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DIVISION OF AIR
RESOURCE MANAGEMENT

October 25, 2011



Mr. Jeffery F. Koerner
Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Solid Waste Authority of Palm Beach County
Palm Beach Renewable Energy Facility No. 2
Air Permit No. 0990234-017-AC (PSD-FL-413)
Permit Modification for Emergency Equipment

Dear Mr. Koerner,

Project NO: 0990234-023-AC - PSD-FL-413A

The Solid Waste Authority of Palm Beach County (the Authority) is pleased to submit this permit modification application to request revisions to the air construction permit issued for the Palm Beach Renewable Energy Facility No. 2 (Air Permit No. 0990234-017-AC (PSD-FL-413)). As we have recently discussed with the Department, the project has now entered the detailed design stage. The contractor selected to construct and operate the facility, Babcock & Wilcox (B&W), has provided updated design specifications that will require permit revisions with respect to the emergency generator and diesel fire pump engines planned for the facility. Accordingly, we have enclosed updated permit application forms (Attachment A) and emission calculations (Attachment B) for the emergency generator and diesel fire pump engines.

The Authority is also requesting the permit be amended to revise the emission unit descriptions for the municipal waste combustor (MWC) units. However, please recognize that there are no substantive changes to the permit being requested for the MWC units.

The requested permit revisions are as follows:

- Emergency Generator (EU-033) - Permit Section 3.D., Conditions 3, 4, and 5.

The permit authorizes the installation of a 250 kW (350 hp) emergency generator. The contractor's design specifies a larger emergency generator sized at 2.5 MW (3634 hp). Therefore, a permit revision is requested to specify a 2.5 MW (3634 hp) emergency generator. The contractor has chosen a larger size emergency generator for enhancement of plant and operator safety during periods of emergency operation such as in a situation with complete loss of electrical power. The additional loads to the emergency bus

include an emergency pump for boiler cooling, pump motors associated with B&W's water-cooled grate design, an air compressor for providing air to critical valves, and electric power for the selective catalytic reduction (SCR) system related motorized dampers as examples, among such others. As originally permitted, the generator is designated for use solely in emergency situations with no operating hour restriction for emergency use. It is also understood that the generator is limited to 100 hours per year of operation for maintenance and readiness testing purposes.

Because of the larger sized emergency generator now planned for the facility, the allowable size of the associated fuel oil tank (indicated in Condition 4 of Section 3.D.) is requested to be increased to 3,500 gallons. Also, it is our understanding from our recent discussions that the Department may consider removing the 30-minute testing period restriction specified in Condition 5 of Section 3.D. The Authority requests that the Department consider removing this provision from the permit as it could unintentionally restrict the operator's ability to thoroughly test the emergency unit.

■ Diesel Fire Pump Engines (EU-031 and 032) - Permit Section 3.C., Conditions 3 and 5.

The permit authorizes installation of two diesel fire pump engines, each with a maximum design rating of 250 hp. The contractor's design calls for a slightly larger 305 hp maximum design rating for these units. Therefore, a permit revision is requested to specify a maximum design rating of 305 hp for these units.

As indicated above for the emergency generator, the Authority is also requesting that the Department consider removing the 30-minute test period restriction for the diesel fire pump engines as specified under Condition 5 of Section 3.C.

■ Emission Unit Description (EU-024, 025, and 026) - Permit Section 1. (pg. 4)

The new combustors are designated as "Municipal Solid Waste Combustor No. 1, No. 2, and No. 3" in the permit. The Authority requests that the permit be amended to designate these new units as "Municipal Solid Waste Combustor No. 3, No. 4, and No. 5". This request is being made to help distinguish the existing combustors currently in operation at the Palm Beach Renewable Energy Park from the new combustors to be installed (the existing combustors are commonly referred to as "Units 1 and 2" in the Authority's internal documents and drawings). Please note that we are not requesting any changes to the Emission Unit ID Numbers specified in the permit.

We look forward to the Department's review of the Authority's proposed permit revisions. If you have any questions concerning the permit application, please contact Mr. Joel Cohn with Malcolm Pirnie/ARCADIS at (757) 873-4411 or via e-mail at Joel.Cohn@arcadis-us.com.

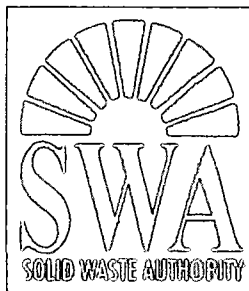
Very truly yours,



Mark Hammond
Executive Director
Solid Waste Authority of Palm Beach County

Attachments: Four (4) copies, Attachment A and Attachment B - Permit Modification Application, Palm Beach Renewable Energy Facility No. 2

cc: M. Bruner
R. Schauer
B. Worobel
M. Morrison
L. Richter, Malcolm Pirnie
J. Cohn, Malcolm Pirnie
A. Chattopadhyay, Malcolm Pirnie



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DIVISION OF AIR
RESOURCE MANAGEMENT

**Solid Waste Authority of
Palm Beach County
Palm Beach Renewable Energy Facility No. 2
Air Permit No. 0990234-017-AC (PSD-FL-413)
Permit Modification for
Emergency Equipment**

ARCADIS
2081 Vista Parkway
2nd Floor
West Palm Beach, Florida 33411
Tel 561.697.7000
Fax 561.697.7751

www.arcadis-us.com



ARCADIS

The Water Division of ARCADIS



Air Permit Modification Application
Solid Waste Authority of Palm Beach County

Attachment A

**FDEP Permit Application Form
(Revisions for Emergency Units)**

Palm Beach Renewable Energy Facility No. 2



03582056.0000



The Water Division of ARCADIS



Department of Environmental Protection

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Division of Air Resource Management APPLICATION FOR AIR PERMIT - LONG FORM

DIVISION OF AIR
RESOURCE MANAGEMENT

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- To establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial, revised, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: Solid Waste Authority of Palm Beach County	
2. Site Name: Palm Beach Renewable Energy Facility No. 2 (PBREF2)	
3. Facility Identification Number:	
4. Facility Location... Street Address or Other Locator: 7501 North Jog Road City: West Palm Beach County: Palm Beach Zip Code: 33412	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Application Contact

1. Application Contact Name: Joel S. Cohn, P.E.	
2. Application Contact Mailing Address... Organization/Firm: Malcolm Pirnie/ARCADIS U.S., Inc. Street Address: 701 Town Center Drive, Suite 600 City: Newport News State: Virginia Zip Code: 23606	
3. Application Contact Telephone Numbers... Telephone: (757) 873 - 4411 ext. Fax: (757) 873 - 8723	
4. Application Contact E-mail Address: joel.cohn@arcadis-us.com	

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 10-31-11	3. PSD Number (if applicable):
2. Project Number(s): 0990234-023-A	4. Siting Number (if applicable):

PSD-FL - 413 A

APPLICATION INFORMATION

Purpose of Application

This application for air permit is being submitted to obtain: (Check one)

Air Construction Permit

- Air construction permit.
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

- Initial Title V air operation permit.
- Title V air operation permit revision.
- Title V air operation permit renewal.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

- Air construction permit and Title V permit revision, incorporating the proposed project.
- Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

- I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

This purpose of this permit modification application is to request revisions to the air construction permit (Air Permit No. 0990234-017-AC (PSD-FL-413)) issued on December 23, 2010, for the Solid Waste Authority of Palm Beach County's Palm Beach Renewable Energy Facility No. 2 (PBREF2). The proposed permit revisions pertain to design changes for the emergency generator and diesel fire pump engines planned for installation at PBREF2.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
EU-031 EU-032	Diesel Fire Pumps (2 units)	AC1F	N/A
EU-033	Emergency Generator	AC1F	N/A


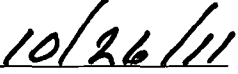
Application Processing Fee

Check one: Attached - Amount: \$ _____ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

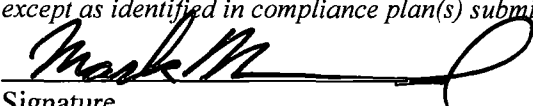
Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name : Mark Hammond, Executive Director
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Solid Waste Authority of Palm Beach County Street Address: 7501 North Jog Road City: West Palm Beach State: Florida Zip Code: 33412
3. Owner/Authorized Representative Telephone Numbers... Telephone: (561) 640-4000 ext. Fax: (561) 640-3400
4. Owner/Authorized Representative E-mail Address: mhammond@swa.org
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.</i>  Signature  Date

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: Mark Hammond, Executive Director
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input checked="" type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source, CAIR source, or Hg Budget source.
3. Application Responsible Official Mailing Address... Organization/Firm: Solid Waste Authority of Palm Beach County Street Address: 7501 North Jog Road City: West Palm Beach State: Florida Zip Code: 33412
4. Application Responsible Official Telephone Numbers... Telephone: (561) 640-4000 ext. Fax: (561) 640-3400
5. Application Responsible Official E-mail Address: mhammond@swa.org
6. Application Responsible Official Certification: <i>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</i>  Signature _____ Date <u>10/26/11</u>

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Amit Chattopadhyay Registration Number: 52823
2. Professional Engineer Mailing Address... Organization/Firm: Malcolm Pirnie/ARCADIS U.S., Inc. Street Address: 17-17 Route 208 North, 2nd Floor City: Fair Lawn State: NJ Zip Code: 07410
3. Professional Engineer Telephone Numbers... Telephone: (201) 398 - 4311 ext. Fax: (201) 797 - 4399
4. Professional Engineer E-mail Address: amit.chattopadhyay@arcadis-us.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i> Signature: <i>Amit Chattopadhyay</i> Date: <i>10/24/2011</i> (seal) STATE OF FLORIDA PROFESSIONAL ENGINEER No. 52823

* Attach any exceptions to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 585.3 North (km) 2961.7		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 26° 46' 33" Longitude (DD/MM/SS) 80° 08' 31"	
3. Governmental Facility Code: 3	4. Facility Status Code: C	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4953
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: Mark Hammond, Executive Director
2. Facility Contact Mailing Address... Organization/Firm: Solid Waste Authority of Palm Beach County Street Address: 7501 North Jog Road City: West Palm Beach State: Florida Zip Code: 33412
3. Facility Contact Telephone Numbers: Telephone: (561) 640-4000 ext. Fax: (561) 640-3400
4. Facility Contact E-mail Address: mhammond@swa.org

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: () - ext. Fax: () -
4. Facility Primary Responsible Official E-mail Address:
5. Potential, Fugitive, and Actual Emissions Comment:

EMISSIONS UNIT INFORMATION

Section [1] of [2]

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Two identical diesel fire pumps. These standby units will be used to provide power to pump water for fire suppression purposes in emergency situations.

3. Emissions Unit Identification Number: **EU-031, EU-032**

4. Emissions Unit Status Code: C	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 49
--	--------------------------------	--------------------------	---

8. Federal Program Applicability: (Check all that apply)

Acid Rain Unit

CAIR Unit

Hg Budget Unit

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:
The emissions unit information in this section applies to each of two identical diesel fire pumps each having a maximum power rating of 305 HP. The emissions information is provided on a per unit basis for each of the two diesel fire pumps.

EMISSIONS UNIT INFORMATION

Section [1] of [2]

Emissions Unit Control Equipment/Method: Control 1 of 1

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _ of _

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Not Applicable

Emissions Unit Control Equipment/Method: Control _ of _

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _ of _

1. Control Equipment/Method Description:
2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION

Section [1] of [2]

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:				
2. Maximum Production Rate:				
3. Maximum Heat Input Rate: 2.0 MMBtu/hr				
4. Maximum Incineration Rate: <p style="text-align: center;">pounds/hr tons/day</p>				
5. Requested Maximum Operating Schedule: <table style="width: 100%;"><tr><td style="text-align: center;">hours/day</td><td style="text-align: center;">day/week</td></tr><tr><td style="text-align: center;">weeks/year</td><td style="text-align: center;">100 hours/year</td></tr></table> <p>Additional operating time may be required in emergency situations. See comment below.</p>	hours/day	day/week	weeks/year	100 hours/year
hours/day	day/week			
weeks/year	100 hours/year			
6. Operating Capacity/Schedule Comment: <p>The requested maximum operating schedule reflects periodic maintenance and readiness testing of each diesel fire pump engine. Additional operating time may be required for operation during emergency situations.</p>				

EMISSIONS UNIT INFORMATION

Section [1] of [2]

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: See Figure 2-2 in PSD Permit Application for PBREF2, dated May 2010.		2. Emission Point Type Code: 1 (see comment below)	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: Not applicable			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: Not applicable			
5. Discharge Type Code: V	6. Stack Height: 25 feet	7. Exit Diameter: 0.42 feet	
8. Exit Temperature: 516 °C	9. Actual Volumetric Flow Rate: 1400 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate:		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 585.44 North (km): 2961.73		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Each of the two diesel fire pump units will have a separate exhaust. The exhaust temperature and flow rate provided above in items 8. and 9. is based on manufacturer information.			

EMISSIONS UNIT INFORMATION

Section [1] of [2]

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Fire Pump Engine - diesel fuel (ultra low sulfur, 15 ppm_w sulfur content)		
2. Source Classification Code (SCC): 20200102		3. SCC Units: Thousand Gallons Burned
4. Maximum Hourly Rate: 0.0146 (see comment)	5. Maximum Annual Rate: 1.46 (see comment)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.0015	8. Maximum % Ash:	9. Million Btu per SCC Unit: 138
10. Segment Comment: The maximum hourly rate data provided above in item 4. is based on engine specifications from John Deere Co. (14.6 gal/hr of diesel at 305 HP). The maximum annual rate assumes 100 hours per year of operation of each standby fire pump engine for maintenance and readiness testing. If emergency situations occur for extended periods, the maximum annual rate may increase.		

Segment Description and Rate: Segment of

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOX		2. Total Percent Efficiency of Control: %	
3. Potential Emissions: 1.88 lb/hour 0.094 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 2.8 grams/HP-hr Reference: John Deere Co., Clarke Model JU6H-UFADX8		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table B-1 for emission calculations			
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions shown in item 3. reflect operation of the fire pump engine for purposes of maintenance and readiness testing. Additional annual emissions may result if emergency situations occur requiring water for fire suppression purposes for extended periods.			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
 ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 2.8 grams/HP-hr	4. Equivalent Allowable Emissions: 1.88 lb/hour 0.094 tons/year
5. Method of Compliance: Purchasing fire pump engines that are certified by the manufacturer to meet the applicable emission standards and maintaining and operating the engines in accordance with manufacturer instructions.	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions shown above will meet NSPS (40 CFR 60, Subpart IIII for compression ignition internal combustion engines) and BACT requirements.	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**
 (Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: CO		2. Total Percent Efficiency of Control: %	
3. Potential Emissions: 0.35 lb/hour 0.017 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.52 grams/HP-hr Reference: John Deere Co., Clarke Model JU6H-UFADX8		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table B-1 for emission calculations			
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions shown in item 3. reflect operation of the fire pump engine for purposes of maintenance and readiness testing. Additional annual emissions may result if emergency situations occur requiring water for fire suppression purposes for extended periods.			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.52 grams/HP-hr	4. Equivalent Allowable Emissions: 0.35 lb/hour 0.017 tons/year
5. Method of Compliance: Purchasing fire pump engines that are certified by the manufacturer to meet the applicable emission standards and maintaining and operating the engines in accordance with manufacturer instructions.	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions shown above will meet NSPS (40 CFR 60, Subpart IIII for compression ignition internal combustion engines) and BACT requirements.	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: SO2		2. Total Percent Efficiency of Control: %	
3. Potential Emissions: 3.11E-03 lb/hour 1.55E-04 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 15 ppm_w sulfur content (ultra low sulfur diesel fuel) Reference: NSPS requirement		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table B-1 for emission calculations			
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions shown in item 3. reflect operation of the fire pump engine for purposes of maintenance and readiness testing. Additional annual emissions may result if emergency situations occur requiring water for fire suppression purposes for extended periods.			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 15 ppm_w sulfur content of fuel	4. Equivalent Allowable Emissions: 3.11E-03 lb/hour 1.55E-04 tons/year
5. Method of Compliance: Use of diesel fuel with maximum sulfur content specified by applicable NSPS requirements and maintaining and operating the units in accordance with manufacturer instructions.	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions reflect the use of ultra low sulfur fuel as required by NSPS (40 CFR 60, Subpart IIII for compression ignition internal combustion engines) and will meet BACT requirements.	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**
(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: PM		2. Total Percent Efficiency of Control: %	
3. Potential Emissions: 0.050 lb/hour 0.0025 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.075 grams/HP-hr Reference: John Deere Co., Clarke Model JU6H-UFADX8		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year.		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table B-1 for emission calculations			
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions shown in item 3. reflect operation of the fire pump engine for purposes of maintenance and readiness testing. Additional annual emissions may result if emergency situations occur requiring water for fire suppression purposes for extended periods.			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.075 grams/HP-hr	4. Equivalent Allowable Emissions: 0.050 lb/hour 0.0025 tons/year
5. Method of Compliance: Purchasing fire pump engines that are certified by the manufacturer to meet the applicable emission standards and maintaining and operating the engines in accordance with manufacturer instructions.	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions shown above will meet NSPS (40 CFR 60, Subpart III for compression ignition internal combustion engines) and BACT requirements.	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
 ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.1 grams/HP-hr	4. Equivalent Allowable Emissions: 0.067 lb/hour 0.0034 tons/year
5. Method of Compliance: Purchasing fire pump engines that are certified by the manufacturer to meet the applicable emission standards and maintaining and operating the engines in accordance with manufacturer instructions.	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions shown above will meet NSPS (40 CFR 60, Subpart IIII for compression ignition internal combustion engines) and BACT requirements.	

Allowable Emissions Allowable Emissions ___ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ___ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [1] of [2]

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ___ of ___

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer:	Serial Number:
Model Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Not Applicable

Continuous Monitoring System: Continuous Monitor ___ of ___

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer:	Serial Number:
Model Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [1] of [2]

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>see comment</u> <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>see comment</u> <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: <u>not applicable</u> <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>see comment</u> <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute: <input checked="" type="checkbox"/> Attached, Document ID: <u>see comment</u> <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [1] of [2]

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): <input checked="" type="checkbox"/> Attached, Document ID: <u>see comment</u> <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input type="checkbox"/> Attached, Document ID: _____
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Additional Requirements Comment

Additional information noted above is either provided below or was provided in the section identified below in the PSD Permit Application for PBREF2, dated May 2010.

Process Flow Diagram - not applicable since the diesel fire pumps are standby units for fire suppression purposes in emergencies (not part of process operations);
Fuel Analysis – ultra low sulfur diesel (15 ppm_w sulfur content) will be used as required by the applicable NSPS Subpart IIII;
Operation & Maintenance Plan is not available and is to be provided at a later date;
Other Information Required by Rule or Statute (see Section 4 of PSD Permit Application); and
Control Technology Review & Analysis (see Section 5 of PSD Permit Application).

EMISSIONS UNIT INFORMATION

Section [2] of [2]

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Emergency generator. This emergency unit will be used to provide limited power to the facility during periods of electrical power loss.

3. Emissions Unit Identification Number: **EU-033**

4. Emissions Unit Status Code: C	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 49
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8. Federal Program Applicability: (Check all that apply)

Acid Rain Unit

CAIR Unit

Hg Budget Unit

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **2500 kW (nominal)**

11. Emissions Unit Comment:

EMISSIONS UNIT INFORMATION

Section [2] of [2]

Emissions Unit Control Equipment/Method: Control __ of __

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control __ of __

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control __ of __

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control __ of __

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Not Applicable

EMISSIONS UNIT INFORMATION

Section [2] of [2]

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:
2. Maximum Production Rate:
3. Maximum Heat Input Rate: 23.9 MMBtu/hr
4. Maximum Incineration Rate: pounds/hr tons/day
5. Requested Maximum Operating Schedule: hours/day weeks/year day/week 100 hours/year
Additional operating time may be required in emergency situations. See comment below.
6. Operating Capacity/Schedule Comment: The requested maximum operating schedule reflects use for maintenance purposes and readiness testing of the emergency generator. Additional operating time may be required for operations during emergency situations (power outages).

EMISSIONS UNIT INFORMATION

Section [2] of [2]

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: See Figure 2-2 in PSD Permit Application for PBREF2, dated May 2010 (generator to be located in or near Switch Gear Room)		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: Not applicable			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: Not applicable			
5. Discharge Type Code: V	6. Stack Height: 26 feet	7. Exit Diameter: 0.83 feet	
8. Exit Temperature: 922 °F	9. Actual Volumetric Flow Rate: 19,049 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate:		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 585.22 North (km): 2961.74		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: The exhaust temperature and flow rate provided above in items 8. and 9. is based on manufacturer specifications from Caterpillar Inc.			

EMISSIONS UNIT INFORMATION

Section [2] of [2]

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Emergency generator – diesel fuel (ultra low sulfur, 15 ppm_w sulfur content)		
2. Source Classification Code (SCC): 20200102		3. SCC Units: Thousand Gallons Burned
4. Maximum Hourly Rate: 0.173 (see comment)	5. Maximum Annual Rate: 17.3 (see comment)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.0015	8. Maximum % Ash:	9. Million Btu per SCC Unit: 138
10. Segment Comment: The maximum hourly rate data provided above in item 4. is based on specifications from Caterpillar Inc. (173.3 gal/hr of diesel at 100% load condition). The maximum annual rate assumes 100 hours per year of operation for maintenance and readiness testing. If emergency situations occur for extended periods, the annual rate may increase.		

Segment Description and Rate: Segment __ of __

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

EMISSIONS UNIT INFORMATION

Section [2] of [2]

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
NOX			EL
CO			EL
SO2			EL
PM			EL
VOC			EL

EMISSIONS UNIT INFORMATION

Section [2] of [2]

POLLUTANT DETAIL INFORMATION

Page [1] of [5]

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOX		2. Total Percent Efficiency of Control: %	
3. Potential Emissions: 48.11 lb/hour 2.41 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 48.11 lb/hr Reference: Caterpillar Inc. (100% load condition)		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table B-2 for emission calculations			
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions shown in item 3. reflect operation of the emergency generator for purposes of maintenance and readiness testing. Additional annual emissions may result if emergency situations occur requiring use of the generator for extended periods.			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
 ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 48.11 lb/hr	4. Equivalent Allowable Emissions: 48.11 lb/hour 2.41 tons/year
5. Method of Compliance: Purchasing a generator that is certified by the manufacturer to meet the applicable emission standards and maintaining and operating the unit in accordance with manufacturer instructions.	
6. Allowable Emissions Comment (Description of Operating Method): Emissions will be certified by manufacturer to meet NSPS (40 CFR 60, Subpart IIII for compression ignition internal combustion engines) and will meet BACT requirements.	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: CO		2. Total Percent Efficiency of Control: %	
3. Potential Emissions: 5.86 lb/hour 0.29 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 5.86 lb/hr Reference: Caterpillar Inc. (100% load condition)		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table B-2 for emission calculations			
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions shown in item 3. reflect operation of the emergency generator for purposes of maintenance and readiness testing. Additional annual emissions may result if emergency situations occur requiring use of the generator for extended periods.			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 5.86 lb/hr	4. Equivalent Allowable Emissions: 5.86 lb/hour 0.29 tons/year
5. Method of Compliance: Purchasing a generator that is certified by the manufacturer to meet the applicable emission standards and maintaining and operating the unit in accordance with manufacturer instructions.	
6. Allowable Emissions Comment (Description of Operating Method): Emissions will be certified by manufacturer to meet NSPS (40 CFR 60, Subpart IIII for compression ignition internal combustion engines) and will meet BACT requirements.	

Allowable Emissions Allowable Emissions ___ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ___ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**
 (Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control: %
3. Potential Emissions: 0.037 lb/hour 0.0018 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 15 ppm_w sulfur content (ultra low sulfur diesel fuel) Reference: Caterpillar Inc.	7. Emissions Method Code: 0
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years
10. Calculation of Emissions: See Table B-2 for emission calculations	
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions shown in item 3. reflect operation of the emergency generator for purposes of maintenance and readiness testing. Additional annual emissions may result if emergency situations occur requiring use of the generator for extended periods.	

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 15 ppm_w sulfur content of fuel	4. Equivalent Allowable Emissions: 0.037 lb/hour 0.0018 tons/year
5. Method of Compliance: Use of diesel fuel with maximum sulfur content specified by applicable NSPS requirements and maintaining and operating the unit in accordance with manufacturer instructions.	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions reflect the use of ultra low sulfur fuel as required by NSPS (40 CFR 60, Subpart IIII for compression ignition internal combustion engines) and will meet BACT requirements.	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**
(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: PM		2. Total Percent Efficiency of Control: %	
3. Potential Emissions: 0.40 lb/hour 0.020 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.40 lb/hr Reference: Caterpillar Inc. (100% load condition)		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table B-2 for emission calculations			
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions shown in item 3. reflect operation of the emergency generator for purposes of maintenance and readiness testing. Additional annual emissions may result if emergency situations occur requiring use of the generator for extended periods.			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
 ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.40 lb/hr	4. Equivalent Allowable Emissions: 0.40 lb/hour 0.020 tons/year
5. Method of Compliance: Purchasing a generator that is certified by the manufacturer to meet the applicable emission standards and maintaining and operating the unit in accordance with manufacturer instructions.	
6. Allowable Emissions Comment (Description of Operating Method): Emissions will be certified by manufacturer to meet NSPS (40 CFR 60, Subpart IIII for compression ignition internal combustion engines) and will meet BACT requirements.	

Allowable Emissions Allowable Emissions ___ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ___ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: VOC		2. Total Percent Efficiency of Control: %	
3. Potential Emissions: 1.07 lb/hour 0.054 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 1.07 lb/hr Reference: Caterpillar Inc. (100% load condition)		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table B-2 for emission calculations			
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions shown in item 3. reflect operation of the emergency generator for purposes of maintenance and readiness testing. Additional annual emissions may result if emergency situations occur requiring use of the generator for extended periods.			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 1.07 grams/HP-hr	4. Equivalent Allowable Emissions: 1.07 lb/hour 0.054 tons/year
5. Method of Compliance: Purchasing a generator that is certified by the manufacturer to meet the applicable emission standards and maintaining and operating the unit in accordance with manufacturer instructions.	
6. Allowable Emissions Comment (Description of Operating Method): Emissions will be certified by manufacturer to meet NSPS (40 CFR 60, Subpart IIII for compression ignition internal combustion engines) and will meet BACT requirements.	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [2] of [2]

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation __ of __

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment: <p style="text-align: center; font-size: 2em; opacity: 0.5;">Not Applicable</p>	

Visible Emissions Limitation: Visible Emissions Limitation __ of __

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [2] of [2]

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ___ of ___

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer:	Serial Number:
Model Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Not Applicable

Continuous Monitoring System: Continuous Monitor ___ of ___

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer:	Serial Number:
Model Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [2] of [2]

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

<p>1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)</p> <p><input checked="" type="checkbox"/> Attached, Document ID: see comment <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)</p> <p><input checked="" type="checkbox"/> Attached, Document ID: see comment <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)</p> <p><input type="checkbox"/> Attached, Document ID: not applicable <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____</p> <p><input checked="" type="checkbox"/> Not Applicable (construction application)</p>
<p>5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)</p> <p><input checked="" type="checkbox"/> Attached, Document ID: see comment <input type="checkbox"/> Previously Submitted, Date _____</p> <p><input type="checkbox"/> Not Applicable</p>
<p>6. Compliance Demonstration Reports/Records:</p> <p><input type="checkbox"/> Attached, Document ID: _____</p> <p>Test Date(s)/Pollutant(s) Tested: _____</p> <p><input type="checkbox"/> Previously Submitted, Date: _____</p> <p>Test Date(s)/Pollutant(s) Tested: _____</p> <p><input type="checkbox"/> To be Submitted, Date (if known): _____</p> <p>Test Date(s)/Pollutant(s) Tested: _____</p> <p><input checked="" type="checkbox"/> Not Applicable</p> <p>Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.</p>
<p>7. Other Information Required by Rule or Statute:</p> <p><input checked="" type="checkbox"/> Attached, Document ID: see comment <input type="checkbox"/> Not Applicable</p>

EMISSIONS UNIT INFORMATION

Section [2] of [2]

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): <input checked="" type="checkbox"/> Attached, Document ID: <u>see comment</u> <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input type="checkbox"/> Attached, Document ID: _____
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements Comment

Additional information noted above is either provided below or was provided in the section identified below in the PSD Permit Application for PBREF2, dated May 2010.

Process Flow Diagram - not applicable since the emergency generator is a standby unit (not part of normal process operations);
Fuel Analysis – ultra low sulfur diesel (15 ppm_w sulfur content) will be used as required by the applicable NSPS Subpart IIII;
Operation & Maintenance Plan is not available and is to be provided at a later date;
Other Information Required by Rule or Statute (see Section 4 of PSD Permit Application); and
Control Technology Review & Analysis (see Section 5 of PSD Permit Application).



Air Permit Modification Application
Solid Waste Authority of Palm Beach County

Attachment B

**Emission Calculation Tables
(Updates for Emergency Units)**

Palm Beach Renewable Energy Facility No. 2



03582056.0000



The Water Division of ARCADIS

TABLE B-1
Estimated Emissions from Diesel Fire Pumps
Palm Beach Renewable Energy Facility No. 2

Fire Water Pump Engine Specifications (Diesel-Fired)	
Air Constuction Permit Emission Unit ID Numbers	031, 032
Power Output Rating (nominal, per unit)	305 hp
Maximum Annual Operating Hours (for maintenance & readiness testing)	100 hrs (per unit)

Pollutant	Emission Data* (g/hp-hr)	Maximum Estimated Emissions Per Unit	
		(lb/hr)	(tons/yr)
Nitrogen Oxides (NO _x)	2.8	1.88	0.094
Carbon Monoxide (CO)	0.52	0.35	0.017
Sulfur Dioxide (SO ₂)	**	0.003	0.0002
Particulate Matter (PM)	0.075	0.050	0.0025
VOC	0.1	0.067	0.0034

* Emissions data obtained from vendor emission data sheet (John Deere Power Systems, Clarke Model JU6H-UFADX8).

** SO₂ emissions are based on the use of ultra low sulfur diesel fuel (15 ppm_w sulfur content) and are calculated based on a 14.6 gal/hr maximum fuel consumption rate from vendor data and a 7.1 lb/gal fuel density.

TABLE B-2
Estimated Emissions from Emergency Generator
Palm Beach Renewable Energy Facility No. 2

Emergency Generator Specifications (Diesel-Fired)	
Air Construction Permit Emission Unit ID Number	033
Power Output Rating (nominal)	2,500 kW
Maximum Annual Operating Hours (for maintenance & readiness testing)	100 hrs

Pollutant	Maximum Estimated Emissions	
	(lb/hr)	(tons/yr)
Nitrogen Oxides (NO _x)	48.11	2.41
Carbon Monoxide (CO)	5.86	0.29
Sulfur Dioxide (SO ₂)	0.037	0.0018
Particulate Matter (PM)	0.40	0.020
VOC	1.07	0.054

* Hourly emissions data obtained from vendor emission data sheet (Caterpillar Inc., Model 3516CDITA). Maximum emissions conservatively reflect short-term, worst-case emissions at the 100 percent load condition as provided on the vendor emission data sheet. Average emission rates across the various load conditions will be lower to comply with the following federal emission standards for internal combustion engines (40 CFR 60, Subpart IIII and 40 CFR 89):

NO_x + NMHC: 6.4 g/kW-hr
CO: 3.5 g/kW-hr
PM: 0.2 g/kW-hr

** SO₂ emissions are based on the use of ultra low sulfur diesel fuel (15 ppm_w sulfur content) and are calculated based on a 173.3 gal/hr maximum fuel consumption rate from vendor data and a 7.1 lb/gal fuel density.