DRAFT PERMIT

PERMITTEE

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

Air Permit No. 0990234-017-AC (PSD-FL-413)
Palm Beach Renewable Energy Park
Palm Beach Renewable Energy Facility No. 2

Authorized Representative:
Mark Hammond, Executive Director

Expires: December 31, 2015
Palm Beach County

PROJECT

This is the final air construction permit authorizing the construction of three 1,000 tons per day (TPD) mass-burn municipal waste combustors (MWC), a 90 to 100 megawatts (MW) steam turbine-electrical generator (STG) and ancillary equipment. The proposed work will be conducted at the existing Palm Beach Renewable Energy Park (PBREP), which is a municipal solid waste (MSW) facility categorized under Standard Industrial Classification Number (No.) 4953. The existing facility is located in Palm Beach County at 7501 North Jog Road in West Palm Beach, Florida. The UTM coordinates are Zone 17, 585.3 kilometers (km) East, and 2961.7 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); and Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix CF of Section 4 of this permit. 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.). 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. for the Prevention of Significant Deterioration (PSD) of Air Quality and a corresponding best available control (BACT) determination.

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)

_____ _____

Joseph Kahn, Director (Date)
Division of Air Resource Management

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 _____ to the persons listed below.

Mark Hammond, SWA, Executive Director: mhammond@swa.org
Michael Halpin, DEP Siting: mike.halpin@dep.state.fl.us
Kevin Claridge, DEP SED: kevin.claridge@dep.state.fl.us
Jim Stormer, Palm Beach County Health Department: james_stormer@doh.state.fl.us
Heather Abrams, EPA Region 4: abrams.heather@epa.gov
Dee Morse, NPS: dee_morse@nps.gov
Amit Chattopadhyay, P.E., Malcolm Pirnie: achattopadhyay@pirnie.com
Vickie Gibson, DEP BAR Reading File: victoria.gibson@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.

_____ _____
(Clerk) (Date)

DRAFT

FACILITY DESCRIPTION

The existing facility consists of the following emissions units (EU):

Facility ID No. 0990234

EU ID No.	EU Description
001	Municipal Solid Waste Boiler No. 1
002	Municipal Solid Waste Boiler No. 2
004	Class III Landfill with Flare
005	Refuse Derived Fuel (RDF) Storage
007	RDF Processing Lines
008	Oversized Bulky Waste (OBW) Processing Lines
010	Sludge Dryer Train No. 1
011	Sludge Dryer Train No. 2
012	Recycle Material Bin and Pellet Storage Silo for Train No. 1
013	Cooling Tower Train No. 1
014	Recycle Material Bin and Pellet Storage Silo for Train No. 2
015	Cooling Tower Train No. 2
016	Emergency Generator
017	Woody Waste Facility Diesel Engine
018	Cooling Tower
019	Ash Building and Handling System
020	Class III Landfill Existing Flare - 1,800 standard cubic feet per minute (scfm), backup use only
021	Emergency Generator, 220 break-horespower (hp), EPA Tier III Certified
023	Powdered Activated Carbon Silo with Baghouse

PROPOSED PROJECT

The permit authorizes the construction of the Palm Beach Renewable Energy Facility No. 2 (PBREF-2). This facility will consist of three 1,000 TPD mass-burn MWC units each with a maximum steam production rate of 320,100 pounds per hour (lb/hr) on a 4-hour average block basis. The project also includes a 90 to100 MW STG; three lime storage silos; one carbon storage silo; two diesel fire pump engines; one emergency generator; and one ash handling system and building. The proposed work will be conducted at the existing PBREP.

The project will incorporate the following pollution control equipment and measures:

- For each MWC unit, good combustion practices (GCP), spray dryers (SD), fabric filter (FF) baghouses, activated carbon injection (CI), selective catalytic reduction (SCR), as an option selective non-catalytic reduction (SNCR) and use of inherently clean natural gas as a startup, shutdown and flame stabilization fuel.
- Use of inherently clean ultra low sulfur distillate (ULSD) fuel oil and GCP in the emergency generator and emergency fire pump engines; and
- Reasonable precautions and best management practices (BMP) to minimize fugitive particulate matter (PM)/(PM_{10})/($PM_{2.5}$) emissions from MSW handling and processing; ash (bottom and fly) handling, storage and shipment; lime handling, storage and processing; and activated carbon handling, storage and processing.

The project will incorporate continuous emission monitoring systems (CEMS) for CO, SO_2, NO_X and Hg and continuous opacity monitoring systems (COMS) for visible emissions (VE).

DRAFT

This project will consist of the following EU:

Facility ID No. 0990234	
EU ID No.	**EU Description**
024	Municipal Solid Waste Combustor No. 1
025	Municipal Solid Waste Combustor No. 2
026	Municipal Solid Waste Combustor No. 3
027	Lime Storage Silo A
028	Lime Storage Silo B
029	Lime Storage Silo C
030	Activated Carbon Storage Silo
031	250 hp Diesel Fire Pump Engine A
032	250 hp Diesel Fire Pump Engine B
033	250 Kilowatt (kW) Emergency Generator
034	Ash Handling System and Building

FACILITY REGULATORY CLASSIFICATION

- The existing PBREP and the new PBREF-2 are major sources of HAP.
- The PBREP and the PBREF-2 are not subject to the acid rain provisions of the Clean Air Act (CAA).
- The PBREP is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The PBREP is a major stationary source in accordance with Rule 62-212.400 (PSD), F.A.C.
- The PBREF-2 is a modification of a major stationary source in accordance with Rule 62-212.400 (PSD), F.A.C.
- The PBREF-2 is subject to New Source Performance Standards (NSPS) under Section 111 of the CAA and National Emissions Standards for Hazardous Air Pollutants (NESHAP) under Section 112 of the CAA which are incorporated by reference in Chapter 62-204.800, F.A.C.

DRAFT

SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT PERMIT)

1. Permitting Authority: The Permitting Authority for this project is the Bureau of Air Regulation in the Division of Air Resource Management of the Department. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. All documents related to applications for permits shall be submitted to the Bureau of Air Regulation in the Division of Air Resource Management of the Department.

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: Air Resource Section, 400 North Congress Avenue, Suite 200, West Palm Beach, FL 33401.

3. Appendices: The following Appendices are attached as a part of this permit and the permittee must comply with the requirements of the appendices:

Appendix A	Identification of General Provisions - NSPS 40 CFR 60, Subpart A;
Appendix A1	General Provisions - NSPS 40 CFR 63, Subpart A;
Appendix CC	Common Conditions;
Appendix CEMS	Continuous Emissions Monitoring System (CEMS) Requirements;
Appendix CF	Citation Formats and Glossary of Common Terms;
Appendix CTR	Common Testing Requirements;
Appendix Eb	NSPS, 40 CFR 60, Subpart Eb - Standards of Performance for Large Municipal Waste Combustors;
Appendix GC	General Conditions;
Appendix IIII	NSPS, Subpart IIII – Stationary Compression Ignition Internal Combustion Engines;
Appendix XSE	Excess Emission Reporting Form; and,
Appendix ZZZZ	NESHAP, Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines (RICE).

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.

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 emissions unit shall be constructed or 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) Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between construction of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit.

DRAFT

(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 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.

(c) 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. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. 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 submitted to the appropriate Permitting Authority with copies to Southeast District of DEP. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

9. Objectionable Odors Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]

   {Note: An objectionable odor is defined in Rule 62-210.200(Definitions), F.A.C., as 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.}

10. Unconfined Emissions of Particulate Matter: No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter. General reasonable precautions include the following: a. Paving and maintenance of roads, parking areas and yards; b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing; c. Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities; d. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulates from becoming airborne; e. Landscaping or planting of vegetation; f. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter; g. Confining abrasive blasting where possible; and h. Enclosure or covering of conveyor systems.
   [Rule 62-296.320(4)(c), F.A.C.]

DRAFT

A. Municipal Solid Waste Combustors (MWC) Units 1, 2, and 3 (EU Nos. 024, 025 and 026)

This section of the permit addresses the following EU.

EU ID Nos. 024, 025 and 026	EU Descriptions

Description: These EU consist of three 1,000 TPD mass burn MWC units, each with a fossil fuel fired auxiliary burner system. The natural gas fired burner systems will be used during periods of startup, shutdown and for flame stabilization. Each MWC unit will produce high pressure, high temperature (HPHT) steam that will be used in a single STG to generate 90 to 100 MW of electrical power.

Fuels: The primary boiler fuel for each MWC unit will be MSW and the other fuels as specified in **Specific Condition 12** of this subsection. Natural gas will be used as a startup, shutdown and flame stabilization fuel in the auxiliary burner system.

Steam Capacity: The maximum steam production limit per unit on a 4 hour block average basis is 320,100 lb steam/hr.

Heat Input: The heat input required to generate the maximum steam capacity is approximately 458 million British thermal units per hour (mmBtu/hr). The maximum heat input limit for the natural gas burner system for each MWC unit is 246 mmBtu/hr during periods of startup, shutdown and for flame stabilization.

Controls for each MWC: The air pollution control systems will consist of GCP, SD, FF, CI, SCR and use of inherently clean natural gas as a startup, shutdown and flame stabilization fuel in the MWC.

Stack Parameters for each MWC: Each of the MWC units will have a separate exhaust flue. The exhaust flues will be co-located and contained in a common outer stack. Each stack flue will be approximately 8.1 feet in diameter (maximum) and 310 feet tall (minimum). Exhaust from each flue will exit the stack at the following approximate conditions: an exit temperature of 285 °F and a volumetric flow rate of 184,310 actual cubic feet per minute (acfm).

Continuous emissions and opacity monitoring systems (CEMS, COMS): Emissions of CO, NO_X, SO_2 and Hg from each MWC unit will be monitored and recorded by CEMS. Opacity (VE) from each unit will be monitored and recorded by a COMS.

Applicability of 40 CFR Subpart Eb (NSPS Subpart Eb): Each MWC unit is subject to NSPS Subpart Eb - Standards of Performance for Large Municipal Waste Combustors.

{Permitting Note: These emission units are subject to BACT determinations for NO_X, CO, SO_2, PM, VOC, SAM, MWC acid gases as SO_2+hydrogen chlorides (HCl), MWC organics as dioxin/furans (D/F), and MWC metals as PM.}

*{Permitting Note: Unless otherwise specified in a **specific condition** of this subsection, the descriptions above under Capacity and Steam Capacity are not operating limitations.}*

EQUIPMENT

1. MWC Units: The permittee is authorized to construct three MWC stoker boiler units each with a natural gas burner system, overfire air ports, steam drum, superheater, economizer, air heater, ash hoppers, ducts, fuel feeding equipment, dry cooling towers, air pollution control equipment and other associated equipment. [Application No. 0990234-017-AC]

2. Air Pollution Control Equipment: The permittee shall install the following add-on air pollution control equipment on each MWC unit.

   a. SD/FF Baghouse System: The permittee shall design, install, operate and maintain a SD/FF baghouse system. The SD/FF baghouse system shall be brought on line in accordance with the manufacturer's procedures and guidelines and will be utilized whenever the MWC unit is in operation and burning MWC.

   b. SCR System: The permittee shall design, install, operate, and maintain an ammonia (NH_3) or urea based SCR system including reagent storage tank, pumps, metering system, injection grid, reactor and catalyst to reduce NO_X emissions in the flue gas exhaust and achieve the NO_X emissions limit specified in this

subsection. The SCR shall be brought on line in accordance with the SCR manufacturer's procedures and guidelines and shall be utilized whenever the MWC unit is in operation and burning MWC. The SCR system also represents BACT for D/F emissions.

c. SNCR System: The permittee may install, operate, and maintain an NH_3 or urea based SNCR system including reagent storage tank, pumps, metering system and injection equipment to reduce NO_X in the furnace prior to further downstream treatment by the SCR system.

d. Activate CI System and FF Baghouse: The permittee shall install, operate and maintain an activated CI system and FF baghouse (same baghouse used for SD) to capture the spent carbon. The CI system and FF baghouse shall be designed, constructed and operated to achieve the Hg and other metals emission limits specified in this subsection. The CI system shall be brought on line in accordance with the manufacturer's procedures and guidelines and will be utilized whenever the MWC unit is in operation and burning MWC.

[Application No. 0990234-017-AC; NSPS Subpart Db; and Rule 62-4.070(3), 62-210.200(PTE) and 62-212.400 (BACT), F.A.C.]

e. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emissions of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]

3. Aqueous Ammonia or Urea Storage Tank: The permittee is authorized to construct a nominal 30,000 gallon or smaller tank to store aqueous ammonia or urea for the SCR systems. In accordance with 40 CFR 60.130, the storage of aqueous ammonia or urea shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68. The tank designed and fabricated in accordance with U.S. Department of Labor Chapter 29, Part 1910.111, Code of Federal Regulations (CFR), American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, ANSI K 61.1, and applicable requirements of Chapter 62-762, F.A.C., Above Ground Storage Tank (AST) Systems.
[Application No. 0990234-017-AC and Rule 62-4.070(3), F.A.C.]

PERFORMANCE REQUIREMENTS AND MONITORING OF MWC OPERATIONS

4. MWC Boiler Unit Fuels: Each MWC boiler unit is authorized to combust MSW and other fuels authorized in **Specific Condition 12** of this subsection. In addition, each MWC unit is authorized to combust natural gas as a startup, shutdown and flame stabilization fuel.
[Application No. 0990234-017-AC; Rules 62-4.070(3), 62-210.200(PTE) and 62-212.400 (BACT), F.A.C.]

5. Steam Production Limits: For each MWC unit, the maximum allowable steam production rate is 320,100 lb/hr (4 hour block average basis).
[Application No. 0990234-017-AC; Rules 62-4.070(3), 62-210.200(PTE) and 62-212.400 (BACT), F.A.C.]

6. Maximum Demonstrated MWC Unit Load: The maximum demonstrated MWC unit load shall be determined during the initial performance test for D/F and each subsequent performance test during which compliance with the D/F emission limit is achieved. The maximum demonstrated MWC unit load shall be the highest 4-hour arithmetic average load based on steam production achieved during four consecutive hours during the most recent test during which compliance with the dioxin/furan emission limit was achieved. Unit load means the steam load of the MWC measured as specified in 40 CFR 60.58b(I)(6). Each unit shall not operate at a load level greater than the steam production rate given in **Specific Condition 5** of this subsection or, if it is less, 110% of the unit's "maximum demonstrated unit load". Higher loads, within the limit in **Specific Condition 5** of this subsection, are allowed for testing purposes as specified in 40 CFR 60.53b(b). [40 CFR 60.34b(b), 60.51b, 60.53b(b), and 60.58b(I)(6)]

7. Steam Parameters: In accordance with the manufacturer's recommendations, the permittee shall install, calibrate, operate and maintain continuous monitoring and recording devices for the following parameters on each MWC unit: steam temperature (°F), steam pressure (psig) and steam production rate (lb/hour). Records shall be maintained on site and made available upon request.
[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

8. Steam Monitoring: MWC unit load means the steam load of the MWC unit measured as specified in §60.58b(i)(6). The owner or operator shall install, calibrate, maintain, and operate a steam flow meter, shall measure steam flow in lb of steam/hr on a continuous basis, and record the output of the monitor (in accordance with the ASME method described in 40 CFR 60.58b(i)(6)). Steam flow shall be calculated in a 4 hour block arithmetic average. For each MWC unit, the maximum steam production limit corresponding to maximum demonstrated unit load is 320,100 lb/hr (4 hour block average basis). Higher unit loads are allowed for testing purposes pursuant to 40 CFR 60.53b(b). [Rules 62-204.800(8) and 62-4.070(1), and (3), F.A.C., and 40 CFR 60.53(a), and 60.58b(i)]

9. Heat Input from Fossil Fuels: The maximum heat input capacity from natural gas for each MWC unit on a steady state basis during boiler startup, shutdown and flame stabilization shall be limited to 246 mmBtu/hr. [Application No. 0990234-017-AC; Rules 62-4.070(3), 62-210.200(PTE) and 62-212.400 (BACT), F.A.C.]

10. Operational Hours: The hours of operation of these MWC units are not restricted (8,760 hours/year). [Application No. 0990234-017-AC; Rules 62-4.070(3) and 62-210.200(PTE)]

11. Prohibited Fuels:

    a. The facility shall not burn:

        i. those materials that are prohibited by state or federal law;
        ii. those materials that are prohibited by this permit;
        iii. lead acid batteries;
        iv. hazardous waste;
        v. nuclear waste;
        vi. radioactive waste;
        vii. sewage sludge;
        viii. explosives; and
        ix. beryllium-containing waste, as defined in 40 CFR 61, Subpart C.

    b. Further, the facility shall not knowingly burn:

        i. nickel-cadmium batteries pursuant to Section 403.7192 (3);
        ii. mercury containing devices and lamps pursuant to Sections 403.7186(2), and (3);
        iii. untreated biomedical waste from biomedical waste generators regulated pursuant to Chapter 64E-16, F.A.C., and from similar generators (or sources);
        iv. segregated loads of biological waste; and
        v. Copper Chromated Arsenate (CCA) treated wood.

12. Authorized Fuels: The primary fuel for the facility is MSW, including the items and materials that fit within the definition of MSW contained in either 40 CFR 60.51b or Section 403.706(5), F.S. (1995). Subject to the limitations contained in this permit, the authorized fuels for the facility also include the other solid wastes that are not MSW which are described below:

    a. Subject to the conditions and limitations contained in this permit, the following other solid waste may be used as fuel at the facility:

        i. Confidential, proprietary or special documents (including but not limited to business records, lottery tickets, event tickets, coupons and microfilm);
        ii. Contraband which is being destroyed at the request of appropriately authorized local, state or federal governmental agencies, provided that such material is not an explosive, a propellant, a hazardous waste, or otherwise prohibited at the facility. For the purposes of this section, contraband includes but is not limited to drugs, narcotics, fruits, vegetables, plants, counterfeit money, and counterfeit consumer goods;
        iii. Wood pallets, clean wood, and land clearing debris;
        iv. Packaging materials and containers;

DRAFT

v. Clothing, natural and synthetic fibers, fabric remnants, and similar debris, including but not limited to aprons and gloves; or

vi. Rugs, carpets, and floor coverings, but not asbestos-containing materials or polyethylene or polyurethane vinyl floor coverings.

b. Subject to the conditions and limitations contained in this permit, waste tires may be used as fuel at the facility. The total quantity of waste tires received as segregated loads and burned at the facility shall not exceed 3%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined on a calendar month basis in accordance with **Specific Condition 35** of this subsection.

c. Subject to the conditions and limitations contained in this permit, the following other solid waste materials may be used as fuel at the facility (i.e. the following are authorized fuels that are non-MSW material). The total quantity of the following non-MSW material received as segregated loads and burned at the facility shall not exceed 5%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined on a calendar month basis in accordance with **Specific Condition 35** of this subsection.

i. Construction and demolition debris.

ii. Oil spill debris from aquatic, coastal, estuarine or river environments. Such items or materials include but are not limited to rags, wipes, and absorbents.

iii. Items suitable for human, plant or domesticated animal use, consumption or application where the item's shelf-life has expired or the generator wishes to remove the items from the market. Such items or materials include but are not limited to off-specification or expired consumer products, pharmaceuticals, medications, health and personal care products, cosmetics, foodstuffs, nutritional supplements, returned goods, and controlled substances.

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

v. Waste materials that:

(a) are generated in the manufacture of items in categories (iii) or (iv), above and are functionally or commercially useless (expired, rejected or spent); or

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

vi. Waste materials that contain oil from:

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

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

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

{Permitting note: Waste materials specifically authorized above do not require Department approval.}

viii. Waste materials generated by manufacturing, industrial or agricultural activities, provided that these items or materials are substantially similar to items or materials that are found routinely in MSW.

[Rule 62-4.070(1), and (3), F.A.C.]

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

a. well mixed with MSW in the refuse pit; or

b. alternately charged with MSW in the hopper.

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

    a. comply with good combustion operating practices in accordance with 40 CFR 60.53b;

    b. install, operate and maintain CEMS for oxygen, CO, SO_2, NO_X and temperature in accordance with 40 CFR 60.58b; and

    c. record and maintain the CEMS data in accordance with 40 CFR 60.59b.

    These steps shall be used to ensure and verify continuous compliance with the emissions limitations in this permit. Natural gas may be used as fuel during boiler startup, shutdown and flame stabilization, and at other times when necessary and consistent with good combustion practices.

NSPS APPLICABILITY

15. NSPS Subpart Eb and Subpart A Applicability: Each MWC unit, including the shared STG, are subject to all applicable requirements of 40 CFR 60, Subpart Eb which applies to Large Municipal Waste Combustors and Subpart A, General Provisions. The applicable conditions are given in Appendices A and Eb of this permit. [Rule 62-204.800(7)(b) and 40 CFR 60, NSPS-Subpart Eb and 40 CFR 60 Subpart A]

EMISSIONS STANDARDS

16. Emissions from each MWC unit (EU-024, EU-025 and EU-026) shall not exceed the following limits:

Pollutant	Emission Standard/Limit [1]	lb/hour [2]	Basis
NO_X	50 ppmvd – 24 hour block arithmetic mean	37.4	BACT
	45 ppmvd – 12 month rolling average		BACT
CO	100 ppmvd – 4 hr block arithmetic mean	45.5	Subpart Eb
	80 ppmvd – 30-day rolling average		BACT
SO_2	24 ppmvd – 24 hour geometric mean	25.0	BACT
HCl [3]	20 ppmvd	11.9	BACT
VOC (as propane)	7 ppmvd	5.0	BACT
$PM/PM_{10}/PM_{2.5}$	12.0 mg/dscm	4.7	BACT
Lead (Pb)	125 µg/dscm	0.049	Avoid PSD
Hg [4]	N/A [5]	113 lb/yr [6]	Avoid PSD
	25 µg/dscm	0.0098	Applicant Request
Cadmium (Cd)	10 µg/dscm	$3.91E^{-03}$	Subpart Eb
D/F [7]	13.0 ng/dscm		Subpart Eb
	10 ng/dscm during initial two years		Initial Test
	0.75 to 10 ng/dscm 3rd year and thereafter		BACT
Opacity	10 % – 6 minute average	N/A	BACT Subpart Eb
Ammonia Slip	10 ppmvd	2.76	PM, Opacity

1 All concentration values are corrected to 7% O_2: µg/dscm = micrograms per dry standard cubic meter; mg/dscm = milligrams per dry standard cubic meter; ng/dscm = nanograms per dry standard cubic meter; and ppmvd = part per million dry volume.
2 Mass emission limits reflect maximum values calculated at 110% of 24 hour steam production limit of 291,000 lb steam/hr for each MWC. The 110% steam limit is 320,100 lb steam/hr for each MWC.
3 HCl is not a BACT pollutant. However, it must be limited together with SO_2 because they both comprise MWC-Acid Gases which has its own PSD threshold.
4 Within 60 days after achieving the maximum production rate, but not later than 180 days after the initial startup, PBREF-2 shall commence quarterly performance Hg stack test events for each MWC exhaust flue to show compliance with the 25 µg/dscm emission limit. The 25 µg/dscm quarterly stack based standard is based on the applicant's request. By meeting the quarterly stack test standard, PBREF-2 will show compliance with Subpart Eb Hg emission standard of 50 µg/dscm.

DRAFT

5 N/A = not applicable.
6 The 113 lb/yr emission limit is a 12 month rolled monthly average based on CEMS data. The Hg CEMS must become operational within 60 days after PBREF-2 achieves its maximum production rate, but not later than 180 days after the initial startup. During the first four quarters of Hg CEMS availability, the CEMS must achieve an 80% data availability rate. Subsequently, an 85% data availability rate is required. See Appendix CEMS for the procedures to be used for data replacement during time of Hg CEMS unavailability.
7 Dioxins/furans: Total tetra through octa-chlorinated dibenzo-p-dioxins and dibenzofurans. During the first year of the PBREF-2 operation of the 10 ng/dscm limit applies. Subsequently, the To Be Determined (TBD) limit will govern based on initial performance and efficiency tests at the inlet and outlet of the SCR as per **Specific Conditions 19 and 20** of this subsection. Based on these tests a D/F limit between 10 ng/dscm and 0.75 ng/dscm will be selected by the Department. The pound per hour limit will correspond to TBD ng/dscm limit.

TEST METHODS AND PROCEDURES

17. Test Methods: Any required stack test shall be performed in accordance with the following methods.

EPA Method	Description of Method and Comments
1 - 4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content. Methods shall be performed as necessary to support other methods.
5	Determination of Particulate Emissions. The minimum sample volume shall be 30 dry standard cubic feet.
6C	Determination of SO_2 Emissions (Instrumental).
7E	Determination of NO_X Emissions (Instrumental). NO_X emissions testing shall be conducted with the air heater operating at the highest heat input possible during the test.
8	Measurement of Sulfuric Acid Mist
9	Visual Determination of Opacity
10	Measurement of Carbon Monoxide Emissions (Instrumental). The method shall be based on a continuous sampling train.
13A or 13B	Measurement of Fluoride Emissions
18	Measurement of Gaseous Organic Compound Emissions (Gas Chromatography) *{Note: EPA Method 18 may be used (optional) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the total hydrocarbons (THC) emissions measured by Method 25A.}*
23	Measurement of Dioxin/Furan Emissions
26 or 26A	Determination of Hydrogen Chloride Emissions
29	Determination of Metals Emissions from Stationary Sources (Hg, Cd, Pb)
CTM-027	Procedure for Collection and Analysis of Ammonia in Stationary Source • This is an EPA conditional test method. • The minimum detection limit shall be 1 ppm.

Method CTM-027 is published on EPA's Technology Transfer Network Web Site at "http://www.epa.gov/ttn/emc/ctm.html". The other methods are specified in Appendix A of 40 CFR 60, adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. Tests shall be conducted in accordance with the appropriate test method and the applicable requirements specified in this permit, and NSPS Subpart A in 40 CFR 60. [Rules 62-204.800, F.A.C. and 40 CFR 60, Appendix A]

18. Testing Requirements: Initial tests shall be conducted between 90% and 100% of permitted capacity; otherwise, this permit shall be modified to reflect the true maximum capacity as constructed. Subsequent

annual tests shall be conducted between 90% and 100% of permitted capacity in accordance with the requirements of Rule 62-297.310(2), F.A.C. [Rule 62-297.310(7)(a) and (b), F.A.C.; 40 CFR 60.8]

19. Initial Compliance Demonstration: Initial compliance stack tests shall be conducted within 60 days after achieving the maximum production rate, but not later than 180 days after the initial startup for each MWC unit. In accordance with the test methods specified in this permit, each units exhaust flue gas shall be tested to demonstrate compliance with the emission standards for NO_X, VOC, CO, SO_2, HCl, $PM/PM_{10}/PM_{2.5}$, Pb, Cd, Hg (quarterly), D/F (quarterly during first two years of operation at the inlet and outlet of the SCR and stack flue exhaust and annually thereafter), VE, and ammonia slip given in **Specific Condition 16** of this subsection. Relative Accuracy Test Audit (RATA) tests for CEMS can constitute initial stack tests for these pollutants. The permittee shall provide the Compliance Authority with any other initial emissions performance tests conducted to satisfy vendor guarantees.
[Rule 62-297.310(7)(a) and (b), F.A.C.; 40 CFR 60.8]

20. Initial Tests for F and SAM Emission Rates: Initial compliance stack tests shall be conducted on each units exhaust flue gas within 60 days after achieving the maximum production rate, but not later than 180 days after the initial startup to determine the emission rates of SAM and F.
Rules 62-4.070(3), 62-210.200 (BACT) and 62-212.400 (PSD), F.A.C.]

21. Subsequent Compliance Testing: Annual stack tests for each MWC units exhaust flue gas shall be conducted for VOC, HCl, $PM/PM_{10}/PM_{2.5}$, Pb, Cd, Hg (quarterly), D/F (quarterly during first two years of operation at the inlet and outlet of the SCR and stack flue exhaust and annually thereafter), VE and ammonia slip during each federal fiscal year (October 1st to September 30th) to show compliance with the emission limits given in **Specific Condition 16** of this subsection. Data collected from the reference method during the required RATA tests for CO, NO_X, SO_2 and Hg (one quarter of four) may be used to satisfy the annual testing requirement provided the notification requirements and emission testing requirements for performance and compliance tests of this permit are satisfied.
[Rules 62-297.310(7)(a) and (b), and 62-296.416, F.A.C., and 40 CFR 60.8 and 60.58b]

22. Emissions Limit Subject to Revision D/F: D/F emissions from each MWC shall not exceed the limitation stated **Specific Condition 16** of this subsection. Stack acceptance testing and SCR inlet/outlet D/F destruction testing shall be performed quarterly on each MWC exhaust flue gas during the first two years of operation. The permittee shall provide a protocol for the SCR efficiency testing for review and approval by the Department ninety days prior to the commencement of testing. The permittee shall provide the results to the Department within 45 days of completion of the eight D/F destruction efficiency and stack tests so that the Department can set a numerical BACT D/F limit based on the performance of the SCR technology.

    The D/F emission limit standard will be between a maximum value of 10 ng/dscm and a minimum value of 0.75 ng/dscm. Between these upper and lower limit values, the limit will be ten times the average of the eight quarterly D/F SCR efficiency and stack test results conducted during the first two years of PBREF-2 operation. For example, if the average of these tests is 0.50 ng/dscm then the limit will be set by the Department at 5.0 ng/dscm, while if the average of the stack tests is 1.2 ng/dscm then the limit will be set at the upper limit value of 10.0 ng/dscm.

    If the D/F average emissions based on the SCR efficiency and stack tests is 0.05 ng/dscm or less, then the D/F emission limit shall be set at 0.74 ng/dscm as a non-PSD/BACT limit. The D/F emission limit shall be established prior to incorporation of this air construction permit into the facility's Title V operating permit.
[40 CFR 60.52b(c); Rules 62-4.070(3), 62-210.200 (BACT) and 62-212.400 (PSD), F.A.C.]

23. Continuous Compliance: The permittee shall demonstrate continuous compliance with the CO, NO_X and SO_2 concentration and mass emission standards and the long-term Hg mass emissions standard based on data collected by the certified CEMS. The permittee shall demonstrate continuous compliance with the opacity limit based on data collected by the required COMS.
[Rule 62-210.200 (BACT), F.A.C. and 40 CFR 60, Subpart Eb]

DRAFT

EXCESS EMISSIONS

*{Permitting Note: **Specific Conditions 24, 25 and 26** apply to the State Implementation Plan (SIP)-based emissions standards specified in **Specific Condition 16** of this subsection. Rule 62-210.700, F.A.C. (Excess Emissions) cannot vary or supersede any federal provision of the NSPS, or Acid Rain programs.}*

24. 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. All such preventable emissions shall be included in any compliance determinations based on CEMS data. [Rule 62-210.700(4), F.A.C.]

25. Emission Limit Compliance and Excess Emissions: Because of the long-term nature of the 12-month NO_X and 12-month Hg concentration limits as part of PSD and the associated BACT determination, all emissions data for these pollutants/averaging times, including periods of startup, shutdown and malfunction, shall be included in compliance determinations based on CEMS data. [Rule 62-210.700(4), 62-210.200(PTE); [Rule 62-212.400(10) (PSD), Control Technology Review; and Rule 62-4.070(3), F.A.C.]

26. Excess Emissions Allowed: As specified in this condition, excess emissions resulting from startup, shutdown and documented malfunctions are allowed for the 24-hour NO_X and 30-day CO rolling concentration and mass limit provided that operators employ the best operational practices to minimize the amount and duration of emissions during such incidents. NO_X and CO emission data exclusions resulting from startup, shutdown, or documented malfunctions shall not exceed three hours in any 24-hour period. A "documented malfunction" means a malfunction that is documented within one working day of detection by contacting the Compliance Authority by telephone, facsimile transmittal, or electronic mail.

27. Regulations Pursuant to 40 CFR 60, Subpart Eb: The following provisions apply to the emissions limits given in **Specific Condition 16** of this subsection that were specified pursuant to 40 CFR 60, Subpart Eb.

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

    b. *Startup, Shutdown and Malfunction:* Except as provided by 40 CFR 60.56b, the standards under 40 CFR 60, Subpart Eb, as incorporated in Rule 62-204.800(8)(b), F.A.C., apply at all times except during periods of startup, shutdown, or malfunction. Duration of startup or shutdown periods are limited to 3 hours per occurrence, except as provided in 40 CFR 60.58b(a)(1)(iii). During periods of startup, shutdown, or malfunction, monitoring data shall be dismissed or excluded from compliance calculations, but shall be recorded and reported in accordance with the provisions of 40 CFR 60.59b(d)(7).

        i. The startup period commences when the affected facility begins the continuous burning of municipal solid waste and does not include any warm-up period when the affected facility is combusting fossil fuel or other non-municipal solid waste fuel, and no municipal solid waste is being fed to the combustor.

        ii. Continuous burning is the continuous, semi-continuous, or batch feeding of municipal solid waste for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of municipal solid waste solely to provide thermal protection of the grate or hearth during the startup period when municipal solid waste is not being fed to the grate is not considered to be continuous burning.

    [40 CFR 60.58b(a)]

    c. *Special Provisions for CO*: For the purpose of compliance with the carbon monoxide emission limits in 40 CFR 60.53b(a), if a loss of boiler water level control (e.g., loss of combustion air fan, induced draft fan, combustion grate bar failure) is determined to be a malfunction, the duration of the malfunction period is limited to 15 hours per occurrence. [40 CFR 60.58b(a)(1)(iii)]

DRAFT

CONTINUOUS MONITORING REQUIREMENTS

28. CEM Systems: The permittee shall install, calibrate, maintain, and operate CEMS to measure and record the emissions of CO, NO_X, Hg and SO_2 from each MWC unit in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards given in **Specific Condition 16** of this subsection. For additional details see Appendix CEMS of this permit.

    a. *CO CEMS:* CO CEMS shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A and shall comply with all requirements of 40 CFR 60.58b. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The required RATA tests shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately, considering the allowable methods of operation and corresponding emission standards.

    b. *NO_X CEMS:* NO_X CEMS shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 2 and shall comply with all requirements of 40 CFR 60.58b. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The required RATA tests shall be performed using EPA Method 7E in Appendix A of 40 CFR 60. The NO_X monitor span values shall be set appropriately, considering the allowable methods of operation and corresponding emission standards.

    c. *SO_2 CEMS:* SO_2 CEMS shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 2 and shall comply with all requirements of 40 CFR 60.58b. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F. The required RATA tests shall be performed using EPA Method 6C in Appendix A of 40 CFR 60. The SO_2 monitor span values shall be set appropriately, considering the expected range of emissions and corresponding emission standards.

    d. *Hg CEMS*: Hg CEMS shall be certified pursuant to the requirements in Performance Specification 12A (PS-12A), "Specifications and Test Procedures for Total Vapor Phase Mercury Continuous Monitoring Systems in Stationary Sources," or that has passed verification tests conducted under the auspices of the U.S. Environmental Protection Agency's (EPA) Environmental Technology Verification (ETV) Program. Changes from these standards with regard to data availability of the Hg CEMS are given in Appendix CEMS, along with the method to fill in data during times of Hg CEMS unavailability. After certification the owner or operator will begin reporting Hg concentration emissions data. The owner or operator shall adhere to the calibration drift and quarterly performance evaluation procedures and ongoing data quality assurance procedures in 40 CFR Part 60, Appendix F or 40 CFR Part 75, Appendix B. The mass emissions shall be estimated based on the actual data collected no later than 30 days following the end of the month. The mercury monitoring data results shall be submitted quarterly. The CEMS shall only be used as the method of compliance for the annual mass emission rate.

    e. *Diluent Monitor:* A continuous emission monitoring system for measuring the oxygen content of the flue gas at each location where carbon monoxide, sulfur dioxide, nitrogen oxides emissions are monitored shall be installed, calibrated, maintained, and operated in accordance with the requirements of 40 CFR 60.58b.

29. COMS: A continuous opacity monitoring system (COMS) shall be installed, calibrated, operated, and maintained in exhaust flue of each MWC unit in a manner sufficient to demonstrate continuous compliance with the opacity standard specified in this section. Opacity shall be based on a 6-minute block average computed from at least one observation (measurement) every 15 seconds. For the COMS, the 6-minute block averages shall begin at the top of each hour. The COMS shall meet the applicable requirements of 40 CFR 60.58b(c)(8).

30. Continuous Flow Monitor: A continuous flow monitor shall be installed to determine the stack exhaust flow rate to be used in determining mass emission rates. The flow monitor shall be certified pursuant to 40 CFR

60, Appendix B, Performance Specification 6.
[Rules 62-210.200(BACT), 62-204.800(8), and 62-4.070(1) and (3), F.A.C.]

OTHER MONITORING REQUIREMENTS

31. Pressure Drop: The permittee shall maintain and calibrate a device which continuously measures and records the pressure drop across each baghouse compartment controlling the PM, sorbent and powdered activated carbon (PAC) emissions for each MWC unit. Records shall be maintained on site and made available upon request. [Rule 62-4.070(3), F.A.C.]

32. Bag Leak Detection: The permittee shall maintain continuous operation of bag leak detection systems on each baghouse for each MWC unit including keeping records of the systems measurements. Baghouse leak detection records shall be kept on site and made available upon request. [Rule 62-4.070(3), F.A.C.]

33. SCR NH_3 or Urea Injection: In accordance with the manufacturer's specifications, the permittee shall install, calibrate, operate and maintain a flow meter to measure and record the NH_3 or urea injection rate for the SCR system on each MWC unit. The permittee shall document the general range of NH_3 or urea flow rates required to meet the NO_X standard over the range of load conditions by comparing NO_X emissions with NH_3 or urea flow rates. During NO_X CEMS downtimes or malfunctions, the permittee shall operate at an NH_3 or urea flow rate that is consistent with the documented flow rate for the given load condition. Records shall be maintained on site and made available upon request. [Rule 62-4.070(3), F.A.C.]

34. Activated CI: In accordance with the manufacturer's specifications, the permittee shall install, calibrate, operate and maintain a mass flow meter to measure and record the activated CI rate (lb/hour) for each MWC unit. The permittee shall document the general range of activated CI mass flow rates required to meet the Hg standard over the range of load conditions by comparing Hg emissions with activated CI mass flow rates. During Hg CEMS downtimes or malfunctions, the permittee shall operate at the activated CI mass flow rate that is consistent with the documented flow rate for the given load condition. Records shall be maintained on site and made available upon request. [Rule 62-4.070(3), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

35. Segregated Solid Waste Record Keeping: The following records shall be made and kept to demonstrate compliance with the segregated non-MSW percentage limitations of **Specific Condition 12** of this subsection**:**

    a. Each segregated load of non-MSW materials, subject to the percentage weight limitations of **Specific Condition 12** of this subsection**,** which is received for processing, shall be documented as to waste description and weight. The weight of all waste materials received for processing shall be measured and recorded using the facility truck scale.

    b. Each day the total weight of segregated tires received shall be computed, and the daily total shall be added to the sum of the daily totals from the previous days in the current calendar month. At the end of each calendar month, the resultant monthly total weight of tires shall be divided by the total weight of all waste materials received in the same calendar month, and the resultant number shall be multiplied by 100 to express the ratio in percentage terms. The percentage computed shall be compared to the 3% limitation.

    c. Each day the total weight of segregated non-MSW materials received that are subject to the 5% restriction shall be computed, and the daily total shall be added to the sum of the daily totals from the previous days in the current calendar month. At the end of each calendar month, the resultant monthly total weight of segregated non-MSW materials subject to the 5% restriction shall be divided by the total weight of all waste materials received in the same calendar month, and the resultant number shall be multiplied by 100 to express the ratio in percentage terms. The percentage computed shall be compared to the 5% limitation.

    [Rules 62-4.070(1) and (3), and 62-210.200(BACT), F.A.C.]

36. Stack Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Compliance Authority on the results of each such test. The required test report shall be filed with the Compliance Authority as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Compliance Authority to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the specified in Rule 62-297.310(8), F.A.C. [Rule 62-297.310(8), F.A.C.]

37. Malfunction Notifications: If temporarily unable to comply with any condition of the permit due to breakdown of equipment (malfunction) or destruction by hazard of fire, wind or by other cause, the permittee shall immediately (within one working day) notify the Compliance Authority. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its 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 Department rules. If requested by the Compliance Authority, the owner or operator shall submit a quarterly written report describing the malfunction. [Rules 62-210.700(6) and 62-4.130, F.A.C.]

38. 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 CO and NO_X emissions in excess of the BACT permit standards and the amounts of authorized data excluded following the format in Appendix XSE of this permit. Periods of startup, shutdown and malfunction shall be monitored and recorded at all times. In addition, the report shall summarize the CEMS systems monitor availability for the previous quarter.

39. 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, F.A.C.]

DRAFT

B. Carbon and Lime Storage Silos (EU Nos. 027, 028, 029 and 030)

This section addresses the following EU.

E.U. ID No.	EU Descriptions
027	Lime Storage Silo #A
028	Lime Storage Silo #B
029	Lime Storage Silo #C
030	Activated Carbon Storage Silo

EQUIPMENT AND CONTROL TECHNOLOGY

1. Storage Silos: The permittee is authorized to construct three lime storage silos and one activated carbon storage silo. Each silo will have a volume of approximately 9,000 to 11,000 cubic feet.

2. FF Baghouses: Each storage silo will be equipped with its own FF baghouse to control PM emissions. Each baghouse shall be designed, operated and maintained to achieve a PM mass emission rate of 0.01 grains per dry standard cubic foot (gr/dscf) or less. The baghouses shall be operated during all silo filling operations.

PERFORMANCE REQUIREMENTS AND EMISSION STANDARDS

3. Hours of Operation: These EU may operate continuously (8,760 hours/year).
[Rules 62-4.160(2) and 62-210.228(PTE), F.A.C.]

4. FF Baghouse PM Emission Standard: PM emissions from each storage silo baghouse shall not exceed 0.010 gr/dscf. [Application No. 0990234-017-AC; Rules 62-4.070(3), 62-212.400 (BACT), 62-210.200(PTE) and 62-4.070, F.A.C.]

5. FF Baghouse PM Standard by Opacity Measurement: A visible emission reading of 5% opacity or less may be used to demonstrate compliance with the PM emission standard in **Specific Condition 4** above**.** A visible emission reading greater than 5% opacity will require the permittee to perform a PM emissions stack test within 60 days to show compliance with the PM standard.
[Application No. 0990234-017-AC; Rules 62-296.603; 62-296.712, 62-4.070 and 62-212.400 (BACT) F.A.C.; and 40 CFR 60.122(a)(2)]

   {Permitting Note: The baghouses are designed to control PM emissions to 0.010 gr/dscf. The 5% opacity limitation is consistent with this design and provides reasonable assurance that annual emissions of $PM/PM_{10}/PM_{2.5}$ for EU will be less than 0.1 TPY.}

6. Fugitive Emissions Limits: Fugitive emissions are limited to 10% opacity from any emissions point not controlled by a FF baghouse. [Rule 62-070(3), F.A.C.]

7. Best Management Practices to Control Unconfined Emissions of PM: To ensure the emission standards with regard to opacity and PM of this subsection are complied with, the procedures set forth in **Specific Condition 10** of **Section II** of this permit, "Unconfined Emissions of Particulate Matter," shall be adhered to where practical and cost effective.
[Application No. 0990234-017-AC; Rules 62-4.070, 62-296.320 and 62-212.400 (BACT) F.A.C.]

TESTING AND MONITORING REQUIREMENTS

8. Compliance Demonstrations: Each emission point shall be tested to demonstrate initial compliance with the emission standards for visible emissions given in **Specific Conditions 5 and 6** of this subsection in accordance with EPA Method 9. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup. Thereafter, compliance with the visible emission limits for each emission point shall be demonstrated during each federal fiscal year (October 1st to September 30th). As specified in Specific Condition 5 of this

DRAFT

subsection, a PM test must be conducted on a FF baghouse of a storage silos with 60 days of its failure in meeting the VE standard. [Rules 62-4.070(3), and 62-297.310(7)(a), F.A.C.]

9. Test Methods: Any required tests shall be performed in accordance with the following reference methods and the applicable requirements of Appendix CTR of this permit.

EPA Method	Description of Method and Comments
5	Determination of Particulate Emissions. The minimum sample volume shall be 30 dry standard cubic feet.
9	Visual Determination of the Opacity of Emissions from Stationary Sources

REPORTING AND RECORD KEEPING

10. Baghouse O&M Plan: For each baghouse the permittee shall prepare an operation and maintenance (O&M) plan to address proper operation, parametric monitoring, and a schedule for conducting periodic inspections and preventive maintenance. Baghouse inspections and maintenance activities shall be recorded in a written log. The O&M plan shall be submitted to the Compliance Authority prior to the initial compliance tests for these EU. [Rule 62-4.070(3), F.A.C.]

11. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the operating rate. [Rule 62-297.310(8), F.A.C.]

DRAFT

C. Diesel Fire Pump Engines (EU Nos. 031 and 032)

This section of the permit addresses the following EU.

EU ID No.	Emission Unit Description
031	One emergency diesel firewater pump engine with a maximum design rating of 250 hp
032	One emergency diesel firewater pump engine with a maximum design rating of 250 hp

NSPS AND NESHAP APPLICABILITY

1. NSPS Subpart IIII Applicability: Each pump engine is an Emergency Stationary Compression Ignition Internal Combustion Engine (Stationary ICE) and shall comply with applicable provisions of 40 CFR 60, Subpart IIII. [40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines]

2. NESHAP Subpart ZZZZ Applicability: The emergency pump engines are Liquid Fueled Reciprocating Internal Combustion Engines (RICE) and shall comply with applicable provisions of 40 CFR 63, Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c) the engines must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII.
[40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)]

EQUIPMENT SPECIFICATIONS

3. Engine Driven Fire Pumps: The permittee is authorized to install, operate, and maintain two emergency diesel fire pump engines. The pump engines will each have a maximum rating of 250 hp (186 kW) or smaller. [Application No. 0990234-017-AC and Rules 62-210.200(PTE) and 62-212.400 (BACT), F.A.C.]

4. ULSD Fuel Oil Storage Tank: The permittee is authorized to construct a 1,000 gallon tank to store ULSD fuel oil for use in the emergency diesel firewater pump engines. [Rule 62-4.070(3), F.A.C.]

   {Permitting Note: The ULSD fuel oil storage tank for the emergency diesel firewater pump engines at the PBREF2 facility is not subject to NSPS Subpart Kb because it stores a liquid (ULSD fuel oil) with a maximum true vapor pressure less than 3.5 kPa (0.51 pounds per square inch (psi)). Accordingly it is an unregulated emissions unit.}
   [40 CFR 60.110b(a) and (c) and Rule 62-204.800(7)(b), F.A.C.]

PERFORMANCE RESTRICTIONS

5. Hours of Operation: Each fire pump engine may operate up to 100 hours per year for maintenance and testing purposes. The duration of each maintenance and testing event for each pump engine shall not exceed 30 minutes in any hour, and shall not be conducted concurrently with maintenance and testing of the other pump engine nor the emergency generator diesel engine.
[Application No. 0990234-017-AC; Rules 62-210.200 (PTE) and 62-212.400 (BACT), F.A.C.]

6. Authorized Fuel: Each pump engine shall fire ULSD fuel oil. The ULSD fuel oil shall contain no more than 0.0015% sulfur by weight. [Application No. 0990234-017-AC; Rules 62-210.200 (PTE) and 62-212.400 (BACT), F.A.C.]

EMISSION STANDARDS

7. Emissions Limits: The emergency fire pump engines shall comply with the following emission limits and demonstrate compliance in accordance with the procedures given in 40 CFR 60, Subpart IIII. Manufacturer certification may be provided to the Department in lieu of actual testing. [40 CFR 60.4211 and Rule 62-4.070(3), F.A.C.]

DRAFT

C. Diesel Fire Pump Engines (EU Nos. 031 and 032)

Emergency Pumps (175 hp ≤ and < 300 hp)	**CO** (g/hp-hr)[1]	**PM** (g/hp-hr)	**SO_2** (% S)[2]	**NMHC[3]+NO_X** (g/hp-hr)
Subpart IIII (2009 and later)	2.6	0.15	0.0015	3.0

1. g/hp-hr means grams per horsepower-hour.
2. SO_2 emission standard will be met by using ULSD fuel oil in the fire pump engines with fuel sulfur (S) content of 0.0015% by weight.
3. Non-Methane Hydrocarbons

[Application No. 0990234-017-AC; 40 CFR 60, NSPS Subpart IIII; and Rules 62-4.070(3) and 62-212.400 (BACT), F.A.C.]

RECORDS AND REPORTS

8. Notification, Recordkeeping and Reporting Requirements: The permittee shall adhere to the compliance testing and certification requirements listed in 40 CFR 60.4211 and maintain records demonstrating fuel usage and quality. [Rule 62-212.400 (BACT), F.A.C. and 40 CFR 60.4211]

DRAFT

D. Emergency Generator (EU-033)

This section of the permit addresses the following emissions units.

EU ID No.	Emission Unit Description
033	One emergency diesel generator with a maximum design rating of 250 kW

NSPS AND NESHAP APPLICABILITY

1. NSPS Subpart IIII Applicability: This emergency generator is a Stationary Compression Ignition Internal Combustion Engine (Stationary ICE) and shall comply with applicable provisions of 40 CFR 60, Subpart IIII, including emission testing or certification. [40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines]

2. NESHAPS Subpart ZZZZ Applicability: The emergency generator is a Liquid Fueled Reciprocating Internal Combustion Engine (RICE) and shall comply with applicable provisions of 40 CFR 63, Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c) the generators must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII.
[40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)]

EQUIPMENT

3. Emergency Generator: The permittee is authorized to install, operate and maintain one emergency generator with a maximum design rating of 250 kW (335 hp) or smaller.
[Application No. 0990234-017-AC and Rules 62-210.200 (PTE) and 62-212.400 (BACT), F.A.C.]

4. ULSD Fuel Oil Storage Tank: The permittee is authorized to construct a 1,000 gallon tank to store ULSD fuel oil for use in the emergency diesel generator. [Rule 62-4.070(3), F.A.C.]

   {Permitting Note: The ULSD fuel oil storage tank for the emergency diesel generator at PBREF No. 2 is not subject to NSPS Subpart Kb because it stores a liquid (ULSD fuel oil) with a maximum true vapor pressure less than 3.5 kPa (0.51 pounds per square inch (psi)). Accordingly it is an unregulated emissions unit.} [40 CFR 60.110b(a) and (c) and Rule 62-204.800(7)(b), F.A.C.]

PERFORMANCE RESTRICTIONS

5. Hours of Operation: The emergency generator may operate up to 100 hours per year for maintenance and testing purposes. The duration of each maintenance and testing event shall not exceed 30 minutes in any hour, and shall not be conducted concurrently with maintenance and testing of the emergency fire water pump diesel engines.
[Application No. 0990234-017-AC and Rules 62-210.200 (PTE) and 62-212.400 (BACT), F.A.C.]

6. Authorized Fuel: The emergency generator shall fire ULSD fuel oil. The ULSD fuel oil shall contain no more than 0.0015% sulfur by weight.
[Application No. 0990234-017-AC and Rules 62-210.200 (PTE) and 62-212.400 (BACT), F.A.C.]

EMISSION STANDARDS

7. Emissions Limits: The emergency generator shall comply with the following emission limits and demonstrate compliance in accordance with the procedures given in 40 CFR 60, Subpart IIII. Manufacturer certification can be provided to the Department in lieu of actual stack testing.

DRAFT

D. Emergency Generator (EU-033)

Emergency Generator (225 kW ≤ and < 450 kW)	**CO** (g/kW-hr)[1]	**PM** (g/kW-hr)	**SO_2**[2] **(% S)**	**NMHC**[3]**+NO_X** (g/kW-hr)
Subpart IIII (2007 and later)	3.5	0.20	0.0015	4.0

1. g/kW-hr means grams per kilowatt-hour.
2. SO_2 emission standard will be met by using ULSD fuel oil in the emergency generator with fuel sulfur (S) content of 0.0015% by weight.
3. NMHC means Non-Methane Hydrocarbons.

[Application No. 0990234-017-AC, NSPS Subpart IIII; and Rules 62-4.070(3) and 62-212.400 (BACT), F.A.C.]

RECORDS AND REPORTS

8. Notification, Recordkeeping and Reporting Requirements: The permittee shall adhere to the compliance testing and certification requirements listed in 40 CFR 60.4211 and maintain records demonstrating fuel usage and quality. [40 CFR 60.4211]

DRAFT

E. Ash Handling System and Building (EU No. 034)

This section of the permit addresses the following EU.

EU ID No.	Emission Unit Description
034	Ash Handling System and Building

EQUIPMENT

1. Ash Handling Building: The permittee is authorized to install, operate, and maintain the ash handling system and building for handling bottom ash from the MWC units and fly ash from the FF baghouses.

2. Enclosed Conveyor System: The permittee is authorized to construct an enclosed conveyor system to transport collected ash from the boiler and air pollution control buildings to the ash management building.

3. Ash Processing Equipment: Within the ash handling building, the permittee is authorized to construct ash processing equipment including ferrous and non-ferrous recovery systems.

4. FF Baghouse: To minimize particulate matter emissions from the ash handling equipment, the permittee shall construct a FF baghouse through which air from the ash handling building will be routed to prior to discharge to the atmosphere.

   {Permitting Note: To minimize fugitive particulate matter emissions from the ash handling equipment, ash (bottom and fly) will be wetted to a moisture content of approximate of 20 to 25 percent.}

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

EMISSIONS AND PERFORMANCE REQUIREMENTS

5. Fugitive Ash Emissions:
   (a) On and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8 of Subpart A, no owner or operator of an affected facility shall cause to be discharged to the atmosphere visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) in excess of 5 percent of the observation period (i.e., 9 minutes per 3-hour period), as determined by EPA Reference Method 22 observations as specified in 40 CFR 60.58b(k), except as provided in paragraphs (b) and (c) below.
   (b) The emission limit specified in (a) above does not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however, the emission limit specified in (a) above does cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.
   (c) The provisions of (a) above do not apply during maintenance and repair of ash conveying systems.

   [40 CFR 60.36b and 40 CFR 60.55b]

6. Testing for Fugitive Ash Emissions: The procedures specified in (1) through (4) below shall be used for determining compliance with the fugitive ash emission limit under 40 CFR 60.55b.
   (1) The EPA Reference Method 22 shall be used for determining compliance with the fugitive ash emission limit under 40 CFR 60.55b. The minimum observation time shall be a series of three 1-hour observations. The observation period shall include times when the facility is transferring ash from the municipal waste combustor unit to the area where ash is stored or loaded into containers or trucks.

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

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

   (4) Following the date that the initial performance test for fugitive ash emissions is completed or is required to be completed under Sec. 60.8 for an affected facility, the owner or operator shall conduct a

performance test for fugitive ash emissions on an annual basis (no more than 12 calendar months following the previous performance test).

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

7. Ash Handling FF Baghouse PM Emission Standard: PM emissions from the baghouse of the ash handling building shall not exceed 0.010 gr/dscf. [Rules 62-4.070(3), 62-212.400 (BACT), 62-210.200(PTE) and 62-4.070, F.A.C.]

8. Baghouse PM Standard by Opacity Measurement: A visible emission reading of 5% opacity or less may be used to demonstrate compliance with the PM emission standard in **Specific Condition 7** above**.** A visible emission reading greater than 5% opacity will require the permittee to perform a PM emissions stack test within 60 days to show compliance with the PM standard.
[Rules 62-296.603; 62-296.712, 62-4.070 and 62-212.400 (BACT) F.A.C.; and 40 CFR 60.122(a)(2)]

TESTING AND MONITORING REQUIREMENTS

9. Initial Compliance Tests: The bottom and fly ash conveyors, transfer points, drop points, hoppers, chutes and dust collectors associated with this emission unit shall be tested to demonstrate initial compliance with the VE standards specified in **Specific Condition 5** of this subsection. The ash handling building FF baghouse shall be tested to demonstrate initial compliance with the VE standard specified in **Specific Condition 8** of this subsection. The initial tests shall be conducted within 180 days after initial operation.
[Rules 62-297.310(7)(a)1., F.A.C. and 62-4.070(3), F.A.C.]

10. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), the bottom and fly ash conveyors, transfer points, drop points, hoppers, chutes and dust collectors associated with this emission unit shall be tested to demonstrate compliance with the VE emissions standards specified in **Specific Condition 5** of this subsection. During each federal fiscal year (October 1st to September 30th), the ash handling building FF baghouse shall be tested to demonstrate compliance with the VE emissions standard specified in **Specific Condition 8** of this subsection.
[Rules 62-297.310(7)(a)4, 62-212.400 (BACT) and 62-4.070(3), F.A.C.]

11. Ash Handling Building FF Baghouse PM Compliance Test: The initial and annual VE tests in **Specific Conditions 9 and 10** of this subsection with regard to the ash handling building FF baghouse shall serve as a surrogate for the PM emissions tests. If the VE emissions standard in **Specific Condition 8** of this subsection is not met for the ash handling building FF baghouse, a PM test utilizing EPA Method 5 must be conducted on the baghouse stack to show compliance with the PM emissions standard in **Specific Condition 7** of this subsection within 60 days. [Rule 62-297.620(4), F.A.C.]

12. Bag Leak Detection: The permittee shall maintain continuous operation of bag leak detection systems, including records, on the ash handling building FF baghouse. Baghouse leak detection records shall be kept on site and made available upon request. [Rule 62-4.070(3), F.A.C.]

13. Test Methods: Any required tests shall be performed in accordance with the following methods.

EPA Method	Description of Method and Comments
5	Determination of Particulate Emissions. The minimum sample volume shall be 30 dry standard cubic feet.
22	Fugitive Opacity

DRAFT

RECORDS AND REPORTS

14. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the operating rate. [Rule 62-297.310(8), F.A.C.]

DRAFT