Florida Department of Environmental Protection

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

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

PERMITTEE

Pinellas County Board of County Commissioners
Department of Environment and Infrastructure
3095 114th Avenue North
St. Petersburg, Florida 33716

Air Permit No. 1030117-012-AC (PSD-FL-420B)
Pinellas County Resource Recovery Facility
Harmonization of Reporting Requirements

Authorized Representative:
Ms. Kelsi Oswald, WTE Program Manager

Expires: December 31, 2016
Pinellas County

PROJECT

This is the final air construction permit to harmonize the air emissions reporting requirements between the air construction permit and the operating permit for the municipal waste combustors at the Pinellas County Resource Recovery Facility (PCRRF), located at 3001 110th Avenue North in St. Petersburg, Florida. The UTM coordinates are Zone 17, 335.273 kilometers (km) East, and 3084.304 km North.

This permit modifies the emissions reporting requirements in the facility's air construction permit to align them with the reporting requirements in the facility's operating permit. The air construction permit modified by this permit is Permit No. 1030117-009-AC (PSD-FL-420), as extended by Permit No. 1030117-010-AC (PSD-FL-420A). This is intended to harmonize the reporting requirements for excess emissions with the requirements in the PCRRF Title V operating permit (1030117-008-AV).

This final permit is organized into the following sections: Section 1 (General Information), Section 2 (Administrative Requirements, Section 3 (Permit Revisions) and Section 4 (Appendices).

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.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. - Prevention of Significant Deterioration of Air Quality.

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)

DRAFT

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 with Appendices) 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 the date indicated below to the following persons.

Kelsi Oswald, Pinellas County Division of Solid Waste: koswald@pinellascounty.org
Robert Hauser, Pinellas County Division of Solid Waste: rhauser@pinellascounty.org
Kushala M.C. Gowda, P.E., ARCADIS: kushala.gowda@arcadis-us.com
Tamara Stankunas, P.G., Earthshine Environmental: tstankunas@earthshineinc.com
Mary Yeargan, DEP Southwest District: mary.yeargan@dep.state.fl.us
Justin Green, DEP Siting Office: justin.green@dep.state.fl.us
Heather Ceron, EPA Region 4: ceron.heather@epa.gov
Ms. Lorinda Shepherd, US EPA Region 4: Shepherd.Lorinda@epa.gov
Lynn Scearce, DEP OPC: lynn.scearce@dep.state.fl.us

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)

DRAFT

FACILITY DESCRIPTION

The Pinellas County Resource Recovery Facility consists of: a municipal solid waste (MSW) landfill; three nominal 1,050 tons per day (tons/day) municipal waste combustors (MWC) with auxiliary burners; lime storage and processing facilities, an activated carbon storage facility, ash storage and processing facilities, a metals recovery system, a cooling tower and, ancillary support equipment. The facility is owned by Pinellas County and presently operated by GCS Energy Recovery of Pinellas, LLC. Each MWC unit has a maximum continuous rating (MSC) of 256,000 pounds per hour (lb/hour) of steam and a peak 4-hour rating of 275,000 lb/hour.

The nominal rating of 1,050 tons/day/unit is based on a solid waste heat content of 5,000 British thermal units (Btu/lb). The actual daily throughput rate of solid waste needed to achieve the MSC rating can be substantially greater or less than the nominal rating based, e.g., on moisture content or plastic fraction of the solid fuel. The three units combined produce sufficient steam to generate approximately 77 megawatts (MW) of electricity

Units 1 and 2 began commercial operation in 1983, while Unit 3 began commercial operation in 1986. Emissions from each unit are controlled by:

- Good combustion practices (GCP) in the furnaces that minimize formation of carbon monoxide (CO), nitrogen oxide (NO_X) and particulate matter (PM);
- Urea-based Selective Non-Catalytic Reduction (SNCR) systems in each furnace to further control NO_X emissions;
- Spray Dryer Absorbers (SDA), based on lime slurry injection, which absorbs and neutralizes MWC-acid gases including sulfur dioxide (SO_2) and hydrogen chloride (HCl) for subsequent capture as PM;
- Powered Activated Carbon Injection (ACI) systems to capture (adsorb) certain metals, such as mercury (Hg), and organic hazardous air pollutants (HAP) including dioxin and furan (dioxin/furan) for subsequent capture as PM; and
- Fabric filters (baghouses) to capture PM originating from combustion, the acid gas reactions and the spent activated carbon.

The facility is equipped with continuous emission monitoring systems (CEMS) for carbon monoxide (CO), SO_2 and NO_X and continuous opacity monitoring systems (COMS) for visible emissions (VE). The three exhaust to a common stack consisting of three separate flues.

This permit affects or includes the emissions units (E.U.) listed below that were constructed under the authority of EPA Permit Nos. PSD-FL-011 and PSD-FL-098 issued in 1979 and 1987, respectively and Florida Power Plant Site Certifications PA78-11 and PA83-18 issued in 1979 and 1984 (revised 1986), respectively.

E.U. No.	Emission Unit Description
001	Municipal Waste Combustor Unit 1
002	Municipal Waste Combustor Unit 2
003	Municipal Waste Combustor Unit 3

PROPOSED PROJECT

The proposed project is a simple harmonization of reporting requirements between the air construction permit and the air operating permit for the PCRRF. This revised air construction permit aligns reporting requirements with those in the PCRRF operating permit by authorizing semi-annual reporting of excess emissions and emissions monitor system performance. Additionally, reports on excess emissions due to

DRAFT

malfunctions will be submitted quarterly, if requested by the Compliance Authority. Provisions requiring the permittee to notify the Compliance Authority of malfunctions within one business day of occurrence remain unchanged.

FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The 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.
- The facility is regulated under Rules 62-296.401(2), F.A.C. - Incinerators and 62-296.416, F.A.C. - Waste-to-Energy Facilities.
- The facility is regulated under Rule 62-204.800(9)(b), F.A.C. – Municipal Waste Combustors. 40 Code of Federal Regulations, Part 60 (40 CFR 60), Subpart Cb, Emission Guidelines and Compliance Times for Large Municipal Waste Combustors That Are Constructed on or Before September 20, 1994 (the Department's MWC Rule).
- The facility is regulated under Chapter 62-17, F.A.C. – Electrical Power Plant Siting

DRAFT

1. Permitting Authority: The permitting authority for this project is the Office of Permitting and Compliance in the Division of Air Resource Management of the Department of Environmental Protection (Department). The Office of Permitting and Compliance mailing address is 2600 Blairstone Road (MS #5505), Tallahassee, Florida 32399-2400.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Southwest District Office at: 13051 N. Telecom Parkway, Temple Terrace, FL 33637-0926.

3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); and Appendix D (Common Testing Requirements).

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified 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 or regulations. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

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: 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. Source Obligation:

   (a) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   [Rule 62-212.400(12), 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 is required for regular operation of the permitted emissions units. The permittee shall apply for a Title V air operation permit within 180 days of issuance of this permit. To apply for a Title V operation permit, 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

DRAFT

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.]

DRAFT

The following permit conditions 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.

Permit Being Modified: Permit No. 1030117-009-AC (PSD-FL-420), as extended by Permit No. 1030117-010-AC (PSD-FL-420A)

This section of the permit addresses the following emissions units.

E.U. No.	Emission Unit Description
001	Municipal Waste Combustor Unit 1
002	Municipal Waste Combustor Unit 2
003	Municipal Waste Combustor Unit 3
005	Residue Storage and Processing Building

Design Waste Throughput Rating: The design waste throughput rating of each municipal waste combustor is 1,050 tons/day when burning waste with a higher heating value (HHV) of 5,000 British thermal units per pound (Btu/lb). Actual waste throughput will vary depending upon the HHV of the waste actually burned and the steam production requirements as described and limited below.

Design Heat Input Rating of the Auxiliary Burners: The design heat input rating of each of the two natural gas-fueled auxiliary burners in each municipal waste combustor unit is 65 MMBtu/hour and may be replaced with new burners with design heat input ratings less than or equal to 99 MMBtu/hr.

31. Excess Emissions Reporting:

a. Malfunction Notification: If emissions in excess of a standard (subject to the specified averaging period) occur due to malfunction, the permittee shall notify the Compliance Authority within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident.

b. Excess Emissions Report: Periods of startup, shutdown and malfunction shall be monitored, recorded and reported as excess emissions when emission levels of SO_2, CO, or NO_X, or visible emissions, exceed the standards specified in this permit, following the NSPS format in 40 CFR 60.7(c), Subpart A. In addition, the report shall summarize the CEMS and COMS availability for the reporting period. This report of excess emissions and emissions monitor system performance shall be submitted to the Compliance Authority semi-annually. A full written report on malfunctions, and the excess emissions and exceedances of opacity standards resulting from malfunctions, shall be submitted to the Compliance Authority within 30 days following the end of each calendar quarter, if requested by the Compliance Authority.

~~b. State Implementation Plan (SIP) Quarterly Permit Limits Excess Emissions Report: Within 30 days following the end of each calendar quarter, the permittee shall submit a report to the Compliance Authority summarizing periods of SO_2, CO, and NO_X emissions, as well as opacity in excess of the permit emission standards following the NSPS format in 40 CFR 60.7(c), Subpart A. Periods of startup, shutdown and malfunction, shall be monitored, recorded and reported as excess emissions when emission levels exceed the standards specified in this permit. In addition, the report shall summarize the CEMS and COMS availability for the previous quarter.~~

[Rules 62-4.130 and, 62-204.800(8)(c), F.A.C.; and Consistency with Rule 62-204.800(9)(b), F.A.C.]

DRAFT