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Module AB201

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RESOURCE MANAGEMENT

July 16, 2013

SWA
SOLID WASTE AUTHORITY
YOUR PARTNER FOR
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Jeff Koerner
Administrator
Office of Permitting and Compliance
Florida Department Environmental Protection
Bob Martinez Center
2600 Blair Stone Road
Tallahassee, FL 32399-2400

0990234-029-AC

RE: Minor-Source AC Application for Replacement Emergency Generator (EU 37) NCRRF Scalehouse
Title V Air Permit 0990234-022-AV & PSD-FL-108J

Dear Jeff:

Please find attached minor-source air construction permit application for the Solid Waste Authority of Palm Beach County's (the Authority) replacement emergency generator for the Scalehouse at the North County Resource Recovery Facility (NCRRF) located at 7501 North Jog Road in West Palm Beach, FL.

The facility is currently operating under Title V air operating permit No. 0990234-022-AV and PSD-FL-108J. The Authority is proposing to replace the existing diesel-fired emergency generator at the Scalehouse (EU #037), which is a General Model 97A00 with a larger Caterpillar Model D60-8S emergency generator. The replacement emergency generator will be subject to the emissions standards contained in the 40 Code of Federal Regulations (CFR) Part 60 Subpart IIII, New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines. There will be no other changes to the NCRRF as a part of this project.

If you have any questions or need additional information please contact Mary Beth Morrison at (561) 640-4000 extension 4613.

Sincerely,

Mark Hammond
Executive Director
Solid Waste Authority of Palm Beach County

Attachments: Four (4) Copies AC Permit Application to Replace Existing Emergency Generator at the NCRRF Scalehouse

cc: Marc Bruner, SWA
Mark McLean, SWA
Mary Beth Morrison, SWA
Patrick Carroll, SWA
Ken Haertig, SWA
Sal Mohammad, Golder Associates
Ken Kosky, Golder Asscociates
Cynthia Hibbard, CDM Smith

Scott
Module AI3201

0090234-029-AC

Permit Application

AIR CONSTRUCTION PERMIT APPLICATION TO REPLACE EXISTING EMERGENCY GENERATOR AT THE NCRRF SCALEHOUSE

North County Regional Resource Recovery Facility

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

Submitted By: Golder Associates Inc.
6026 NW 1st Place
Gainesville, FL 32607 USA

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1 copy – Golder Associates Inc.

July 2013

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Golder Associates

APPLICATION FOR AIR PERMIT – LONG FORM

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

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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: **North County Regional Resource Recovery Facility**	
3. Facility Identification Number: **0990234**	
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? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Facility Contact Name: **Mary Beth Morrison, Environmental Programs Supervisor**
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: **Palm Beach** Zip Code: **33412**
3. Facility Contact Telephone Numbers: Telephone: (**561**) **640-4000** ext. **4613** Fax: (**561**) **640- 3400**
4. Facility Contact E-mail Address: **mmorrison@swa.org**

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 7-17-13	3. PSD Number (if applicable):
2. Project Number(s): 0990234-029-AC	4. Siting Number (if applicable):

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

Air construction permit application to replace existing emergency generator at the NCRRF Scalehouse (EU 037) with a new emergency generator.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
	Replacement 60 kW Emergency Generator for NCRRF Scalehouse	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: **FL** 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, 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.

   Signature

   7/15/13
   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:

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):

- ☐ 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.
- ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
- ☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.
- ☐ The designated representative at an Acid Rain source or CAIR source.

3. Application Responsible Official Mailing Address...
Organization/Firm:
Street Address:
City: State: Zip Code:

4. Application Responsible Official Telephone Numbers...
Telephone: ( ) - ext. Fax: ( ) -

5. Application Responsible Official E-mail Address:

6. Application Responsible Official Certification:

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.

Signature Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **Kennard F. Kosky**
   Registration Number: **14996**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates Inc.****
   Street Address: **6026 NW 1st Place**
   City: **Gainesville** State: **FL** Zip Code: **32607**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 336-5600** ext. **21156** Fax: **(352) 336-6603**
4. Professional Engineer E-mail Address: **Ken_Kosky@golder.com**
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(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

(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.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, 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.

(4) If the purpose of this application is to obtain an air construction permit (check here ☒, 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 ☐, 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.

(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 ☐, 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.

Signature 7/12/13 Date

(seal)

* Attach any exception to certification statement.
**Board of Professional Engineers Certificate of Authorization #00001670.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **585.82** North (km) **2960.474**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **26/45/53** Longitude (DD/MM/SS) **80/08/12**	
3. Governmental Facility Code: **3**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **49**	6. Facility SIC(s): **4953**
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: **Mary Beth Morrison, Environmental Programs Supervisor**
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: **FL** Zip Code: **33412**
3. Facility Contact Telephone Numbers: Telephone: **(561) 640-4000** ext. **4613** Fax: **(561) 640-3400**
4. Facility Contact E-mail Address: **mmorrison@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:

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☒ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☒ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☒ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	
The replacement emergency generator will be subject to the NSPS provisions under 40 CFR 60 Subpart IIII for Stationary Compression Ignition Internal Combustion Engines.	

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
NOx	A	N
CO	A	N
SO2	A	N
H106	A	N
VOC	B	N
PM	A	N
PM10	A	N
PB	B	N
D/F	B	N
H114	B	N
H027	B	N
NH3	B	N

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility-Wide Cap [Y or N]? (all units)	3. Emissions Unit ID's Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot 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)
   ☐ Attached, Document ID:____ ☒ Previously Submitted, Date: **5/10/2010**

2. Process Flow Diagram(s): (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)
   ☐ Attached, Document ID:____ ☒ Previously Submitted, Date: **5/10/2010**

3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (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)
   ☐ Attached, Document ID:____ ☒ Previously Submitted, Date: **5/10/2010**

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location:
   ☐ Attached, Document ID:_____ ☒ Not Applicable (existing permitted facility)

2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL):
   ☒ Attached, Document ID: **Part II**

3. Rule Applicability Analysis:
   ☒ Attached, Document ID: **Part II**

4. List of Exempt Emissions Units: Diesel storage tank, aqueous ammonia (19%) or urea storage tank, and ash handling system (based on 62-210.300(3)(b)1., F.A.C.)
   ☐ Attached, Document ID:_____ ☒ Not Applicable (no exempt units at facility)

5. Fugitive Emissions Identification:
   ☐ Attached, Document ID:_____ ☒ Not Applicable

6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable

7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable

8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable

9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable

10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
    ☐ Attached, Document ID:_____ ☒ Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units:
   ☐ Attached, Document ID:_____ ☒ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities: (Required for initial/renewal applications only)
   ☐ Attached, Document ID:_____ ☐ Not Applicable (revision application)

2. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought)
   ☐ Attached, Document ID:_____
   ☐ Not Applicable (revision application with no change in applicable requirements)

3. Compliance Report and Plan: (Required for all initial/revision/renewal applications)
   ☐ Attached, Document ID:_____
   Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.

4. List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only)
   ☐ Attached, Document ID:_____
   ☐ Equipment/Activities Onsite but Not Required to be Individually Listed
   ☐ Not Applicable

5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)
   ☐ Attached, Document ID:_____ ☐ Not Applicable

6. Requested Changes to Current Title V Air Operation Permit:
   ☐ Attached, Document ID:_____ ☐ Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program

1. Acid Rain Program Forms:

   Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable (not an Acid Rain source)

   Phase II NO_X Averaging Plan (DEP Form No. 62-210.900(1)(a)1.):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable

   New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable

2. CAIR Part (DEP Form No. 62-210.900(1)(b)):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable (not a CAIR source)

Additional Requirements Comment

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION
Section [1]
Emergency Generator

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:
   Replacement Emergency Generator for NCRRF Scalehouse.

3. Emissions Unit Identification Number:

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

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

   ☐ Acid Rain Unit

   ☐ CAIR Unit

9. Package Unit:
   Manufacturer: **Caterpillar** Model Number: **D60-8S**

10. Generator Nameplate Rating: **60** kW

11. Emissions Unit Comment:
    Caterpillar D60-8S emergency generator set associated with Caterpillar C4.4 diesel engine. See Part II for additional description.

EMISSIONS UNIT INFORMATION
Section [1]
Emergency Generator

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:

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: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: **24** hours/day **52** weeks/year	**7** days/week **8,760** hours/year
6. Operating Capacity/Schedule Comment: **The emergency engine will operate a combined total of 100 hr/yr for maintenance checks, readiness testing, and emergency demand response, which includes a maximum 50 hr/yr for non-emergency operation.** **There are no limits for emergency operation.**	

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:	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code:	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Internal Combustion Engines; Electric Generation; Distillate Oil; Reciprocating**		
2. Source Classification Code (SCC): **2-01-001-02**	3. SCC Units: **Thousand Gallons Burned**	
4. Maximum Hourly Rate: **0.0052**	5. Maximum Annual Rate: **0.52**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.0015**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **136**
10. Segment Comment: **Max annual rate = 5.2 gal/hr x 100 hr/yr = 520 gal/yr. Hourly fuel usage based on manufacturer data.**		

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:		

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
PM			**NS**
PM10			**NS**
PM2.5			**NS**
SO2			**NS**
CO			**NS**
VOC			**NS**
NOx			**NS**

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: **0.17** lb/hour **0.008** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **1.15 g/kWhr** Reference: **Manufacturer Data**	7. Emissions Method Code: **5**
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: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **See Table 1 in Part II.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

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: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **5.0 g/kWhr**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: **Maintain manufacturer certification**	
6. Allowable Emissions Comment (Description of Operating Method): **40 CFR 60 SUbpart IIII [Rule 60.4205(b)] and 40 CFR 89.112(a).**	

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: **NOx**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.63** lb/hour **0.032** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **4.33 g/kWhr** Reference: **Manufacturer Data**	7. Emissions Method Code: **5**
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: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **See Table 1 in Part II.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

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: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **4.7 g/kWhr**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: **Maintain manufacturer certification**	
6. Allowable Emissions Comment (Description of Operating Method): **40 CFR 60 SUbpart IIII [Rule 60.4205(b)] and 40 CFR 89.112(a).**	

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/PM10/PM2.5**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.03** lb/hour **0.001** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.18 g/kWhr** Reference: **Manufacturer Data**	7. Emissions Method Code: **5**
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: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **See Table 1 in Part II.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

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: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.40 g/kWhr**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: **Maintain manufacturer certification**	
6. Allowable Emissions Comment (Description of Operating Method): **40 CFR 60 SUbpart IIII [Rule 60.4205(b)] and 40 CFR 89.112(a).**	

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: **0.0006** lb/hour **0.00003** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0015% S (15 ppm)** Reference: **Fuel sulfur content**	7. Emissions Method Code: **4**
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: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **See Table 1 in Part II.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

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: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **Maximum S content of 15 ppm**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: **Fuel specification**	
6. Allowable Emissions Comment (Description of Operating Method): **40 CFR 60 SUbpart IIII [Rule 60.4207(b)] and 40 CFR 80.510(b).**	

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: **0.22** lb/hour **0.011** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0247 lb/hp-hr** Reference: **AP-42**	7. Emissions Method Code: **3**
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: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **See Table 1 in Part II.**	
11. Potential, Fugitive, and Actual Emissions Comment:	

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 ____ 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):	

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):	

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 1 of 1

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment: **Rule 62-296.320(4)(b), F.A.C., General visible emissions standard.**	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

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:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

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)
   ☐ Attached, Document ID: _____ ☐ 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)
   ☐ Attached, Document ID: _____ ☐ 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)
   ☐ Attached, Document ID: _____ ☐ 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)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ 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)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ 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:
   ☐ Attached, Document ID: _____ ☒ Not Applicable

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)): ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☐ Attached, Document ID: _____
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements Comment

PART II

PART II

APPLICATION FOR MINOR SOURCE AIR CONSTRUCTION PERMIT FOR EMERGENCY GENERATOR

EXECUTIVE SUMMARY

Solid Waste Authority of Palm Beach County (SWAPBC) is seeking authorization from the Florida Department of Environmental Protection (FDEP) to replace the existing emergency generator at the North County Resource Recovery Facility (NCRRF) Scalehouse (EU 037) with a new emergency generator, which is capable of generating more power than EU 037. Since the maximum potential emissions due to the collective maximum potential diesel fuel usage by all stationary reciprocating internal combustion engines (RICE) at the facility exceeds 64,000 gallons, the proposed new emergency generator is not exempt from requiring an air construction permit. The new emergency generator's potential to emit is less than 5 tons per year (TPY) for any regulated air pollutants based on a maximum requested operation not to exceed 100 hours/year. Therefore, a minor source air construction permit application is being submitted.

INTRODUCTION

SWAPBC's NCRRF, which is located at 7501 North Jog Road, West Palm Beach, FL is currently operating under Title V air operating permit No. 0990234-022-AV. This air permit application package consists of the appropriate application form [Part I; DEP Form 62-210.900(1)], a technical description of the project, and rule applicability for the project.

Based on permit No. 0990234-022-AV, the NCRRF currently operates 12 stationary RICE. EU037 is a General Model 97A00 diesel-fired emergency generator at the Scalehouse (ID # WTES-E1) with a power generation capacity of 14 kilowatts (kW) or 19 horsepower (hp). SWAPBC is proposing to replace EU 037 with a Caterpillar Model D60-8S emergency diesel generator set with a power output of 60 kW. The generator will be powered by a Caterpillar Model C4.4 inline 4-cylinder diesel engine rated at 88.5 brake horse power (bhp) and a total cylinder displacement of 4.4 liters. The emergency generator will be subject to the emissions standards contained in 40 Code of Federal Regulations (CFR) Part 60 Subpart IIII, New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines. There will be no other changes to the NCRRF as a part of this project.

RULE APPLICABILITY

Based on Rule 62-210.300(a), Florida Administrative Code (F.A.C.), unless exempt from permitting pursuant to paragraph 62-210.300(3)(a) or (b), F.A.C., or Rule 62-4.040, F.A.C., an air construction permit is required for any proposed new emissions unit prior to the beginning of construction. As stated in Rule 62-210.300(a)35, F.A.C., stationary RICE are exempt from requiring an air construction permit if collectively, all engines claiming this exemption at the same facility burn only diesel and do not burn more

than 64,000 gallons of diesel fuel. The existing stationary RICE at the NCRRF have the potential to collectively burn more than 64,000 gallons of diesel fuel. Therefore, the proposed new emergency generator requires an air construction permit.

Under Federal and State of Florida PSD review requirements, all major new or modified sources of air pollutants regulated under the Clean Air Act (CAA) must be reviewed and a pre-construction permit issued. The U.S. Environmental Protection Agency (EPA) has approved Florida's State Implementation Plan (SIP), which contains PSD regulations. The applicable PSD rules in Florida are found in Rule 62-212.400, Florida Administrative Code (F.A.C.).

A "major facility" is defined as any 1 of 28 named source categories that have the potential to emit 100 tons per year (TPY) or more, or any other stationary facility that has the potential to emit 250 TPY or more, of any pollutant regulated under the CAA. "Potential to emit" means the capability, at maximum design capacity, to emit a pollutant after the application of control equipment. Once a new source is determined to be a "major facility" for a particular pollutant, any pollutant emitted in amounts greater than the PSD significant emission rates is subject to PSD review. For an existing major source for which a modification is proposed, the modification is subject to PSD review if the net increase in emissions due to the modification is greater than the PSD significant emission rates.

The NCRRF is a major facility under FDEP rules. Based on Rule 62-210.200(205), F.A.C., "modification" is defined as any physical change in, change in the method of operation of, or addition to a facility which would result in an increase in the actual emissions of any pollutant subject to new source review regulation under the CAA. Because there will be an increase in emissions due to an existing emergency engine being replaced by a larger engine, the project is a potential modification as defined in the FDEP rules in Rule 62-210.200 and under the PSD rules in Rule 62-212.400, F.A.C. PSD review would be required for the project if there were a significant net increase in emissions.

Table 1 summarizes the potential emissions of regulated air pollutants including greenhouse gas (GHG) emissions for the proposed Caterpillar emergency generator set. As shown, the potential annual emissions based on 100 hours non-emergency operation per year are negligible and as such, a net emissions increase test for the facility is not warranted.

EMISSIONS STANDARDS AND OPERATIONAL LIMITATIONS

The proposed emergency generator is a stationary compression ignition internal combustion engine with a displacement of less than 30 liters per cylinder and the model year is 2007 or later. As a result, the engine is subject to 40 CFR 60 Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. Based on 40 CFR 60.4205(b), SWAPBC is required to maintain manufacturer certification of emissions standards contained in 40 CFR 89.112 and 40 CFR 89.113.

Pursuant to 40 CFR 89.112(a), the following Tier 3 exhaust emissions standards apply to the proposed new emergency generator:

- NO_X + NMHC – 4.7 g/kWhr
- CO – 5.0 g/kWhr
- PM – 0.40 g/kWhr

The Caterpillar performance data for the proposed emergency generator set is attached in Appendix A and as shown, the nominal emissions data are as follows:

- NO_X + NMHC – 4.33 g/kWhr
- CO – 1.15 g/kWhr
- PM – 0.18 g/kWhr

Pursuant to 40 CFR 60.4207(b), the emergency generator is required to use diesel fuel with a maximum sulfur content of 15 parts per million (0.0015-percent), or ultra-low-sulfur diesel fuel. According to 40 CFR 60.4209(a), a non-resettable hour meter must be installed prior to startup of the engines.

According to 40 CFR 60.4211(a), the following compliance requirements apply to the engine:

- **The engine must be operated and maintained according to manufacturer's emission** related written instructions.
- Change of emission-related setting are allowed only if permitted by the manufacturer
- Meet the Tier 3 emissions standards contained in 40 CFR 89.112

Pursuant to 40 CFR 60.4211(f), the emergency generator is subject to the following operating requirements:

- There is no limit on the use of the emergency generator in emergency situations
- The emergency engine may be used for a combined total of 100 hours per year for maintenance checks and readiness testing and emergency demand response as defined in 40 CR 60.4211(f)(2)(ii), and during deviation of voltage or frequency of 5-percent or greater below standard voltage or frequency.
- The emergency engine may be operated for up to 50 hours per year in non-emergency situations.

If the engine is installed, configured, operated, and maintained according to manufacturer's emission-related written instructions, then there are no testing requirements.

Since the engine is a new stationary RICE with a site rating of less than 500 hp located at a major source of HAP emissions and is subject to the requirements of 40 CFR 60 Subpart IIII, according to 40 CFR 63.6590(c), the engine meets the requirements under 40 CFR 63 Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary RICE and no further requirements apply.

TABLE

TABLE 1
POTENTIAL EMISSIONS FROM THE EMERGENCY GENERATOR
SWAPBC NCRRF

Pollutants	Emission Factor	Ref.	Activity Factor[a]					Potential Emissions (per engine)	
			Engine Power (kW)	Engine Power (bhp)	Fuel Consumption (gal/hr)	Maximum Heat Input[h] (MMBtu/hr)	Operating Hours	(lb/hr)	(TPY)
Carbon Monoxide (CO)	1.15 g/kWhr	a	66.0	88.5	5.2	0.72	100	0.17	0.008
Nitrogen Oxides (NOx)	4.33 g/kWhr	a	66.0	88.5	5.2	0.72	100	0.63	0.032
Particulate Matter (PM)	0.18 g/kWhr	a	66.0	88.5	5.2	0.72	100	0.03	0.001
Particulate Matter (PM_{10})	0.18 g/kWhr	b	66.0	88.5	5.2	0.72	100	0.03	0.001
Particulate Matter ($PM_{2.5}$)	0.18 g/kWhr	b	66.0	88.5	5.2	0.72	100	0.03	0.001
Sulfur Dioxide (SO_2)	0.0015 % S	c	66.0	88.5	5.2	0.72	100	0.0006	0.00003
Volatile Organic Compounds (VOC)	2.47E-03 lb/hp-hr	d	66.0	88.5	5.2	0.72	100	0.22	0.011
Greenhouse Gases (GHG)									
Carbon Dioxide (CO_2)	163.01 lb/MMBtu	e	66.0	88.5	5.2	0.72	100	116.97	5.85
Nitrous Oxide (N_2O)	1.32E-03 lb/MMBtu	f	66.0	88.5	5.2	0.72	100	9.49E-04	4.74E-05
Methane (CH_4)	6.61E-03 lb/MMBtu	f	66.0	88.5	5.2	0.72	100	4.74E-03	2.37E-04
Total GHG as CO_{2e}[g]									5.87

[a] Activity factors and emissions data are based on Caterpillar performance data for CAT C4.4 diesel engine.

[b] PM_{10} and $PM_{2.5}$ emissions are assumed to be equal to estimated PM emissions.

[c] Based on firing of ultra low-sulfur diesel.

[d] Based on AP-42, Chapter 3.3, Gasoline and diesel industrial engines (10/96).

[e] 40 CFR 98 Table C-1.

[f] 40 CFR 98 Table C-2.

[g] Carbon dioxide equivalent (CO2e) calculated using the following formula: CO2e (TPY) = CO2 (TPY) x 1 + N2O (TPY) x 210 + CH4 (TPY) x 21

[h] Calculated based on assuming heating value of 138,000 Btu/gal.

Golder Associates

APPENDIX A

CATERPILLAR ENGINE SPECIFICATIONS

DIESEL GENERATOR SET

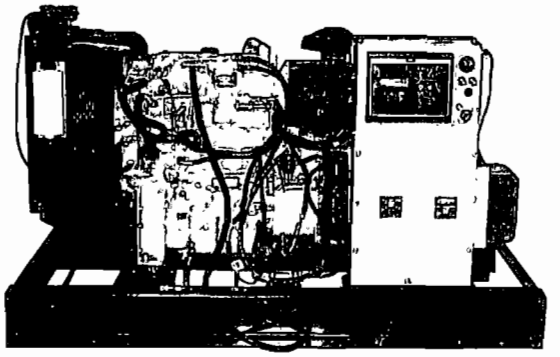

Image shown may not reflect actual package.

STANDBY
60 ekW 60 kVA

PRIME
55 ekW 55 kVA

60 Hz 1800 rpm 240/120 Volts

Caterpillar is leading the power generation marketplace with Power Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

FEATURES

FUEL/EMISSIONS STRATEGY
- EPA Certified for Stationary Emergency Application (EPA Tier 3 emissions levels)

FULL RANGE OF ATTACHMENTS
- Wide range of bolt-on system expansion attachments, factory designed and tested
- Flexible packaging options for easy and cost effective installation

SINGLE-SOURCE SUPPLIER
- Fully prototype tested with certified torsional vibration analysis available

WORLDWIDE PRODUCT SUPPORT
- Cat dealers provide extensive post sale support including maintenance and repair agreements
- Cat dealers have over 1,800 dealer branch stores operating in 200 countries
- The Cat® S•O•SSM program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products

Cat Model D60-8S, Single Phase

CAT® C4.4 DIESEL ENGINE
- Reliable, rugged, durable design
- Field-proven in thousands of applications worldwide
- Four-stroke diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic engine control

GENERATOR SET
- Complete system designed and built at ISO 9001 certified facilities
- Factory tested to design specifications at full load conditions

CAT EMCP 4 CONTROL PANELS
- Simple user friendly interface and navigation
- Scalable system to meet a wide range ofcustomer needs
- Integrated Control System and Communications Gateway

SEISMIC CERTIFICATION
- Seismic Certification available
- Anchoring details are site specific, and are dependent on many factors such as generator set size, weight, and concrete strength. IBC Certification requires that the anchoring system used is reviewed and approved by a Professional Engineer
- Seismic Certification per Applicable Building codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, IBC 2012 CBC 2007, CBC 2010
- Pre-approved by OSHPD and carries an OSP-0321-10 for use in healthcare projects in California

STANDBY 60 ekW 60 kVA
PRIME 55 ekW 55 kVA
60 Hz 1800 rpm 240/120 Volts

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FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	• Dry replaceable paper element type with restriction indicator	
Cooling	• Radiator and cooling fan complete with protective guards • Standard ambient temperatures up to 50°C (122°F)	[ ] Radiator stone guard [ ] Radiator transition flange
Exhaust		[ ] Industrial [ ] Residential [ ] Critical mufflers [ ] Overhead silencer mounting kit
Fuel	• Flexible fuel lines to base with NPT connections	[ ] Sub-base dual wall UL listed 24 hr fuel tank [ ] Sub-base dual wall UL listed 48 hr fuel tank [ ] Emergency vent 12ft extension [ ] 5 gallon spill containment
Generator	• Class H insulation • Drip proof generator air intake (NEMA 2,IP23) • Electrical design in accordance with with BS5000 Part 99, EN61000-6, IEC60034-1, NEMA MG-1.33 • IP23 Protection	[ ] Generator upgrade 1 size [ ] Permanent magnet excitation [ ] Internal excitation [ ] Anti-condensation space heater
Power Termination	• Circuit breakers, UL/CSA listed, 3 pole (100% rated) • Power center houses EMCP controller and control terminations (CB) • Segregated low voltage wiring termination panel • NEMA 1 steel enclosure, vibration isolated • Electrical stub-up area directly below circuit breaker	[ ] Auxiliary contacts [ ] Shunt trip [ ] Overload shutdown via breaker
Governor	• ADEM™A4	
Control Panels	• EMCP 4.2 digital control panel • Vibration isolated NEMA 1 enclosure with lockable hinged door • DC and AC Wiring harnesses	[ ] NFPA110 upgrade [ ] Control panel chassis
Lube		[ ] Lube oil heater
Mounting	• Heavy-duty fabricated steel base with lifting points • Anti-vibration pads to ensure vibration isolation • Complete OSHA guarding • Stub-up pipe ready for connection to silencer pipework	[ ] IBC Seismic and OSHPD certification per Applicable Building Codes: IBC2000, IBC2003, IBC2006, IBC 2009, IBC 2012, CBC 2007, CBC 2010
Starting/Charging	• 12 volt starting motor • Batteries with rack and cables	[ ] Battery charger – UL 10 amp [ ] Battery disconnect switch [ ] Battery removal (does not remove rack and cables) [ ] Coolant Heater
General	• High gloss polyurethane paint, Caterpillar Yellow except rails and radiators gloss black • Anticorrosive paint protection • All electroplated hardware	[ ] CSA Certified [ ] Weather protective enclosure Industrial/Critical [ ] Sound attenuated protective enclosure [ ] Caterpillar tool set [ ] Caterpillar White paint

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SPECIFICATIONS

STANDARD CAT GENERATOR	
Frame size	LCB2014H
Excitation	Self excitation
Pitch	0.6667
Number of poles	4
Number of bearings	Single bearing
Number of leads	4
Insulation	Class H
IP Rating	IP23
Overspeed capability (%)	125
Wave form deviation (%)	2
Voltage regulation	+/- 1.0% (steady state)
CAT DIESEL ENGINE	
C4.4 In-line 4, 4-cycle diesel	
Bore	105.0 mm (4,13 in)
Stroke	127.0 mm (5.0 in)
Displacement	4.4 L (268.5 in³)
Compression ratio	16.2:1
Aspiration	T
Fuel system	Common rail
Governor type	Electronic
EMISSIONS (Nominal[1])	
NOx + HC g/kWhr	4.33
CO g/kWhr	1.15
PM g/kWhr	0.18

[1]The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engne variations. Emissions data is based on 100% load.

CAT EMCP 4 SERIES CONTROLS

EMCP 4 controls including:
- Run / Auto / Stop Control
- Speed and Voltage Adjust
- Engine Cycle Crank
- 12 volt DC operation
- Environmental sealed front face
- Text alarm/event descriptions

Digital indication for:
- RPM
- DC volts
- Operating hours
- Oil pressure (psi, kPa or bar)
- Coolant temperature
- Volts (L-L & L-N), frequency (Hz)
- Amps (per phase & average)
- ekW, kVA, kVAR, kW-hr, %kW, PF

Warning/shutdown with common LED indication of:
- Low oil pressure
- High coolant temperature
- Overspeed
- Emergency stop
- Failure to start (overcrank)
- Low coolant temperature
- Low coolant level

Programmable protective relaying functions:
- Generator phase sequence
- Over/Under voltage (27/59)
- Over/Under frequency (81 o/u)
- Reverse power (kW) (32)
- Reverse reactive power (kVAr) (32RV)
- Overcurrent (50/51)

Communications:
- Six digital inputs
- Four relay outputs (Form A)
- Two relay outputs (Form C)
- Two digital outputs
- Customer data link (Modbus RTU)
- Accessory module data link
- Serial annunciator module data link
- Emergency stop pushbutton

Compatible with the following:
- Digital I/O module
- Local annunciator
- Remote CAN annunciator
- Remote serial annunciator

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TECHNICAL DATA

Open Generator Set – 1800 rpm/60 Hz/480 Volts	P3468A		P3468B	
Tier 3	**STANDBY**		**PRIME**	
Generator Set Package Performance				
Genset power rating @ 0.8 pf	60.0 kVA		55.0 kVA	
Genset power rating with fan	60.0 ekW		55.0 ekW	
Fuel Consumption				
100% load with fan	19.5 L/hr	5.2 gal/hr	18.7 L/hr	4.9 gal/hr
75% load with fan	16.7 L/hr	4.4 gal/hr	15.8 L/hr	4.2 gal/hr
50% load with fan	12.8 L/hr	3.4 gal/hr	12.0 L/hr	3.2 gal/hr
Cooling System[1]				
Air flow restriction (system)	0.12 kPa	0.48 in. water	0.12 kPa	0.48 in. water
Engine coolant capacity with radiator/exp. tank	16.5 L	4.4 gal	16.5 L	4.4 gal
Engine coolant capacity	9.5 L	2.5 gal	9.5 L	2.5 gal
Radiator coolant capacity	7.0 L	1.8 gal	7.0 L	1.8 gal
Inlet Air				
Combustion air inlet flow rate	5.9 m³/min	208.4 cfm	5.9 m³/min	208.4 cfm
Exhaust System				
Exhaust stack gas temperature	547.0°C	1017 °F	525.0°C	977 °F
Exhaust gas flow rate	14.7 m³/min	519 cfm	14.4 m³/min	509 cfm
Exhaust flange size (internal diameter)	63.5 mm	2.5 in	63.5 mm	2.5 in
Exhaust system back pressure	15 kPa	60.2 in. water	15 kPa	60.2 in. water
Heat Rejection				
Heat rejection to coolant (total)	49.6 kW	2821 Btu/min	46.7 kW	2656 Btu/min
Heat rejection to exhaust (total)	66.9 kW	3805 Btu/min	65.9 kW	3742 Btu/min
Heat rejection to atmosphere from engine	14.9 kW	847.3 Btu/min	10.8 kW	614.2 Btu/min
Heat rejection to atmosphere from generator	6.1 kW	346.9 Btu/min	5.4 kW	307.1 Btu/min
Alternator[2]				
Motor starting capability @ 30% voltage dip	163 skV		163 skV	
Frame	LC2014HF		LC2014HF	
Temperature rise	105°C	189°F	105°C	189°F
Lubrication System				
Total oil capacity	8.4 L	2.2 gal	8.4 L	2.2 gal
Oil pan	6.9 L	1.8 gal	6.9 L	1.8 gal

[1]For ambient and altitude capabilities consult your Cat dealer. Airflow restriction (system) is added to existing restriction from factory.

[2]Generator temperature rise is based on a 40°C (104°F) ambient per NEMA MG1-32.

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RATING DEFINITIONS AND CONDITIONS

Applicable Codes and Standards: AS1359, CSA C22.2 No 100-04, UL142, UL489, UL601, UL869, UL2200, NFPA 37, NFPA 70, NFPA 99, NFPA 110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG 1-22, NEMA MG 1-33, 72/23/EEC, 98/37/EC, 2004/108/EC.

Standby – Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Prime – Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand of 100% of prime-rated eKW with 10% of overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

Fuel rates are based on fuel oil to specification EPA 2D 89.330-96 with a density of 0.845 – 0.850 kg/L (7.052 – 7.094 lbs/U.S. gal.) @ 15°C (59°F) and fuel inlet temperature 40°C (104°F). Additional ratings may be available for specific customer requirements, contact your Cat representative for details. For information regarding Low Sulfur fuel and Biodiesel capability, please consult your Cat dealer.

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DIMENSIONS

Package Dimensions		
Length	1932 mm	76 in
Width	1110 mm	44 in
Height	1767 mm	46 in

NOTE: For reference only – do not use for installation design. Please contact your local dealer for exact weight and dimensions. (General Dimension Drawing #3989305).

Performance No.: P3468A/B

Feature Code: NAC141P

Gen. Arr. Number: 3932521

Source: U.S. Sourced

LEHE0428-01 (04/13)

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At Golder Associates we strive to be the most respected global group of companies specializing in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organizational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

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