. The existing monitoring equipment shall comply with these requirements or the owner or operator shall install new monitoring equipment to comply with the federal regulations. [PSD-FL-108A; Project No. 0990234-015-AC/PSD-FL-108H; and 40 CFR 60.58b(i)(7)]

SECTION 4. APPENDICES
CONTENTS

Appendix A. Citation Formats and Glossary of Common Terms

Appendix B. General Conditions

Appendix C. Common Conditions

Appendix D: Attachment A

SECTION 4. APPENDIX A
CITATION FORMATS AND GLOSSARY OF COMMON TERMS

The following examples illustrate the format used in the permit to identify applicable permitting actions and regulations.

REFERENCES TO PREVIOUS PERMITTING ACTIONS

Old Permit Numbers

Example: Permit No. AC50-123456 or Air Permit No. AO50-123456

Where: “AC” identifies the permit as an Air Construction Permit
“AO” identifies the permit as an Air Operation Permit
“123456” identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: “099” represents the specific county ID number in which the project is located
“2222” represents the specific facility ID number
“001” identifies the specific permit project
“AC” identifies the permit as an air construction permit
“AF” identifies the permit as a minor federally enforceable state operation permit
“AO” identifies the permit as a minor source air operation permit
“AV” identifies the permit as a Title V Major Source Air Operation Permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: “PSD” means issued pursuant to the Prevention of Significant Deterioration of Air Quality
“FL” means that the permit was issued by the State of Florida
“317” identifies the specific permit project

RULE CITATION FORMATS

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

GLOSSARY OF COMMON TERMS

° F: degrees Fahrenheit

acfm: actual cubic feet per minute

ARMS: Air Resource Management System
(Department’s database)

BACT: best available control technology

Be: Beryllium

Btu: British thermal units

CAM: compliance assurance monitoring

Cd: Cadmium

CEMS: continuous emissions monitoring system

SECTION 4. APPENDIX A
CITATION FORMATS AND GLOSSARY OF COMMON TERMS

cfm: cubic feet per minute	MW: megawatt
CFR: Code of Federal Regulations	NESHAP: National Emissions Standards for Hazardous Air Pollutants
CO: carbon monoxide	NO_x: nitrogen oxides
COMS: continuous opacity monitoring system	NSPS: New Source Performance Standards
DEP: Department of Environmental Protection	O&M: operation and maintenance
Department: Department of Environmental Protection	O₂: oxygen
dscfm: dry standard cubic feet per minute	Pb: lead
EPA: Environmental Protection Agency	PM: particulate matter
ESP: electrostatic precipitator (control system for reducing particulate matter)	PM₁₀: particulate matter with a mean aerodynamic diameter of 10 microns or less
EU: emissions unit	ppmvd: parts per million by volume dry
F.A.C.: Florida Administrative Code	PSD: prevention of significant deterioration
F.D.: forced draft	psi: pounds per square inch
F.S.: Florida Statutes	PTE: potential to emit
FGR: flue gas recirculation	RACT: reasonably available control technology
F: fluoride	RATA: relative accuracy test audit
ft²: square feet	SAM: sulfuric acid mist
ft³: cubic feet	scf: standard cubic feet
gpm: gallons per minute	scfm: standard cubic feet per minute
gr: grains	SIC: standard industrial classification code
HAP: hazardous air pollutant	SNCR: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)
Hg: mercury	SO₂: sulfur dioxide
I.D.: induced draft	TPH: tons per hour
ID: identification	TPY: tons per year
kPa: kilopascals	UTM: Universal Transverse Mercator coordinate system
lb: pound	VE: visible emissions
MACT: maximum achievable technology	VOC: volatile organic compounds
MMBtu: million British thermal units	
MSDS: material safety data sheets	

SECTION 4. APPENDIX B
GENERAL CONDITIONS

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

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

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

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

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

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

SECTION 4. APPENDIX B
GENERAL CONDITIONS

shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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

SECTION 4. APPENDIX C
COMMON CONDITIONS

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

EMISSIONS AND CONTROLS

1. **Plant Operation - Problems:** If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. **Circumvention:** The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. **Excess Emissions Allowed:** Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. Condition E.3.a in Permit No. 0990234-010-AV specifies the allowable excess emissions for emissions units 001 and 002. [Rule 62-210.700(1), F.A.C.]
4. **Excess Emissions Prohibited:** Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
5. **Excess Emissions - Notification:** In case of excess emissions resulting from malfunctions, the permittee shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
6. **VOC or OS Emissions:** No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
7. **Objectionable Odor Prohibited:** No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(Definitions), F.A.C.]
8. **General Visible Emissions:** No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
9. **Unconfined Particulate Emissions:** During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

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

RECORDS AND REPORTS

10. **Records Retention:** All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2, F.A.C.]
11. **Annual Operating Report:** The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by April 1st of each year. [Rule 62-210.370(3), F.A.C.]

SECTION 4. APPENDIX D
ATTACHMENT A

Air Pollution Control System Upgrade

The components, equipment and materials for the refurbishment project related to the air pollution control system (APC) upgrade consist of:

- Two fabric filter systems
- Induced draft (ID) fans
- Fabric filter and Spray Dryer Absorber ash conveying system, per line, connecting to the existing fly ash conveying system
- Double flap valves and instillation for all fabric filter hoppers
- Plumbing – roof drains and installation
- Heating, Ventilating and Air Conditioning (HVAC) – ventilation equipment and installation
- Plant air system (including air dryers, receivers, enclosure and installation)
- Fire protection system
- 4.16 kilovolt (kV) switchgear and conductors for new ID fan motors [approximately 1,000 horsepower (hp) motors]
- Two 480 volt (V) Motor Control Centers (MCC) – one for each APC train
- 480 V Electrical Distribution System (EDS) with separate feeds for each MCC
- 5 kV EDS
- Fabric filter, SNCR systems and ACI systems electrical work
- One SNCR system for each boiler, including common urea feed tank
- One ACI system for each boiler, with a redundant feeder and blower, fed from a common carbon silo
- Two Spray Dry Absorbers with multiple lime injection nozzles and baffles; a live bin activator to enhance fly ash removal; and the original slaking, tanks and feed equipment will remain.

Municipal Waste Combustor (MWC) Components

The MWC work will consist of the following activities:

- Replace 12 fuel chutes
- Replace 12 air swept spouts with air supplies
- Replace 2 ash diverters
- Replace two Inconel 625-clad furnaces (with front, rear and side walls with upper and lower headers and drains/vents, stoker seals, supply tubes, buck stays, access doors and new furnace roofs)
- Replace four auger feed conveyors
- Install two new transport air fans, supports, ducts and expansion joints
- Refurbish two of the existing forced draft fans
- Refurbish two of the existing overfire air fans
- Replace two bottom ash conveyors (horizontal portions only)
- Refurbish eight natural gas auxiliary burners with isolation dampers, hoses and igniters, and relocated valve racks
- Replace two superheaters (310HSS and SA210) with headers, hangers, cross over piping, saturated connections, rapper hammers, outlet piping and drains/vents
- Replace two attemperators

SECTION 4. APPENDIX D
ATTACHMENT A

- Replace two sets of steam drum internals, including sixteen (16) steam-water separators and related drum baffles and internals
- Replace two generating banks (loose tubes and side wall tubes)
- Replace two sets of boiler trim
- Replace two sets of feed water piping from flow control valves to steam drums
- Replace two modular economizers
- Replace two modular tubular air heaters
- Install air heater bypass ducts and dampers
- Replace two Corten flue systems including expansion joints, supports and hoppers from the boiler to stack
- Replace two sets of Corten boiler casing
- Replace two penthouse casings and install two (2) new penthouse trolley beams
- Upgrade two sets of boiler instrumentation, excluding drum instrumentation
- Replace two closed circuit televisions for furnace grates
- Install two sets of boiler platforms (interior to the building)

Balance of Plant/Facility Materials or Equipment

The components, equipment and materials for the Refurbishment Project related to the balance of the plant/facility consist of the following activities:

- Replace two 15 kV interrupter switches
- Replace two 13.8 kV/480 V transformers
- Refurbish existing ID fan 4.16 kV motor starters and provide to the Operator as spares
- Cleaning and reinsulation of non-segregated metal bus duct
- Reinsulation of 13.8 kV switchgear
- Refurbish existing precipitator MCC to be provided to the Operator as spares
- Install one uninterruptible power supply and AC instrument transformer
- Install one Distributed Control System (DCS) and associated wiring for the boiler islands, RDF buildings and water treatment plant
- Install one fire protection monitoring system
- Install one fire protection system data logger
- Install one fire protection system (FM200) for turbine generator cable room, DCS and Engineering Work Station (EWS) rooms to replace existing Halon systems
- Install one set of boiler laboratory instrumentation
- Install one Sensidyne combustion gas detection system
- Refurbish four drum magnets (overhaul only)
- Replace one bulk acid storage tank
- Replace two bucket elevators
- Install Manufacturing Building tipping floor cap, but no floor capping in the storage building
- Refurbish boiler building elevator

SECTION 4. APPENDIX D

ATTACHMENT A

- Install one air compressor system for RDF buildings, including foundation/skid, utilities, MCC, local piping, air compressors with coolers, air dryers, receivers and tie-in to existing air system

Install one emergency egress from the boiler house control room. The new egress door will be equipped with a window and exiting to a new stairway leading to ground level.

Livingston, Sylvia

From: Livingston, Sylvia
Sent: Monday, September 21, 2009 9:20 AM
To: 'mhammond@swa.org'
Cc: 'ctilman@pirnie.com'; 'elias@rtpenv.com'; Halpin, Mike; 'james_stormer@doh.state.fl.us'; Anderson, Lennon; 'abrams.heather@epamail.epa.gov'; 'forney.kathleen@epamail.epa.gov'; 'catherine_collins@fws.gov'; Gibson, Victoria; 'laxmana_tallam@doh.state.fl.us'; Mitchell, Bruce; Walker, Elizabeth (AIR); Koerner, Jeff
Subject: Solid Waste Authority of Palm Beach County - North County Resource Recovery Facility; 0990234-015-AC (PSD-FL-108H)
Attachments: 0990234-015-AC_Signatures.pdf

Dear Sir/ Madam:

Attached is the official **Notice of Final Permit** for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send".

Note: We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Click on the following link to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0990234.015.AC.F_pdf.zip

Owner/Company Name: SOLID WASTE AUTHORITY OF PBC

Facility Name: SOLID WASTE AUTHORITY OF PBC/NCRRF

Project Number: 0990234-015-AC/ PSD-FL-108H

Permit Status: FINAL

Permit Activity: CONSTRUCTION

Facility County: PALM BEACH

Processor: Bruce Mitchell

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Access these documents by clicking on the link provided above, or search for other project documents using the "*Air Permit Documents Search*" website at <http://www.dep.state.fl.us/air/eproducts/apds/default.asp>.

Permit project documents addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation at (850)488-0114.

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
850/921-9506
sylvia.livingston@dep.state.fl.us

Livingston, Sylvia

From: Sandra Vassalotti [svassalotti@swa.org] on behalf of Mark Hammond [mhammond@swa.org]
Sent: Wednesday, September 23, 2009 9:40 AM
To: Livingston, Sylvia
Subject: RE: Solid Waste Authority of Palm Beach County - North County Resource Recovery Facility; 0990234-015-AC (PSD-FL-108H)

Good morning Sylvia,

This is to acknowledge that we are able to open/access the attachment.

Thanks
Mark Hammond

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Monday, September 21, 2009 9:20 AM
To: Mark Hammond
Cc: ctilman@pirnie.com; elias@rtpenv.com; Halpin, Mike; james_stormer@doh.state.fl.us; Anderson, Lennon; abrams.heather@epamail.epa.gov; forney.kathleen@epamail.epa.gov; catherine_collins@fws.gov; Gibson, Victoria; laxmana_tallam@doh.state.fl.us; Mitchell, Bruce; Walker, Elizabeth (AIR); Koerner, Jeff
Subject: Solid Waste Authority of Palm Beach County - North County Resource Recovery Facility; 0990234-015-AC (PSD-FL-108H)

Dear Sir/ Madam:

Attached is the official **Notice of Final Permit** for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send".

Note: We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Click on the following link to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0990234.015.AC.F_pdf.zip

Owner/Company Name: SOLID WASTE AUTHORITY OF PBC
Facility Name: SOLID WASTE AUTHORITY OF PBC/NCRRF
Project Number: 0990234-015-AC/ PSD-FL-108H
Permit Status: FINAL
Permit Activity: CONSTRUCTION
Facility County: PALM BEACH
Processor: Bruce Mitchell

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Permit project documents addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please

Livingston, Sylvia

From: Livingston, Sylvia
Sent: Wednesday, September 30, 2009 11:00 AM
To: 'ctilman@pirnie.com'; 'elias@rtpenv.com'
Subject: FW: Solid Waste Authority of Palm Beach County - North County Resource Recovery Facility; 0990234-015-AC (PSD-FL-108H)
Attachments: 0990234-015-AC_Signatures.pdf

Dear Sir/ Madam:

We have not received confirmation that you were able to access the documents attached to this September 21st e-mail. Please confirm receipt by opening the attachment and sending a reply to me.

The Division of Air Resource Management is sending electronic versions of these documents rather than sending them Return Receipt Requested via the US Postal service. Your "receipt confirmation" reply serves the same purpose as tracking the receipt of the signed "Return Receipt" card from the US Postal Service. Please let me know if you have any questions.

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
850/921-9506
sylvia.livingston@dep.state.fl.us

From: Livingston, Sylvia
Sent: Monday, September 21, 2009 9:20 AM
To: 'mhammond@swa.org'
Cc: 'ctilman@pirnie.com'; 'elias@rtpenv.com'; Halpin, Mike; 'james_stormer@doh.state.fl.us'; Anderson, Lennon; 'abrams.heather@epamail.epa.gov'; 'forney.kathleen@epamail.epa.gov'; 'catherine_collins@fws.gov'; Gibson, Victoria; 'laxmana_tallam@doh.state.fl.us'; Mitchell, Bruce; Walker, Elizabeth (AIR); Koerner, Jeff
Subject: Solid Waste Authority of Palm Beach County - North County Resource Recovery Facility; 0990234-015-AC (PSD-FL-108H)

Dear Sir/ Madam:

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http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0990234.015.AC.F_pdf.zip

Owner/Company Name: SOLID WASTE AUTHORITY OF PBC
Facility Name: SOLID WASTE AUTHORITY OF PBC/NCRRF
Project Number: 0990234-015-AC/ PSD-FL-108H

Permit Status: FINAL
Permit Activity: CONSTRUCTION
Facility County: PALM BEACH
Processor: Bruce Mitchell

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Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
850/921-9506
sylvia.livingston@dep.state.fl.us

Note: The attached document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: <http://www.adobe.com/products/acrobat/readstep.html> .

Livingston, Sylvia

From: Donald F. Elias [elias@rtpenv.com]
Sent: Thursday, October 01, 2009 1:40 PM
To: Livingston, Sylvia
Subject: Not read: Solid Waste Authority of Palm Beach County - North County Resource Recovery Facility; 0990234-015-AC (PSD-FL-108H)
Attachments: ATT187684.txt

Your message

To: ctilman@pirnie.com; elias@rtpenv.com
Subject: FW: Solid Waste Authority of Palm Beach County - North County Resource Recovery Facility; 0990234-015-AC (PSD-FL-108H)
Sent: 9/30/2009 10:59 AM

was deleted on 10/1/2009 1:39 PM.

Livingston, Sylvia

From: Tilman, Christopher [CTilman@PIRNIE.COM]
To: undisclosed-recipients
Sent: Wednesday, September 30, 2009 11:21 AM
Subject: Read: Solid Waste Authority of Palm Beach County - North County Resource Recovery Facility; 0990234-015-AC (PSD-FL-108H)

Your message

To: CTilman@PIRNIE.COM
Subject:

was read on 9/30/2009 11:21 AM.