Florida Department of Environmental Protection

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PERMITTEE

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

Authorized Representative:
Mark Hammond, Executive Director

Air Permit No. 0990234-023-AC(PSD-FL-413A)
Palm Beach Renewable Energy Park
Palm Beach Renewable Energy Facility No. 2
Modification of Emergency Equipment
Expires: December 31, 2015
Palm Beach County

PROJECT

This is the final permit to modify Permit Number (No.) 0990234-017-AC (PSD-FL-413) to change the sizes of the emergency generator and fire pump engines, i.e., emergency equipment, at the permitted but yet to be constructed Palm Beach Renewable Energy Center Facility No. 2 (PBREF-2). The restriction that the duration of each emergency equipment maintenance and testing event shall not exceed 30 minutes in any hour, and shall not be conducted concurrently with maintenance and testing of other emergency equipment was removed. The emergency equipment will be located at the existing Palm Beach Renewable Energy Park, which is a municipal solid waste (MSW) facility categorized under Standard Industrial Classification No. 4953. Another modification is changing the designations for the three new municipal waste combustors (MWC) of the PBREF-2 from Nos. 1, 2 and 3 to Nos. 3, 4 and 5. This modification is being done to distinguish the three new MWC from the two existing MWC (Nos. 1 and 2) currently in operation at the PBREP. Finally, the fuel oil storage tank for the emergency generator is increased in size from 1,000 gallons to 3,500 gallons due to the larger size of the generator and an incorrect federal rule citation is corrected. 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 modification is organized into the following sections: Section 1 (General Information), including changes to emission unit (EU) descriptions, and Section 2 (Air Permit Modifications). 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 original project was subject to those for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality. A copy of this permit modification shall be filed with the referenced permit and shall become part of the permit.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida
Electronically Signed

Office of Permitting and Compliance
Division of Air Resource Management
Department of Environmental Protection
Tallahassee, Florida

Jeffery F. Koerner
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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) 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.

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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.
Electronically Signed

Lynn Scearce
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FACILITY DESCRIPTION

Permit No. 0990234-017-AC (PSD-FL-413) authorized the construction of the 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 and one 90 to100 megawatt (MW) steam turbine electrical generator (STG). The proposed work will be conducted at the existing PBREP.

PROPOSED PROJECT

Permit No. 0990234-017-AC (PSD-FL-413) also authorized the construction of three lime storage silos; one carbon storage silo; two diesel fire pump engines; one emergency generator; several fuel oil storage tanks; and one ash handling system and building. During final engineering design of the project, the applicant determined that the emergency equipment consisting of the two fire pump engines and the emergency generator needed to be increased in size. Specifically, the fire pump engines needed to be increased from 250 horsepower (hp) to 305 hp, while the emergency generator need to be increased in size from 250 kilowatts (kW) to 2,500 kW. Along with the generator size increase, the permittee requested that its fuel oil storage tank be increased in size from 1,000 gallons to 3,500 gallons. The permittee also requested that the restriction that the duration of each emergency equipment maintenance and testing event shall not exceed 30 minutes in any hour, and shall not be conducted concurrently with maintenance and testing of other emergency equipment, be removed. In addition, the permittee requested that the designations of the three MWC authorized by Permit No. 0990234-017-AC (PSD-FL-413) be changed from Nos. 1, 2 and 3 to Nos. 3, 4 and 5 so as not to be confused with the two MWC (Nos. 1 and 2) currently in operation at the PBREP. This permitting action modifies the original permit to increase the size of the emergency equipment, the size of one fuel oil storage tank, change the number designations of the three new MWC at the PBREF-2 and remove the maintenance and testing time restriction that applies to the emergency equipment.

Facility ID No. 0990234

EU ID No.	EU Description
024	Municipal Solid Waste Combustor No. 3
025	Municipal Solid Waste Combustor No. 4
026	Municipal Solid Waste Combustor No. 5
031	305 hp Diesel Fire Pump Engine A
032	305 hp Diesel Fire Pump Engine B
033	2,500 kW Emergency Generator

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.

Permit Modified: 0990234-017-AC (PSD-FL-413)
Subsection 3.A. Municipal Solid Waste Combustors (MWC) Units 1, 2, and 3 (EU Nos. 024, 025 and 026)

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 68.130, 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.]

Permit Modified: 0990234-017-AC (PSD-FL-413)
Subsection 3.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 305 hp
032	One emergency diesel firewater pump engine with a maximum design rating of 305 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 305 hp (227 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. [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.]

Emergency Pumps (300 hp ≤ and < 600 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]

Permit Modified: 0990234-017-AC (PSD-FL-413)
Subsection 3.D. Emergency Generator (EU No. 033)

This section of the permit addresses the following emissions unit.

EU ID No.	Emission Unit Description
033	One emergency diesel generator with a maximum design rating of 2,500 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 2,500 kW (3,364 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 3,500 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.
[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.

Emergency Generator (kW> 560)	**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	6.4

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]