P.E. CERTIFICATION STATEMENT

APPLICANT

Solid Waste Authority of Palm Beach County
North County Regional Resource Recovery Facility

Draft Permit No. 0990234-019-AC/PSD-FL-108I

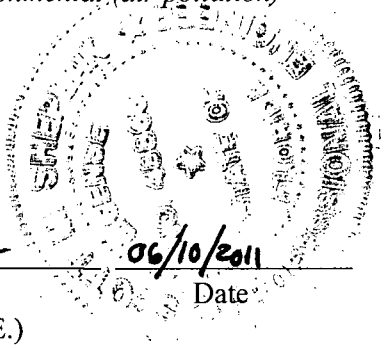
PROJECT TYPE: Air Construction Permit Revision (Revises Permit No. 0990234-006-AC and PSD-FL-108A & F)

PROJECT DESCRIPTION

This project is for an air construction (AC)/Prevention of Significant Deterioration (PSD) permit revision.

This project is subject to the general preconstruction review requirements in Rule 62-212.300, Florida Administrative Code (F.A.C.) and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the PSD of Air Quality. The Department's full review of the project and rationale for issuing the draft air construction permit revision is provided in the Technical Evaluation and Preliminary Determination.

I HEREBY CERTIFY *that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes (F.S.), and F.A.C. Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify any other aspects of the proposal outside of my area of expertise (including, but not limited to, the electrical, civil, mechanical, structural, hydrological, geological, and meteorological features). My licensed area of practice as a professional engineer under Chapter 471, F.S. is environmental (air pollution) engineering.*



Scott M. Sheplak 06/10/2011
Scott M. Sheplak Date
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SMS/

TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

APPLICANT

Solid Waste Authority of Palm Beach County

7501 North Jog Road
West Palm Beach, Florida 33412

North County Regional Resource Recovery Facility
Facility ID No. 0990234

PROJECT

Draft Permit No. 0990234-019-AC/PSD-FL-108I
Application for Minor Source Air Construction Permit
Miscellaneous Revisions

COUNTY

Palm Beach County, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Permitting and Compliance Section
2600 Blair Stone Road, MS#5505
Tallahassee, Florida 32399-2400

June 13, 2011

1. GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control - General Provisions); 62-210 (Stationary Sources - General Requirements); 62-212 (Stationary Sources - Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources - Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Facility Description and Location

This facility is an existing municipal waste combustor plant, which is categorized under Standard Industrial Classification Code No. 4953. This existing plant is located in Palm Beach County at 7501 North Jog Road, West Palm Beach; UTM Coordinates: Zone 17, 585.82 km East and 2960.474 km North; Latitude: 26° 45' 53" North and Longitude: 80° 08' 12" West.

This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standards (AAQS).

Facility Regulatory Categories

- The facility is a major source of hazardous air pollutants (HAP).
- This facility does not operate 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 major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Project Description

As part of the project for the Title V air operation permit renewal (Project No. 0990234-020-AV), the applicant requested a concurrent air construction permit revision to change several underlying construction permit conditions.

Application Processing Schedule

Application for a Title V Air Operation Permit Renewal and Application for Concurrent Air Construction/PSD Permit Revision received via Electronic Permit Submittal and Processing System (EPSAP) on November 17, 2010.

Relevant Documents

- PSD-FL-108A.
- Permit No. 0990234-006-AC/PSD-FL-108F.

2. PSD APPLICABILITY

General PSD Applicability

For areas currently in attainment with the state and federal AAQS or areas otherwise designated as unclassifiable, the Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. Under preconstruction review, the Department first must determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, must conduct a PSD preconstruction review. A PSD applicability review is required for projects at new and existing major stationary sources. In addition, proposed projects at existing minor sources are subject to a PSD applicability review to determine whether potential emissions *from the proposed project itself* will exceed the PSD major stationary source thresholds. A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit:

- 5 tons per year or more of lead;
- 250 tons per year or more of any regulated air pollutant; or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the following 28 PSD-major facility categories: fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), Kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants and charcoal production plants.

Once it is determined that a project is subject to PSD preconstruction review, the project emissions are compared to the "significant emission rates" defined in Rule 62-210.200, F.A.C. for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO_X); sulfur dioxide (SO_2); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM_{10}); volatile organic compounds (VOC); lead (Pb); fluorides (F); sulfuric acid mist (SAM); hydrogen sulfide (H_2S); total reduced sulfur (TRS), including H_2S; reduced sulfur compounds, including H_2S; municipal waste combustor organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans; municipal waste combustor metals measured as PM; municipal waste combustor acid gases measured as SO_2 and hydrogen chloride (HCl); municipal solid waste landfills emissions measured as non-methane organic compounds (NMOC); and mercury (Hg). In addition, significant emissions rate also means any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 $\mu g/m^3$, 24-hour average.

If the potential emission exceeds the defined significant emissions rate of a PSD pollutant, the project is considered "significant" for the pollutant and the applicant must employ the Best Available Control Technology (BACT) to minimize the emissions and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

PSD Applicability for Project

The project will revise miscellaneous permit conditions. There will be no emissions increases and the project is not subject to PSD preconstruction review. Because the revisions are being made to PSD permits, a 30-day comment period will be specified concurrent with the 30-day comment period for the draft/proposed Title V air operation permit.

3. DEPARTMENT REVIEW

Response to Requested Revisions

As part of the project for the Title V air operation permit renewal (Project No. 0990234-020-AV), the applicant requested several changes to Title V air operation permit conditions. Some of these changes required revisions to the underlying PSD/air construction permit conditions, which are explained below in this Technical Evaluation and Preliminary Determination.

The applicant requested changes to two PSD permits by submitting a request with the Title V air operation permit renewal (Project No. 0990234-020-AV).

1st Permit Being Modified: PSD-FL-108A
Affected Emissions Units: Municipal Solid Waste (MSW) Boiler Nos. 1 and 2 (E.U. ID Nos. 001 & 002)

The "Specific Condition No." cited below refers to the specific condition in PSD-FL-108A.

1. Specific Condition 3.g., limits fluoride (F) emissions from each unit to 3.2 x 10-3 lb/MMBtu and Specific Condition 4.1. requires testing. The annual equivalent emissions for each unit are 5.78 tons per year (TPY).

   Applicant's Requested Change:

   The applicant requested that the F emissions limit and testing requirements be removed for MSW Boiler Unit Nos. 1 and 2.

   Department's Response:

   Fluoride (F) is a PSD pollutant; however, F is not emitted directly by a municipal waste combustor (MWC). In an exhaust stream rich with moisture, like from an MWC, F is emitted in the form of an acid gas - hydrofluoric acid (HF). HF is not a PSD pollutant; yet typically, all of the HF emitted is assumed to be F. The latest update to 40 CFR 60, Subparts Cb/Eb (May 10, 2006) does not include a limit for F emissions but, does limit MWC acid gases with specific emission limits for SO_2 and HCl. HF is a strong acid gas. Indirectly, HF/F is therefore restricted by the federal MWC acid gas (SO_2 and HCl) standards.

   The Department recently issued a PSD/AC permit for the SWA's Palm Beach Renewable Energy Facility No. 2 on December 23, 2010, and determined that "it was unnecessary to set a BACT based limit or testing requirements for F given the history at the NCRRF." A detailed review of 5-year stack testing data at the NCRRF in the Department's database indicates F emissions from MSW Boiler Unit No. 1 ranged from 89 - 99 % below the limit and F emissions from MSW Boiler Unit No. 2 ranged from 84 - 99 % below the limit. The corresponding equivalent values ranged from 0.0253 - 0.658 TPY for MSW Boiler Unit No. 1 and from 0.0307 - 0.903 TPY for MSW Boiler Unit No. 2. Maximum emissions during the 5-year period from MSW Boiler Unit Nos. 1 and 2 were therefore 1.6 TPY.

   Based on the stack testing history, the fact that these units have acid gas controls (spray dryer absorbers) and the federal MWC acid gas emission limits apply to these units, there are reasonable assurances that actual F emissions from the MSW Boiler Unit Nos. 1 and 2 should remain at their current levels which is less than 3 TPY (the level to trigger a BACT determination under PSD).

   For these reasons, the Department believes that there is no longer a need to limit or test for F emissions from the MSW Boiler Unit Nos. 1 and 2 at the North County Regional Resource Recovery Facility. The F emissions limit and testing requirements for MSW Boiler Unit Nos. 1 and 2 are removed from the permit.

2. Specific Condition 4.i., specifies that EPA Method 26 shall be used for the determination of hydrochloric acid concentration or other methods approved by the Department and EPA.

   Applicant's Requested Change:

   The applicant requested that this specific condition include modifications to the EPA Method 26 sampling train.

   Department's Response:

   The Department's research has indicated no biases are expected solely from the requested modifications. The Department has been approving the specifically requested sampling train modifications for each municipal waste combustor facility in Florida via the ASP procedure. The ASP has contained an expiration date. Including the sampling train modifications in an AC permit eliminates the need for an ASP, i.e. the need to renew it every 5 years independent of the Title V permit. The requested modifications to the EPA Method 26 in Specific Condition 4.i. are made.

2nd Permit Being Modified: Permit No. 0990234-006-AC/PSD-FL-108F, as amended
Affected Emissions Units: Biosolids Pelletization Facility (BPF)
BPF Sludge Dryer Train Nos. 1 & 2 (E.U. ID Nos. 010 & 011)

The "Specific Condition No." cited below refers to the specific condition in PSD-FL-108F.

1. The emissions unit description and Specific Condition No. III.A.2. specify what fuels are allowed to be burned in the BPF Sludge Dryer Train Nos. 1 and 2.

   Applicant's Requested Change:

   The applicant requested that the BPF Sludge Dryer Train Nos. 1 and 2 be allowed to fire 100% natural gas.

   Department's Response:

   The original PSD/AC permit application requested that the BPF Sludge Dryer Train Nos. 1 and 2 be fired primarily on landfill gas with natural gas as an alternate (back-up) fuel. Air pollutant emission rate calculations in the original PSD/AC permit application were based on 100% combustion of landfill gas. Worst case emissions are expected to be from 100% combustion of landfill gas. The combustion of natural gas is expected to result in lower air pollutant emission rates. While it is a change to the permit, no emission increases are expected. The requested change is made.

Revisions

The approved revisions are shown in ~~strikethrough~~ (for deletions) and double-underlines (for additions) format within the permit revision itself. All changes are emphasized with yellow highlight.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. No air quality modeling analysis is required because the project does not result in a significant increase in emissions.

Mr. Scott M. Sheplak, P.E. is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting him by telephone at 850/717-9074 or by e-mail at scott.sheplak@dep.state.fl.us in the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

Draft Permit Revision

PERMITTEE

Solid Waste Authority of Palm Beach County
North County Regional Resource Recovery Facility

Draft Permit No. 0990234-019-AC/PSD-FL-108I
Air Construction Permit Revision -
Miscellaneous Revisions

Palm Beach County, Florida

Authorized Representative:
Mr. Mark Hammond, Executive Director

PROJECT

This is the final air construction permit, which revises Permit No. 0990234-006-AC/PSD-FL-108F for the Biosolids Pelletization Facility (BPF). Revisions are made to miscellaneous permit conditions. This facility is an existing municipal waste combustor plant categorized under Standard Industrial Classification No. 4953. This existing plant is located in Palm Beach County at 7501 North Jog Road, West Palm Beach; UTM Coordinates: Zone 17, 585.82 km East and 2960.474 km North; Latitude: 26° 45' 53" North and Longitude: 80° 08' 12" West.

This final permit is organized into the following sections: Section 1 (General Information) and Section 2 (Permit Revisions). [(if applicable) As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit.]

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality. A copy of this permit modification shall be filed with the referenced permit and shall become part of the permit.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under 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 must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida

(Draft)

Michael P. Halpin, P.E., Director
Division of Air Resource Management

Date

MPH/tlv/jfk/jkh/sms

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit Revision) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on _____ *(Draft)* _____ to the persons listed below.

Mr. Mark Hammond, SWA: mhammond@swa.org
Ms. Marybeth Morrison, SWA: mmorrison@swa.org
Mr. Manuel Hernandez, P.E., CDM: hernandezmj@cdm.com
Mr. Lennon Anderson, P.E., DEP Southeast District Office: lennon.anderson@dep.state.fl.us
Mr. James Stormer, PBCHD: james_stormer@doh.state.fl.us
Ms. Cindy Mulkey, DEP Siting Office: cindy.mulkey@dep.state.fl.us
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Ms. Katy R. Forney, U.S. EPA Region 4: forney.kathleen@epa.epa.gov
Ms. Ana Oquendo-Vazquez, U.S. EPA Region 4: oquendo.ana@epa.gov
Ms. Barbara Friday, DEP BAR: barbara.friday@dep.state.fl.us (for posting with U.S. EPA, Region 4)
Ms. Victoria Gibson, DEP BAR: victoria.gibson@dep.state.fl.us (for reading file)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

(Draft)

_____ _____
Clerk Date

FACILITY DESCRIPTION

This existing facility is a municipal waste combustor plant designed to process 2,000 tons per day (TPD) of municipal solid waste (MSW). 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 TPD of incoming MSW. The boiler plant includes two Babcock & Wilcox (B&W) boilers (Nos. 1 and 2) with auxiliary burners. Each boiler was designed with a maximum heat input of 427.5 MMBtu/hr and a maximum steam production rating of 324,000 lbs/hour. At a reference heating value of 5,700 Btu/lb, this is equivalent to 900 TPD of RDF per boiler. The gross nominal electric generating capacity of the facility is 62 megawatts (MW).

Two landfills, a Class I Landfill and a Class III Landfill, each with its own gas collection system and flare are located at the facility. Additional activities at the facility include: a composting facility, material processing systems, a metals recovery system, storage and handling systems for RDF; lime storage and processing facilities; storage and handling systems for ash and ash treatment; and, cooling towers. A biosolids pelletization facility (BPF) is located adjacent to the existing landfill.

The facility is owned by the Solid Waste Authority and operated by Palm Beach Resource Recovery Corporation, a subsidiary of Babcock and Wilcox Corporation.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

FACILITY REGULATORY CLASSIFICATION

- This facility is a major source of hazardous air pollutants (HAP).
- This facility does not operate units subject to the acid rain provisions of the Clean Air Act (CAA).
- 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 (PSD), F.A.C.

PROPOSED PROJECT

As part of the project for the Title V air operation permit renewal (Project No. 0990234-020-AV), the applicant requested a concurrent air construction permit revision to change several underlying construction permit conditions found in two PSD permits.

SECTION 2. PERMIT REVISIONS

The following permit conditions and emissions unit description are revised as indicated. ~~Strikethrough~~ is used to denote the deletion of text. Double-underlines are used to denote the addition of text. All changes are emphasized with yellow highlight in the electronic document.

This facility has MWC (municipal waste combustor) type emissions units that are subject to the emission standards and limitations under the May 10, 2006 federal amendments to the 40 CFR 60 Subparts Cb/Eb.

1st Permit Being Modified: PSD-FL-108A
Affected Emissions Units: Municipal Solid Waste Boiler Nos. 1 and 2 (E.U. ID Nos. 001 & 002)

The affected Specific Condition Nos. 3.g., 4.i. and 4.l. from PSD-FL-108A are hereby changed as follows (the remainder of the permit remains unchanged as a result of this permitting action):

~~3.g. Fluoride: 0.0032 lbs/MMBtu.~~

4.i. EPA Method 26 shall be used for the determination of hydrochloric acid concentration or other methods approved by DEP and EPA. The permittee may modify the EPA Method 26 sampling train as follows: full-size (Greenburg-Smith design) impingers may be used in lieu of midget impingers; and, the two sodium hydroxide (NaOH) impingers may be replaced with one empty impinger.

~~4.l. Method 13A or 13B for determination of fluoride concentrations and associated moisture content, or other Methods approved by DER. One sample constitutes one test run.~~

2nd Permit Being Modified: Permit No. 0990234-006-AC/PSD-FL-108F, as amended
Affected Emissions Units: Biosolids Pelletization Facility (BPF)
BPF Sludge Dryer Train Nos. 1 & 2 (E.U. ID Nos. 010 & 011)

The emissions unit description and the affected Specific Condition No. III.A.2. from Permit No. 0990234-006-AC/PSD-FL-108F are hereby changed as follows (the remainder of the permit remains unchanged as a result of this permitting action):

Emissions Unit Description

The BPF will have two 337.5 wtpd {67.5 dry tpd} sludge drying trains Dryer Train #1 and #2, and related appurtenances. Each dryer train at the BPF ~~will~~may combust natural gas or landfill gas generated from the nearby landfill in a rotary drum dryer to dry sewage sludge, and then screen the dried sludge into marketable fertilizer pellets. ~~Natural gas will be used as an alternate fuel.~~ Each dryer has a rated capacity of 40 MMBTU/hr heat input {for either landfill or natural gas} plus an additional 2 MMBTU/hr heat input from each regenerative thermal oxidizer (RTO) for a total rated capacity of 84 MMBTU/hr heat input from the dryers and RTOs.

Specific Condition No. III.A.2.

A.2. Methods of Operation - Fuels. The dryers ~~shall~~may be fired ~~primarily~~ by natural gas or landfill gas ~~with natural gas used as an alternate fuel~~.
[Rules 62-4.160(2) and 62-210.228(PTE), F.A.C.]