Application

APPLICATION FOR INITIAL TITLE V PERMIT

FPL West County Energy Center – Units 1 and 2

Prepared for: Florida Power & Light Company
700 Universe Blvd.
Juno Beach, FL 33408 USA

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

November 2009

093-87697

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BUREAU OF AIR REGULATION

Ms. Trina L. Vielhauer, Chief Bureau of Air Regulation
Florida Department of Environmental Protection
111 South Magnolia Drive
Magnolia Parkway Courtyard
Tallahassee, FL 32301-2973

RE: FPL WEST COUNTY ENERGY CENTER DEP FILE NO. 0990646-001-AC; PSD-FL-354 - INITIAL TITLE V APPLICATION

-0990646-004-AV

Dear Trina:

Please find attached 7 copies of the initial Title V application for the FPL West County Energy Center. The application is for both Units 1 and 2 that have become operational. Compliance tests for Unit 1 have been completed and will be submitted according to the air construction permit conditions when the reports are finalized. The compliance tests for Unit 2 will begin in the near future with testing reports submitted according the air construction permit conditions. Compliance testing when the units utilize ultra low distillate fuel oil will be performed in the future according the air construction permit conditions when this alternate method of operation becomes operational. A compliance plan has been included addressing the testing.

It is requested that two administrative corrections be made to the Title V permit that clarify conditions regarding excess emissions. Specifically, the administrative corrections are requested in Condition 18 of the air construction permit and are identified below.

- Fuel Switching - Condition 18.d. expressly authorizes excess emissions as follows: "For fuel switching, excess emissions shall not exceed 2 hours in any 24-hour period." This specific condition authorizes fuel switching for oil-to-gas and gas-to-oil, which are approved alternate method of operation. Both of these fuel switches require sufficient time (i.e., 2 hours) to stabilize the combustion process when the units are switched to either fuel. In the general description of the excess emission allowed condition, the wording is as follows: "As specified in this condition, excess emission resulting from startup, shutdown, oil-to-gas fuel switches and documented malfunctions are allowed provided that operators employ the best operational practices to minimize the amount and duration of emissions during such incidents." It is requested that the wording "oil-to-gas" be removed since the specific condition authorizes both oil-to-gas and gas-to-oil, which was the intent of the condition and similar to that on all FPL combined cycle units.

- Steam Turbine/HRSG System Cold Startup – Condition 18.a. authorizes excess emissions as follows: "For cold startup of the steam turbine system, excess emissions from any gas turbine/HRSG system shall not exceed 8 hours in any 24-hour period. A cold 'startup of the steam turbine system' is defined as startup of the 3-on-1 combined cycle system following a shutdown of the steam turbine lasting at least 48 hours." This specific condition has a permitting note that states: "During a cold startup of the steam turbine system, each gas turbine/HRSG system is sequentially brought on line at low load to gradually increase the temperature of the steam-electrical turbine and prevent metal fatigue. Note that shutdowns and documented malfunctions are separately regulated in accordance with the requirements of this condition." Since this excess emission condition applies to any gas turbine/HRSG system and each gas turbine/HRSG system is

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sequentially brought on line, the entire period of sequential excess emissions could be up to 24 hours. It is requested that this time maximum time period for the 3-on-1 combined cycle system be indentified in the permitting note. The suggested wording to be added to the permitting note is: "As a result, the total time of maximum excess emissions authorized for the cold startup of the steam turbine in the 3-on-1 combined cycle system, is 24 hours with excess emissions for each gas turbine/HRSG not exceeding 8 hours in any 24-hour period."

It is also requested that an administrative correction be made to the Title V permit with regards to the limited use gas-fueled auxiliary boiler (EU 009) and the two gas-fueled process heaters (EU010). Specific condition No. 1 in Section D of the air construction permit references the applicability of 40 CFR 63, Subpart *DDDDD*. Since the regulation has been vacated, it is requested that references to this NESHAP be removed from the permit.

Please call or email Mr. John Hampp, who is identified as the application contact, or me if there are any questions.

Sincerely,

GOLDER ASSOCIATES INC.

Kennard F. Kosky, P.E.
Principal

KFK/JDP/nav

cc: John Hampp, FPL-JES
Carmine Priore, FPL-WCEC
David Fawcett, FPL-WCEC
Jeremy Paul, Golder
Sal Mohammad, Golder

APPLICATION FOR AIR PERMIT – LONG FORM

Department of Environmental Protection

Division of Air Resource Management

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BUREAU OF AIR REGULATION

APPLICATION FOR AIR PERMIT - LONG FORM

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: **Florida Power & Light Company**	
2. Site Name: **West County Energy Center**	
3. Facility Identification Number: **0990646**	
4. Facility Location... Street Address or Other Locator: **20505 State Road 80** City: **Loxahatchee** County: **Palm Beach** Zip Code: **33470**	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☐ Yes ☒ No

Application Contact

1. Application Contact Name: **John Hampp, Environmental Services Manager**
2. Application Contact Mailing Address... Organization/Firm: **Florida Power & Light Company** Street Address: **700 Universe Blvd.** City: **Juno Beach** State: **FL** Zip Code: **33408**
3. Application Contact Telephone Numbers... Telephone: **(561) 691-2894** ext. Fax: **(561) 691-7049**
4. Application Contact E-mail Address: **John.Hampp@FPL.com**

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 11/12/09	3. PSD Number (if applicable):
2. Project Number(s): 0990646 - 064-AV	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

Application is for the initial Title V operating permit for FPL West County Energy Center's 1,250-MW combined cycle Units 1 and 2, each consisting of three nominal 250-MW Mitsubishi Heavy Industries (MHI) 501G gas turbines. Additional ancillary equipment includes two 26-cell mechanical draft cooling towers, one 97.7-MMBtu/hr auxiliary boiler, three nominal 2,250-kW emergency generators, one emergency fire pump, two diesel fuel storage tanks, and other associated support equipment. Construction of the equipment was permitted under air construction permit No. 0990646-001-AC/PSD-FL-354. Extended operating hours for the auxiliary boiler has been permitted in the air construction draft permit No. 0990646-003-AC.

Air Construction Permit No. 0990646-001-AC/PSD-FL-354 references the now vacated 40 CFR 63, Subpart DDDDD applicability for the Auxiliary Boiler and the Natural Gas Heater. Since this regulation has been vacated, FPL requests that the references to this NESHAP be removed from the permit.

Also please note that the maximum rated heat input for each natural gas process heater is less than 10 MMBtu/hr and therefore 40 CFR 60, Subpart Dc, is not applicable to these units.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
001, 002, 003	Combined Cycle Units 1A, 1B, and 1C		
004, 005, 006	Combined Cycle Units 2A, 2B, and 2C		
007	Two 6.3 Million Gallon No. 2 Fuel Oil Storage Tanks		
008	Two 26-Cell Mechanical Draft Cooling Towers		
011	Three Nominal 2,250 kW Emergency Generators		
012	One Diesel Emergency Fire Pump Engine		
009	One 97.7-MMBtu/hr Auxiliary Boiler		
010	Two 8.3 MMBtu/hr Process Heaters		

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 :
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Owner/Authorized Representative Telephone Numbers... Telephone: ( ) ext. Fax: ( )
4. Owner/Authorized Representative E-mail Address:
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 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:
   Carmine Priore, Plant General Manager, FPL-West County Energy Center

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, CAIR source, or Hg Budget source.

3. Application Responsible Official Mailing Address...
   Organization/Firm: **Florida Power & Light Company**
   Street Address: **20505 SR 80**
   City: **Loxahatchee** State: **FL** Zip Code: **33470**

4. Application Responsible Official Telephone Numbers...
   Telephone: **(561) 904-4904** ext. Fax: **(561) 904-2200**

5. Application Responsible Official E-mail Address: **Carmine.Priore@FPL.com**

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

Carmine A. Priore III, PE
Plant General Manager
West County Energy Center

November 6, 2009
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. Fax: **(352) 336-6603**
4. Professional Engineer E-mail Address: **kkosky@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 (seal) 11/11/09 Date

* 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) **562.19** North (km) **2953.04**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **26/41/54.98** Longitude (DD/MM/SS) **80/22/29.54**	
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **49**	6. Facility SIC(s): **4911**
7. Facility Comment : **FPL West County Energy Center consists of two nominal 1,250 MW power blocks each with three combustion turbine (CT)/heat recovery steam generator (HRSG) trains (Units 1 and 2).**			

Facility Contact

1. Facility Contact Name: **David Fawcett, Environmental and Water Management Leader**
2. Facility Contact Mailing Address... Organization/Firm: **Florida Power & Light Company** Street Address: **20505 State Road 80** City: **Loxahatchee** State: **FL** Zip Code: **33470**
3. Facility Contact Telephone Numbers: Telephone: **(561) 904-4907** ext. Fax: **(561) 904-2200**
4. Facility Contact E-mail Address: **David.Fawcett@FPL.com**

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:	

CTs and duct burners are subject to 40 CFR 60, Subpart KKKK and 40 CFR 60, Subpart YYYY.
Auxiliary Boiler is subject to 40 CFR 60, Subpart Dc.
Diesel Fire Pump Engine and Emergency Generators are subject to 40 CFR 60, Subpart IIII.
Emergency Generators subject to 40 CFR 60, Subpart ZZZZ.

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM	**A**	**N**
PM10	**A**	**N**
VOC	**A**	**N**
SO2	**A**	**N**
NOx	**A**	**N**
CO	**A**	**N**
SAM	**A**	**N**
H095 (Formaldehyde)	**A**	**N**
HAPS	**A**	**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: FPL-FI-C1 ☐ Previously Submitted, Date:_____

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: SEE EU Sections ☐ Previously Submitted, Date:_____

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: FPL-FI-C3 ☐ Previously Submitted, Date:_____

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:_____

3. Rule Applicability Analysis:
   ☐ Attached, Document ID:_____

4. List of Exempt Emissions Units:
   ☐ 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: FPL-FI-CV1 ☐ 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: FPL-FI-CV2
   ☐ 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: FPL-FI-CV3
   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: FPL-FI-CV4
   ☐ 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: **July 2006**
   ☐ 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

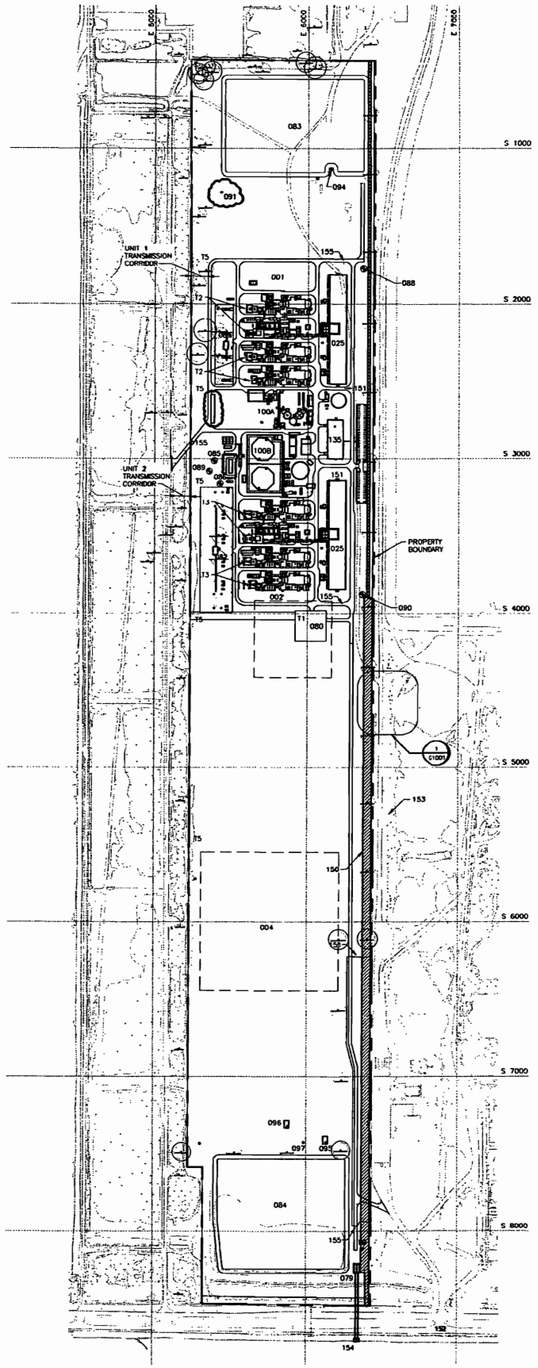
2. CAIR Part (DEP Form No. 62-210.900(1)(b)):
   ☐ Attached, Document ID:_____ ☒ Previously Submitted, Date: **July 2006**
   ☐ Not Applicable (not a CAIR source)

3. Hg Budget Part (DEP Form No. 62-210.900(1)(c)):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable (not a Hg Budget unit)

Additional Requirements Comment

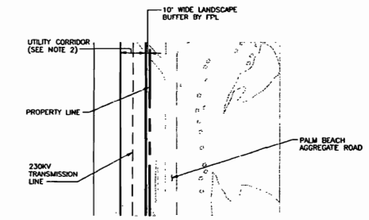
ATTACHMENT FPL-FI-C1

FACILITY PLOT PLAN



FACILITIES LEGEND

ID	FACILITY	FOUNDATION	TIEDOWN LOCATION SOUTH	TIEDOWN LOCATION EAST	REMARKS
001	UNIT 1 POWER BLOCK AREA	–	–	–	
002	UNIT 2 POWER BLOCK AREA	–	–	–	
004	500 kV SUBSTATION (FUTURE)	–	–	–	
025	COOLING TOWER BASIN	XHRC-S5804	–	–	
079	RAW WATER INTAKE STRUCTURE	CBSU-S5750	–	–	
080	GULFSTREAM METERING & REGULATING STATION 705	–	–	–	
081	230 kV COLLECTOR YARD	–	–	–	
082	500 kV COLLECTOR YARD	–	–	–	
083	NORTH STORMWATER POND	–	–	–	
084	SOUTH STORMWATER POND	–	–	–	
085	ABANDONED CONSTRUCTION WELL	–	3012.00	5385.50	CL WELL
086	ABANDONED CONSTRUCTION WELL	–	3159.65	5425.15	CL WELL
088	FLORIDAN AQUIFER WELL FAW-1	CBSU-S5776	1771.00	6354.28	CL WELL
089	FLORIDAN AQUIFER WELL FAW-2	CBSU-S5776	3080.00	5353.00	CL WELL
090	FLORIDAN AQUIFER WELL FAW-3	CBSU-S5776	3877.00	6354.28	CL WELL
091	FLORIDAN AQUIFER WELL FAW-4	CBSU-S5776	1283.00	5430.00	CL WELL
094	FLORIDAN AQUIFER MONITORING WELL FAMW-1	–	1136.07	6143.38	CL WELL
095	DEEP INJECTION WELL IW-1	–	7426.12	6128.36	CL WELL
096	DEEP INJECTION WELL IW-2	CBSU-S5776	7323.59	5880.83	CL WELL
097	DUAL ZONE MONITORING WELL DZMW-1	–	-7426.12	5983.36	CL WELL
100A	WATER TREATMENT AREA	S5700 SERIES	–	–	
100B	FUEL OIL AREA	S5600 SERIES	–	–	
135	ADMIN/CONTROL/WAREHOUSE BUILDING	CBSF-S5301	–	–	–
150	EAST UTILITY CORRIDOR	–	–	–	
151	MOTORIZED SLIDE GATE	–	–	–	
152	SOUTHERN BLVD	–	–	–	
153	PALM BEACH AGGREGATE	–	–	–	
154	RAW WATER INLET STRUCTURE	CBSU-S5754	–	–	
155	SWING GATE	–	–	–	–



DETAIL 1
SCALE: 1"=100'

PROJECT SURVEY CONTROL

NEW CONTROL MONUMENT LOCATIONS

MONUMENT NO.	PLANT COORDINATES NORTH/SOUTH	PLANT COORDINATES EAST/WEST	PLANT ELEVATION	STATE PLANE COORDINATES NORTHING	STATE PLANE COORDINATES EASTING	NAVD88 ELEVATION
BM-1	S 1211.75	E 6280.75	–	862,711.8253	860,686.3427	–
BM-2	S 1785.25	E 5488.50	–	862,149.5259	859,885.9636	–
BM-3	S 1785.25	E 6133.50	–	862,140.2921	860,530.8975	–
BM-4	S 2587.25	E 6103.50	–	861,338.8038	860,489.4191	–
BM-5	S 3081.25	E 5490.00	–	860,853.8373	859,868.9098	–
BM-6	S 3103.75	E 5114.75	–	860,832.1956	860,493.2737	–
BM-7	S 3943.75	E 5528.00	–	859,990.6817	859,894.5583	–
BM-8	S 6132.25	E 6308.50	–	855,791.4372	860,615.0155	–
CP-1	S 2000.00	E 6000.00	–	861,927.4753	860,394.3368	–
CP-2	S 2307.00	E 6000.00	–	861,620.5068	860,389.9418	–
CP-3	S 2457.00	E 6000.00	–	861,470.5221	860,387.7944	–
CP-4	S 3327.00	E 6000.00	–	860,600.6113	860,375.3394	–
CP-5	S 3634.00	E 6000.00	–	860,293.8427	860,370.9444	–
CP-6	S 3784.00	E 6000.00	–	860,143.6581	860,368.7970	–
Z-1	S 2000.00	E 6417.50	–	861,921.4983	860,811.7940	23.836
Z-2	S 3000.00	E 6417.50	–	860,921.6008	860,797.4780	24.156
Z-3	S 4000.00	E 6417.50	–	859,921.7033	860,783.1619	24.22
Z-4	S 5000.00	E 6417.50	–	858,921.8058	860,768.8438	24.303

CONTROL POINTS CP-1 THRU CP-6 ARE LOCATED AT CENTER OF STACKS.

EXISTING CONTROL MONUMENT LOCATIONS

MONUMENT NO.	PLANT COORDINATES NORTH/SOUTH	PLANT COORDINATES EAST/WEST	PLANT ELEVATION	STATE PLANE COORDINATES NORTHING	STATE PLANE COORDINATES EASTING	NAVD88 ELEVATION
1	S 3330.97	E 4687.61	88.95	860,615.4280	859,063.0252	13.45
2	S 177.65	E 4668.59	87.87	863,768.7003	859,089.1500	12.37
3	S 1286.60	E 6083.69	97.72	862,638.8024	860,488.2340	22.22
4	S 8478.94	E 4497.86	90.88	855,470.7082	858,799.6025	15.38
5	S 8538.27	E 7200.70	91.09	855,372.6835	861,501.3097	15.59

NOTE: HORIZONTAL CONTROL IS BASED ON THE FLORIDA STATE PLANE COORDINATE – EAST ZONE (1983 N.A.D.) SYSTEM. THE ELEVATIONS ARE BASED ON THE NAVD88 DATUM. PLANT GRID SYSTEM IS BASED ON STATE PLANE COORDINATE N 861,927.4753 , E 860,394.3368 EQUALING PLANT GRID COORDINATE S 2,000.00 , E 6,000.00 THE PLANT GRID SYSTEM IS ROTATED 0°49'13" CLOCKWISE FROM TRUE NORTH. PLANT ELEVATION 100.0' EQUALS 24.50' NAVD88. CONTROL MONUMENTS LABELLED AS HUNCHAMAKS (HM) WILL BE A HUMANHUNI COMMOK MONI MUNUHUNI STA. TYPICAL DETAIL ON THIS DRAWING. EXISTING CONTROL POINTS WERE PROVIDED BY AERO-METRIC, INC.

TERMINAL POINTS

T1 FUEL GAS
T2 230KV GSU DEAD-END TOWER
T3 500KV GSU DEAD-END TOWER
T4 NOT USED
T5 CONSTRUCTION POWER

NOTES

1. SEE DRAWING CSTA-G1001 FOR SITE PLOT PLAN.
2. UTILITY CORRIDOR TO INCLUDE:
   230KV TRANSMISSION LINE
   INTAKE WATER
   INJECTION WELL
   DATA LINES
   U1/U2 DUCTBANK
   FLORIDAN WELL
   POTABLE WATER

ALL BACKCIRCLED CHANGES PER ECN N-S-0219

ATTACHMENT FPL-FI-C1

APPROVED FOR CONSTRUCTION

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRWG	CHK	POC	APP
2	12/04/2008	REVISED PER ECN N-S-0186	CDC	TER	TLK	TLK
1	06/13/2008	REVISED PER ECN N-S-0186	TER	TER	JJS	JJS
0	06-20-2007	ISSUED FOR CONSTRUCTION	JMS	TER	JJS	SEP

STATE PLANE / PLANT 0°49'13"

300' 150' 0 300' 600'
1"=300'

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF FLORIDA.
SIGNED JAMES JOSEPH SHERMAN
DATE 06-20-2007 REG. NO. 51652

WEST COUNTY Power Partners, LLC	FLORIDA POWER & LIGHT WEST COUNTY ENERGY CENTER	PROJECT / DRAWING NUMBER	REV
ENGINEER TEB DRAWN CDC	SITE – ARRANGEMENTS OVERALL SITE PLOT PLAN	FPLWC-CSTA-G1000	2
CHECKED JJS DATE 06-20-2007		CODE / AREA	

ACAD 16.1s (LMS Tech)
DATE 12/04/08 13:32:57
CADFILE csta-g1000

ATTACHMENT FPL-FI-C3

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

ATTACHMENT FPL-FI-C3

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

The facility has negligible amounts of unconfined particulate matter as a result of the operation of the facility. Reasonable precautions are undertaken at the facility, pursuant to Rule 62-296.320(4)(c)2, F.A.C., as applicable, to minimize particulate emissions.

a. Paving and maintenance of roads, parking areas, and yards

b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing

c. Application of asphalt, water, oil, chemicals, or other dust suppressants to unpaved roads, yards, open stock piles, and similar activities

d. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment and from buildings or work areas to prevent particulate from becoming airborne

e. Landscaping or planting of vegetation

f. Use of hoods, fans, filters, and similar equipment to contain, capture, and/or vent particulate matter

g. Confining abrasive blasting where possible

h. Enclosure or covering of conveyor systems

ATTACHMENT FPL-FI-CV1

LIST OF INSIGNIFICANT EMISSIONS UNITS AND/OR ACTIVITIES

ATTACHMENT FPL-FI-CV1
LIST OF INSIGNIFICANT ACTIVITIES

A list of existing units and/or activities that are considered to be insignificant and are exempted from Title V permitting under Rule 62-213.430(6) is presented below. The exempt activities listed are also those activities that are included in Rule 62-210.300(3)(a) that would not exceed the thresholds in Rule 62-213.430(6)(b)3.

Brief Description of Emissions Units and/or Activities:

- Internal combustion engines of vehicles used for transportation of passengers or freight
- Vacuum pumps in laboratory operations
- Equipment used for steam cleaning
- Belt or drum sanders having a total sanding surface of 5 square feet or less
- Laboratory equipment used exclusively for chemical or physical analyses
- Brazing, soldering, or welding equipment
- Fire and safety equipment
- Petroleum lubrication systems
- Degreasing units
- Non-halogenated solvent storage and cleaning operations
- Surface coating operations
- Combustion turbine lube oil vents
- Steam turbine lube oil vents
- Miscellaneous steam and condensate vents
- Two 82,850-gallon aqueous ammonia (19-percent) storage tanks
- Sealed drums and containers
- Natural gas metering station
- Compressed nitrogen bottles
- Compressed air systems
- Storage & use of water treatment chemicals
- Water treatment systems
- Lube oil storage area (55-gallon lube oil drums)
- Parts washer (aliphatic hydrocarbon solvent)
- Miscellaneous painting activities
- Two 20,000-gallon each oil/water separators
- Cooling tower HCl storage tanks (2)
- Water treatment chemicals
- Water treatment HCl tank

- Water treatment ferric chloride tank
- Two lime silos (40 ton) with dust collectors
- Two soda ash silos (60 ton) with dust collectors
- Miscellaneous electrical equipment
- Miscellaneous enclosed oil filled equipment
- Enclosed transformers
- Spent lime stock out building
- No. 2 fuel oil tank truck unloading area
- Fire pump diesel storage
- Tank truck unloading area
- Storage of bottled gases
- Four propane-fired emergency generators (30 kW)
- Three, 1,000-gallon each backup diesel generator storage tanks
- Two, 15,000 gallon each steam turbine lube oil storage tanks
- Six, 1,000-gallon each false start drains/CT water wash drains tanks
- Six, 6,875-gallon each CT Lube oil storage tank/accessory modules
- Four, 1,050-gallon each, mineral oil tanks for generator SFC isolation transformers
- Six, 490-gallon each, mineral oil tanks for CTG excitation transformers
- Two, 244-gallon each, mineral oil tanks for surface water intake 480V MCC transformers
- Two, 486-gallon each, mineral oil tanks for common area 480V SUS transformers
- Six, 409-gallon each, mineral oil tanks for CTG 480 SUS transformers
- Two, 409-gallon each, mineral oil tanks for ST 480V SUS transformers
- Four, 486-gallon each mineral oil tanks for cooling tower 480V MCC transformers
- Two, 5,445-gallon tanks for auxiliary transformers
- Six 13,334-gallon each, mineral oil tanks for CT Generator step-up transformers
- One 16,233-gallon mineral oil tank for Unit 1 steam turbine generator step-up transformers
- One 22,288-gallon mineral oil tank for Unit 2 steam turbine generator step-up transformer
- Two 1,240-gallon each, mineral oil tanks for steam turbine excitation transformers
- Two 200-gallon each, hydraulic oil tanks for steam turbine electro-hydraulic control unit skid
- New and used oil drum storage
- Six 120-gallon each, boiler feed pump lube oil tanks

ATTACHMENT FPL-FI-CV2

IDENTIFICATION OF APPLICABLE REQUIREMENTS

ATTACHMENT FPL-FI-CV2

TITLE V CORE LIST

Effective: 03/01/02

(Updated based on current version of FDEP Air Rules)

[Note: The Title V Core List is meant to simplify the completion of the "List of Applicable Regulations" for DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List.]

Federal: ***(description)***

40 CFR 61, Subpart M: NESHAP for Asbestos.

40 CFR 82: Protection of Stratospheric Ozone.
40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).
40 CFR 82, Subpart F: Recycling and Emissions Reduction.

State: ***(description)***

CHAPTER 62-4, F.A.C.: PERMITS, effective 03-16-08

62-4.030, F.A.C.: General Prohibition.
62-4.040, F.A.C.: Exemptions.
62-4.050, F.A.C.: Procedure to Obtain Permits; Application.
62-4.060, F.A.C.: Consultation.
62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.
62-4.080, F.A.C.: Modification of Permit Conditions.
62-4.090, F.A.C.: Renewals.
62-4.100, F.A.C.: Suspension and Revocation.
62-4.110, F.A.C.: Financial Responsibility.
62-4.120, F.A.C.: Transfer of Permits.
62-4.130, F.A.C.: Transferability of Definitions.
62-4.150, F.A.C.: Review.
62-4.160, F.A.C.: Permit Conditions.
62-4.210, F.A.C.: Construction Permits.
62-4.220, F.A.C.: Operation Permit for New Sources.

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 06-29-09

62-210.300, F.A.C.: Permits Required.
62-210.300(1), F.A.C.: Air Construction Permits.
62-210.300(2), F.A.C.: Air Operation Permits.
62-210.300(3), F.A.C.: Exemptions.
62-210.300(5), F.A.C.: Notification of Startup.
62-210.300(6), F.A.C.: Emissions Unit Reclassification.
62-210.300(7), F.A.C.: Transfer of Air Permits.
62-210.350, F.A.C.: Public Notice and Comment.
62-210.350(1), F.A.C.: Public Notice of Proposed Agency Action.
62-210.350(2), F.A.C.: Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment-Area Preconstruction Review.
62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.

62-210.360, F.A.C.: Administrative Permit Corrections.
62-210.370, F.A.C.: Emissions Computation and Reporting.
62-210.400, F.A.C.: Emission Estimates.
62-210.650, F.A.C.: Circumvention.
62-210.700, F.A.C.: Excess Emissions.

62-210.900, F.A.C.: Forms and Instructions.
62-210.900(1), F.A.C.: Application for Air Permit – Title V Source, Form and Instructions.
62-210.900(5), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.
62-210.900(7), F.A.C.: Application for Transfer of Air Permit – Title V and Non-Title V Source.

CHAPTER 62-212, F.A.C.: STATIONARY SOURCES - PRECONSTRUCTION REVIEW, effective 06-29-09

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 10-12-08

62-213.205, F.A.C.: Annual Emissions Fee.
62-213.400, F.A.C.: Permits and Permit Revisions Required.
62-213.410, F.A.C.: Changes Without Permit Revision.
62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.
62-213.415, F.A.C.: Trading of Emissions Within a Source.
62-213.420, F.A.C.: Permit Applications.
62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.
62-213.440, F.A.C.: Permit Content.
62-213.450, F.A.C.: Permit Review by EPA and Affected States
62-213.460, F.A.C.: Permit Shield.

62-213.900, F.A.C.: Forms and Instructions.
62-213.900(1), F.A.C.: Major Air Pollution Source Annual Emissions Fee Form.
62-213.900(7), F.A.C.: Statement of Compliance Form.

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 10-06-08

62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter.

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.

CHAPTER 62-297, F.A.C.: STATIONARY SOURCES - EMISSIONS MONITORING, effective 2-12-04

62-297.310, F.A.C.: General Test Requirements.
62-297.310(4), F.A.C.: Applicable Test Procedures.
62-297.310(7), F.A.C.: Frequency of Compliance Tests.
62-297.310(6), F.A.C.: Repaired Stack Sampling Facilities.
62-297.310(5), F.A.C.: Determination of Process Variables.
62-297.510(8), F.A.C.: Test Report.
62-297.620, F.A.C.: Exceptions and Approval of Alternate Procedures and Requirements.

Miscellaneous:

CHAPTER 28-106, F.A.C.: Decisions Determining Substantial Interests
CHAPTER 62-110, F.A.C.: Exception to the Uniform Rules of Procedure, effective 07-01-98
CHAPTER 62-256, F.A.C.: Open Burning and Frost Protection Fires, effective 10-06-08
CHAPTER 62-257, F.A.C.: Asbestos Notification and Fee, effective 10-12-08
CHAPTER 62-281, F.A.C.: Motor Vehicle Air Conditioning Refrigerant Recovery and Recycling, effective 09-10-96

ATTACHMENT FPL-FI-CV3

COMPLIANCE REPORT

ATTACHMENT FPL-FI-CV3
COMPLIANCE REPORT

Florida Power and Light Company certifies that the West County Energy Center in Loxahatchee, Florida, as of the date of this application, is in compliance with each applicable requirement addressed in this Title V air operation permit application.

I, the undersigned, am the responsible official as designed in Chapter 62-213, F.A.C., of the Title V source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.

Compliance statements for this facility will be submitted on an annual basis to FDEP, on or before April 1 of each year.

Signature, Responsible Official

November 6, 2009
Date

Carmine A. Priore III, PE
Plant General Manager
West County Energy Center

ATTACHMENT FPL-FI-CV3B
COMPLIANCE PLAN FOR WEST COUNTY ENERGY CENTER

A. Unit 2 Initial Compliance Testing

Applicable Requirements

Specific Condition A. 22 of Air Construction Permit No. 0990646-001-AC/PSD-FL-354 requires each combustion turbine to be stack tested to demonstrate initial compliance with the emission standards for CO, NO_x, VOC, visible emissions, and ammonia slip. The tests must be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial the initial startup of each unit configuration. Initial compliance testing is required for each unit while firing natural gas, when using the duct burners, and when firing distillate fuel oil.

FPL has not completed the initial compliance testing required for Unit 2.

Compliance Plan

Initial compliance testing for Unit 2 as required by Specific Condition A. 22 for natural gas will be completed no later than 180 days after the initial startup of each combined cycle unit. A report indicating the results of the results of the required initial compliance testing for Unit 2 will be submitted to the Compliance Authority no later than 45 days after completion of the last test run.

B. Units 1 and 2 Initial Compliance Testing for Fuel Oil Firing

Applicable Requirements

Specific Condition A. 22 of Air Construction Permit No. 0990646-001-AC/PSD-FL-354 requires each combustion turbine to be stack tested to demonstrate initial compliance with the emission standards for CO, NO_x, VOC, visible emissions, and ammonia slip while firing distillate fuel oil.

FPL has not fired fuel oil in Units 1 and 2 and therefore has not completed the required initial performance test.

Compliance Plan

Initial compliance testing for Units 1 and 2 while firing fuel oil as required by Specific Condition A. 22 will be completed no later than 180 days after the initial startup of this method of operation. A report indicating the results of the required initial compliance testing for Unit 1 while firing fuel oil will be submitted to the Compliance Authority no later than 45 days after completion of the last test run.

ATTACHMENT FPL-FI-CV4

EQUIPMENT/ACTIVITIES REGULATED UNDER TITLE VI

ATTACHMENT FPL-FI-CV4

EQUIPMENT/ACTIVITIES REGULATED UNDER TITLE VI

The facility has one air conditioning system with chlorofluorocarbons (CFCs) greater than 50 pounds.

- Carrier Air Conditioning System for the administration building with an estimated 274 pounds of CFCs.

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.

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:
   Three Mitsubishi Frame G combustion turbine (CT)/heat recovery steam generators (HRSGs).

3. Emissions Unit Identification Number: **001, 002, and 003**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
A	**March 16, 2006**	**1A: May 17, 2009** **1B: April 29, 2009** **1C: April 16, 2009**	**49**

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

   ☒ Acid Rain Unit

   ☒ CAIR Unit

   ☐ Hg Budget Unit

9. Package Unit:
   Manufacturer: **Mitsubishi Power Systems** Model Number: **501G**

10. Generator Nameplate Rating: **750** MW

11. Emissions Unit Comment:
    Combined Cycle Unit 1 consists of three nominal 250-megawatt gas turbine-electrical generator sets with evaporative inlet cooling system, three supplementary-fired HRSGs, and one nominal 428-MMBtu/hr (LHV) gas fired duct burner within each of the three HRSGs. The HRSGs supply steam to a nominal 500-MW steam-electric generator.

EMISSIONS UNIT INFORMATION
Section [1]
Combined Cycle Units 1A - 1C

Emissions Unit Control Equipment/Method: Control **1** of **3**

1. Control Equipment/Method Description: **Selective Catalytic Reduction System**
2. Control Device or Method Code: **065**

Emissions Unit Control Equipment/Method: Control **2** of **3**

1. Control Equipment/Method Description: **Water Injection**
2. Control Device or Method Code: **028**

Emissions Unit Control Equipment/Method: Control **3** of **3**

1. Control Equipment/Method Description: **Dry Low-NOx Combustion**
2. Control Device or Method Code: **025**

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: **6,999** million Btu/hr (MMBtu/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: **Maximum heat input rate based on heat input of 2,333 MMBtu/hr for each of the three CT/HRSGs firing natural gas (LHV) at 100-percent load and 59°F ambient temperature. Maximum heat input rate is 6,351 MMBtu/hr when firing distillate fuel oil (LHV) at 100-percent load and 59°F ambient temperature. Maximum heat input to the duct burners is 1,284 MMBtu/hr (three duct burners, each 428 MMBtu/hr) based on LHV of natural gas.** **Emission estimates, heat input rates, fuel usage, and exhaust parameters based on manufacturers specifications at 59 °F ambient temperature. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves. Manufacturer's performance curves that correct for site conditions will be submitted to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing.**	

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: **Units 1A, 1B, and 1C**	2. Emission Point Type Code: **1**	
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: **V**	6. Stack Height: **149** feet	7. Exit Diameter: **22** feet
8. Exit Temperature: **293**°F	9. Actual Volumetric Flow Rate: **1,533,502** 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: **Exit temperature and flow rate are for each CT/HRSG and based on distillate fuel oil firing at 100-percent load at 59°F ambient temperature. Exit temperature and flow rate for each CT/HRSG are 195°F and 1,330,197 acfm, respectively, based on natural gas firing at 100-percent load and 59°F ambient temperature.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): **Internal Combustion Engines: Electric Generation; Natural Gas; Turbine Generator**		
2. Source Classification Code (SCC): **2-01-002-01**	3. SCC Units: **Million cubic feet**	
4. Maximum Hourly Rate: **2.5**	5. Maximum Annual Rate: **21,905**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **933**
10. Segment Comment: **Maximum hourly and annual rates are for each CT/HRSG and based on 59°F turbine inlet temperature.** **Maximum hourly rate = 2,333 MMBtu/hr ÷ 933 MMBtu/MMft^3 = 2.5 MMft^3/hr** **Maximum annual rate = 2.5 MMft^3/hr x 8,760 hrs/yr = 21,905 MMft^3/yr**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): **Internal Combustion Engines: Electric Generation; Distillate Oil (No. 2); Turbine Generator**		
2. Source Classification Code (SCC): **2-01-001-01**	3. SCC Units: **1,000 Gallons**	
4. Maximum Hourly Rate: **16.2**	5. Maximum Annual Rate: **8,100**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.0015**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **131**
10. Segment Comment: **Maximum hourly and annual rates are for each CT/HRSG and based on 59°F turbine inlet temperature.** **Maximum hourly rate = 2,117 MMBtu/hr ÷ 131 MMBtu/10^3 gallons = 16.2x10^3 gallons** **Maximum annual rate = 16.2x10^3 gallons x 500 hrs/yr = 8,100x10^3 gallons/yr** **Fuel heat content based on 18,387 Btu/lb (LHV) and 7.1 lb/gallon.**		

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			EL
PM10			EL
SO2			EL
NOx	025, 028	065	EL
CO			EL
VOC			EL
SAM			EL
Ammonia			EL
H095 (Formaldehyde)			EL

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: **108** lb/hour **205.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly emissions based on distillate oil firing at 59°F inlet condition.
Hourly emissions of one CT/HRSG = 36 lb/hr.
Hourly emissions of three CT/HRSGs = 36 lb/hr x 3 = 108 lb/hr.

Potential annual emissions based on TEPD of permit No. 0990646-001-AC/PSD-FL-354.
Annual emissions of two combined cycle units = 511 TPY (CT + DB) – 100 TPY (Cooling Towers) = 411 TPY.
Annual emissions of one combined cycle unit = 411 TPY/2 = 205.5 TPY.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Distillate oil firing limited to 500 hr/yr per CT/HRSG.
Duct-firing limited to 7,395,840 MMBtu for six CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).

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 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 gr S/100 SCF of gas**	4. Equivalent Allowable Emissions: **44.4** lb/hour **205.5** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing: Fuel sulfur content limited to 2 grains per 100 standard cubic feet of natural gas. Equivalent hourly emissions based on 59°F inlet condition.** **Hourly emissions of one CT/HRSG with DB = 14.8 lb/hr.** **Hourly emissions of three CT/HRSGs with DB = 14.8 x 3 = 44.4 lb/hr.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0015-percent sulfur fuel oil**	4. Equivalent Allowable Emissions: **108** lb/hour **205.5** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for fuel oil firing: Fuel sulfur content limited to 0.0015 percent, by weight.** **Equivalent hourly emissions based on 59°F inlet condition.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **VE<10-percent opacity**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: **EPA Method 9, 6 minute block average**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas and fuel oil firing.**	

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: **PM10**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **108** lb/hour **103** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly emissions based on distillate oil firing at 59°F inlet condition.
Hourly emissions of one CT/HRSG = 36 lb/hr.
Hourly emissions of three CT/HRSG = 36 lb/hr x 3 = 108 lb/hr.

Potential annual emissions based on TEPD of permit No. 0990646-001-AC/PSD-FL-354.
Annual emissions of two combined cycle units = 211 TPY (CT + DB) – 5 TPY (Cooling Towers) = 206 TPY.
Annual Emissions of one combined cycle unit = 206 TPY/2 = 103 TPY.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Distillate oil firing limited to 500 hr/yr per CT/HRSG.
Duct-firing limited to 7,395,840 MMBtu for six CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).

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 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 gr S/100 SCF of gas**	4. Equivalent Allowable Emissions: **44.4** lb/hour **103** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing: Fuel sulfur content limited to 2 grains per 100 standard cubic feet of natural gas. Equivalent hourly emissions based on 59°F inlet condition. Hourly emissions of one CT/HRSG with DB = 14.8 lb/hr. Hourly emissions of three CT/HRSGs with DB = 14.8 x 3 = 44.4 lb/hr.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0015-percent sulfur fuel oil**	4. Equivalent Allowable Emissions: **108** lb/hour **103** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for fuel oil firing: Fuel sulfur content limited to 0.0015 percent, by weight. Equivalent hourly emissions based on 59°F inlet condition.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **VE<10-percent opacity**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: **EPA Method 9, 6 minute block average**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas and fuel oil firing.**	

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: **50.7** lb/hour **203.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly emissions based on natural gas firing with DB at 59°F inlet conditions.
Hourly emissions of one CT/HRSG = 16.9 lb/hr.
Hourly emissions of three CT/HRSGs = 16.9 lb/hr x 3 = 50.7 lb/hr.

Potential annual emissions based on TEPD of Permit No. 0990646-001-AC/PSD-FL-354.
Annual emissions of two combined cycle units = 407 TPY.
Annual emissions of one combined cycle unit = 407/2 = 203.5 TPY.

Hourly emissions for CT only, oil firing, 59°F inlet conditions = 3.4 lb/hr per CT/HRSG.
Hourly emissions for CT only, natural gas firing, 59°F inlet conditions = 14.0 lb/hr per CT/HRSG

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Distillate oil firing limited to 500 hr/yr per CT/HRSG.
Duct-firing limited to 7,395,840 MMBtu for six CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).

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 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 gr S/100 SCF of gas**	4. Equivalent Allowable Emissions: **50.7** lb/hour **203.5** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing: Fuel sulfur content limited to 2 grains per 100 standard cubic feet of natural gas. Equivalent hourly emissions based on 59°F inlet condition.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0015-percent sulfur fuel oil**	4. Equivalent Allowable Emissions: **10.2** lb/hour **203.5** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for fuel oil firing: Fuel sulfur content limited to 0.0015 percent. Equivalent hourly emissions based on 59°F inlet condition.** **Hourly emissions of one CT/HRSG = 3.4 lb/hr.** **Hourly emissions of three CT/HRSGs = 3.4 lb/hr x 3 = 10.2 lb/hr.**	

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: **SAM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **7.77** lb/hour **3.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly emissions based on natural gas firing with DB at 59°F inlet conditions.
Hourly emissions of one CT/HRSG = 2.59 lb/hr.
Hourly emissions of three CT/HRSGs = 2.59 lb/hr x 3 = 7.77 lb/hr.

Potential annual emissions based on TEPD of Permit No. 0990646-001-AC/PSD-FL-354.
Annual emissions of two combined cycle units = 7 TPY.
Annual emissions of one combined cycle unit = 7/2 = 3.5 TPY.

Hourly emissions for CT only, oil firing, 59°F inlet conditions = 1.1 lb/hr per CT/HRSG.
Hourly emissions for CT only, natural gas firing, 59°F inlet conditions = 2.1 lb/hr per CT/HRSG.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Distillate oil firing limited to 500 hr/yr per CT/HRSG.
Duct-firing limited to 7,395,840 MMBtu for six CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).

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 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 gr S/100 SCF of gas**	4. Equivalent Allowable Emissions: **7.77** lb/hour **3.5** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing: Fuel sulfur content limited to 2 grains per 100 standard cubic feet of natural gas. Equivalent hourly emissions based on 59°F inlet condition.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0015-percent sulfur fuel oil**	4. Equivalent Allowable Emissions: **3.3** lb/hour **3.5** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for fuel oil firing: Fuel sulfur content limited to 0.0015 percent. Equivalent hourly emissions based on 59°F inlet condition.** **Hourly emissions of one CT/HRSG = 1.1 lb/hr.** **Hourly emissions of three CT/HRSGs = 1.1 lb/hr x 3 = 3.3 lb/hr.**	

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: **247.2** lb/hour **420.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly emissions based on fuel oil firing at 59°F inlet condition.
Hourly emissions of one CT/HRSG = 82.4 lb/hr.
Hourly emissions of three CT/HRSG = 82.4 x 3 = 247.2 lb/hr.

Potential annual emissions based on TEPD of Permit No. 0990646-001-AC/PSD-FL-354.
Annual emissions of two combined cycle units = 841 TPY.
Annual emissions of one combined cycle units = 841/2 = 420.5 TPY.

Hourly emissions for CT only, natural gas firing, 59°F inlet condition = 20.0 lb/hr per CT/HRSG.
Hourly emissions for CT + DB, natural gas firing, 59°F inlet condition = 24.2 lb/hr per CT/HRSG.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Distillate oil firing limited to 500 hr/yr per CT/HRSG.
Duct-firing limited to 7,395,840 MMBtu for six CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).

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 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **8.0 ppmvd @ 15-Percent O_2**	4. Equivalent Allowable Emissions: **247.2** lb/hour **420.5** tons/year
5. Method of Compliance: **CEMS 24-hr block average, stack test using EPA Methods 7E or 20**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for fuel oil firing.** **Equivalent hourly emissions based on 59°F inlet condition.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2.0 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **72.6** lb/hour **420.5** tons/year
5. Method of Compliance: **CEMS 24-hr block average, stack test using EPA Methods 7E or 20.**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing with duct burners.** **Equivalent hourly emissions based on 59°F inlet condition.** **Hourly emissions for one CT/HRSG = 24.2 lb/hr.** **Hourly emissions for three CT/HRSG = 24.2 lb/hr x 3 = 72.6 lb/hr.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2.0 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **60.0** lb/hour **420.5** tons/year
5. Method of Compliance: **CEMS 24-hr block average, stack test using EPA Methods 7E or 20.**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing CT only.** **Equivalent hourly emissions based on 59°F inlet condition.** **Hourly emissions for one CT/HRSG = 20 lb/hr.** **Hourly emissions for three CT/HRSG = 20 lb/hr x 3 = 60 lb/hr.**	

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: **157.5** lb/hour **484.0** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly emissions based on natural gas firing with DB at 59°F inlet condition.
Hourly emissions of one CT/HRSG = 52.5 lb/hr.
Hourly emissions of three CT/HRSGs = 52.5 lb/hr x 3 = 157.5 lb/hr.

Potential annual emissions based on TEPD of Permit No. 0990646-001-AC/PSD-FL-354.
Annual emissions of two combined cycle units = 968 TPY.
Annual emissions of one combined cycle unit = 968/2 = 484 TPY.

Hourly emissions for CT only, natural gas firing, 59°F inlet condition = 23.2 lb/hr per CT/HRSG.
Hourly emissions for CT only, oil firing, 59°F inlet condition = 42.0 lb/hr per CT/HRSG.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Distillate oil firing limited to 500 hr/yr per CT/HRSG.
Duct-firing limited to 7,395,840 MMBtu for six CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).

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 4

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **8.0 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **126** lb/hour **420.5** tons/year
5. Method of Compliance: **CEMS 24-hour block average, annual stack test using EPA Method 10**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for Fuel oil firing. Oil firing limited to 500 hr/yr per CT/HRSG. Equivalent hourly emissions based on 59°F inlet condition. Hourly emissions for one CT/HRSG = 42 lb/hr. Hourly emissions for three CT/HRSG = 42 lb/hr x 3 = 126 lb/hr.**	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **7.6 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **157.5** lb/hour **420.5** tons/year
5. Method of Compliance: **Annual stack test (EPA Method 10)**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing with duct burners. Duct firing limited to 2,880 hr/yr per CT/HRSG. Annual stack test limit applies only at 90-100 percent load. Equivalent hourly emissions based on 59°F inlet condition.**	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **4.1 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **69.6** lb/hour **420.5** tons/year
5. Method of Compliance: **Annual stack test (EPA Method 10)**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing CT only. Annual stack test limit applies only at high load. Hourly emissions of one CT/HSRG = 23.2 lb/hr. Hourly emissions of three CT/HSRG = 23.2 lb/hr x 3 = 69.6 lb/hr. Equivalent hourly emissions based on 59°F inlet condition.**	

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 **4** of **4**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **6 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: lb/hour **420.5** tons/year
5. Method of Compliance: **CEMS 12-month rolling average**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas or fuel oil firing.**	

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: **58.8** lb/hour **88** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly emissions based on fuel oil firing at 59°F inlet condition.
Hourly emissions of one CT/HRSG = 19.6 lb/hr.
Hourly emissions of three CT/HRSG = 19.6 lb/hr x 3 = 58.8 lb/hr.

Potential annual emissions based on TEPD of Permit No. 0990646-001-AC/PSD-FL-354.
Annual emissions of two combined cycle units = 176 TPY.
Annual emissions of one combined cycle unit = 176/2 = 88 TPY.

Hourly emissions for CT + DB, natural gas firing, 59°F inlet condition = 5.4 lb/hr.
Hourly emissions for CT only, natural gas firing, 59°F inlet condition = 4.1 lb/hr per CT/HRSG.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Distillate oil firing limited to 500 hr/yr per CT/HRSG.
Duct-firing limited to 7,395,840 MMBtu for six CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).

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 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **6.0 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **58.8** lb/hour **88** tons/year
5. Method of Compliance: **Annual stack test using EPA Methods 25A or 18**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for fuel oil firing. Fuel oil firing limited to 500 hr/yr per CT/HRSG. Limit applies only at high load (90 - 100-percent). Compliance with the CO CEMS based limits at lower loads represents compliance with the VOC limit.** **Equivalent hourly emissions based on 59°F inlet condition.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.5 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **16.2** lb/hour **88** tons/year
5. Method of Compliance: **Annual Stack test using EPA Methods 25A or 18**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing with duct burners. Limit applies only at high load (90 – 100-percent). Equivalent hourly emissions based on 59°F inlet condition. Compliance with the CO CEMS based limits at lower loads represents compliance with the VOC limit.** **Hourly emissions for one CT/HRSG = 5.4 lb/hr.** **Hourly emissions for three CT/HRSG = 5.4 lb/hr x 3 = 16.2 lb/hr.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.2 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **12.3** lb/hour **88** tons/year
5. Method of Compliance: **Annual Stack test using EPA Methods 25A or 18**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing CT only. Limit applies only at high load (90 – 100-percent). Compliance with the CO CEMS based limits at lower loads represents compliance with the VOC limit.** **Hourly emissions for one CT/HRSG = 4.1 lb/hr.** **Hourly emissions for three CT/HRSGs = 4.1 lb/hr x 3 = 12.3 lb/hr.**	

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: **NH3**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **See Comment** lb/hour tons/year	4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	7. Emissions Method Code:
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:	
11. Potential, Fugitive, and Actual Emissions Comment: **Ammonia slip limited to 5 ppmvd @ 15-percent O_2. State requirement only. Ammonia is not a regulated air pollutant under Title V or NSPS.**	

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 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: **Annual stack test using EPA Method CTM-027**	
6. Allowable Emissions Comment (Description of Operating Method): **For natural gas and fuel oil firing including duct burner operation.**	

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 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **10 %** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Limit based on BACT for PM/PM10. Visible emissions limited for each 6-minute block average.**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **10 %** Exceptional Conditions: **20 %** Maximum Period of Excess Opacity Allowed: **See Comment** min/hour	
4. Method of Compliance: **None**	
5. Visible Emissions Comment: **Rule 62-210.400, F.A.C. Visible emissions due to startup, shutdown, and malfunction limited to ten, 6-minute periods per calendar day.**	

H. CONTINUOUS MONITOR INFORMATION

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

Continuous Monitoring System: Continuous Monitor 1 of 9

1. Parameter Code: **EM**	2. Pollutant(s): **NO_x**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **TECO** Model Number: **42i - LS**	Serial Number: **0802826484**
5. Installation Date: **04/01/2009**	6. Performance Specification Test Date: **09/11/2009**
7. Continuous Monitor Comment: **Continuous monitoring of NOx emissions. Unit 1A 40 CFR Part 75**	

Continuous Monitoring System: Continuous Monitor 2 of 9

1. Parameter Code: **EM**	2. Pollutant(s): **CO**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **TECO** Model Number: **42i - CLS**	Serial Number: **0802826479**
5. Installation Date: **04/01/2009**	6. Performance Specification Test Date: **09/11/2009**
7. Continuous Monitor Comment: **Continuous monitoring of CO emissions. Unit 1A 40 CFR Part 75**	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

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

Continuous Monitoring System: Continuous Monitor 3 of 9

1. Parameter Code: **O2**	2. Pollutant(s):
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Servomex** Model Number: **1440D**	Serial Number: **01440DIV02/4064**
5. Installation Date: **04/01/09**	6. Performance Specification Test Date: **09/11/09**
7. Continuous Monitor Comment: **Monitoring of O_2 for dilution with NOx and CO monitors. Unit 1A 40 CFR Part 75**	

Continuous Monitoring System: Continuous Monitor 4 of 9

1. Parameter Code: **EM**	2. Pollutant(s): **NOx**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **TECO** Model Number: **42i - LS**	Serial Number: **0802826487**
5. Installation Date: **04/01/2009**	6. Performance Specification Test Date: **09/10/2009 & 09/11/2009**
7. Continuous Monitor Comment: **Continuous monitoring of NOx emissions. Unit 1B 40 CFR Part 75**	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

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

Continuous Monitoring System: Continuous Monitor 5 of 9

1. Parameter Code: **EM**	2. Pollutant(s): **CO**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **TECO** Model Number: **42i - CLS**	Serial Number: **0821027618**
5. Installation Date: **04/01/2009**	6. Performance Specification Test Date: **09/10/2009 & 09/11/2009**
7. Continuous Monitor Comment: **Continuous monitoring of CO emissions. Unit 1B 40 CFR Part 75**	

Continuous Monitoring System: Continuous Monitor 6 of 9

1. Parameter Code: **O2**	2. Pollutant(s):
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Servomex** Model Number: **1440D**	Serial Number: **01440DIV02/484**
5. Installation Date: **04/01/2009**	6. Performance Specification Test Date: **09/10/09 & 09/11/09**
7. Continuous Monitor Comment: **Monitoring of O_2 for dilution with NOx and CO monitors. Unit 1B 40 CFR Part 75**	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

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

Continuous Monitoring System: Continuous Monitor 7 of 9

1. Parameter Code: **EM**	2. Pollutant(s): **NOx**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **TECO** Model Number: **42i - LS**	Serial Number: **0805128524**
5. Installation Date:	6. Performance Specification Test Date: **09/10/2009**
7. Continuous Monitor Comment: **Continuous monitoring of NOx emissions. Unit 1C 40 CFR Part 75**	

Continuous Monitoring System: Continuous Monitor 8 of 9

1. Parameter Code: **EM**	2. Pollutant(s): **CO**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **TECO** Model Number: **42i - CLS**	Serial Number: **0802826481**
5. Installation Date: **04/01/2009**	6. Performance Specification Test Date: **09/10/2009**
7. Continuous Monitor Comment: **Continuous monitoring of CO emissions. Unit 1C 40 CFR Part 75**	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

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

Continuous Monitoring System: Continuous Monitor 9 of 9

1. Parameter Code: **O2**	2. Pollutant(s):
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Servomex** Model Number: **1440D**	Serial Number: **01440DIV02/4085**
5. Installation Date: **04/01/2009**	6. Performance Specification Test Date: **09/10/2009**
7. Continuous Monitor Comment: **Monitoring of O_2 for dilution with NOx and CO monitors. Unit 1 C. 40 CFR Part 75**	

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: **FPL-EU1-I1** ☐ 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: **FPL-EU1-I2** ☐ 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: **FPL-EU1-I3** ☐ 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: **FPL-EU1-I4** ☐ 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): **Within 45 days of completion of the last test run.**
   Test Date(s)/Pollutant(s) Tested: **1A: 10/7/09 & 10/8/09, 1B: 10/6/09 & 10/7/09 1C: 10/5/09 & 10/6/09. Pollutants tested - CO, NOx, VE, and VOC.**
   ☐ 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

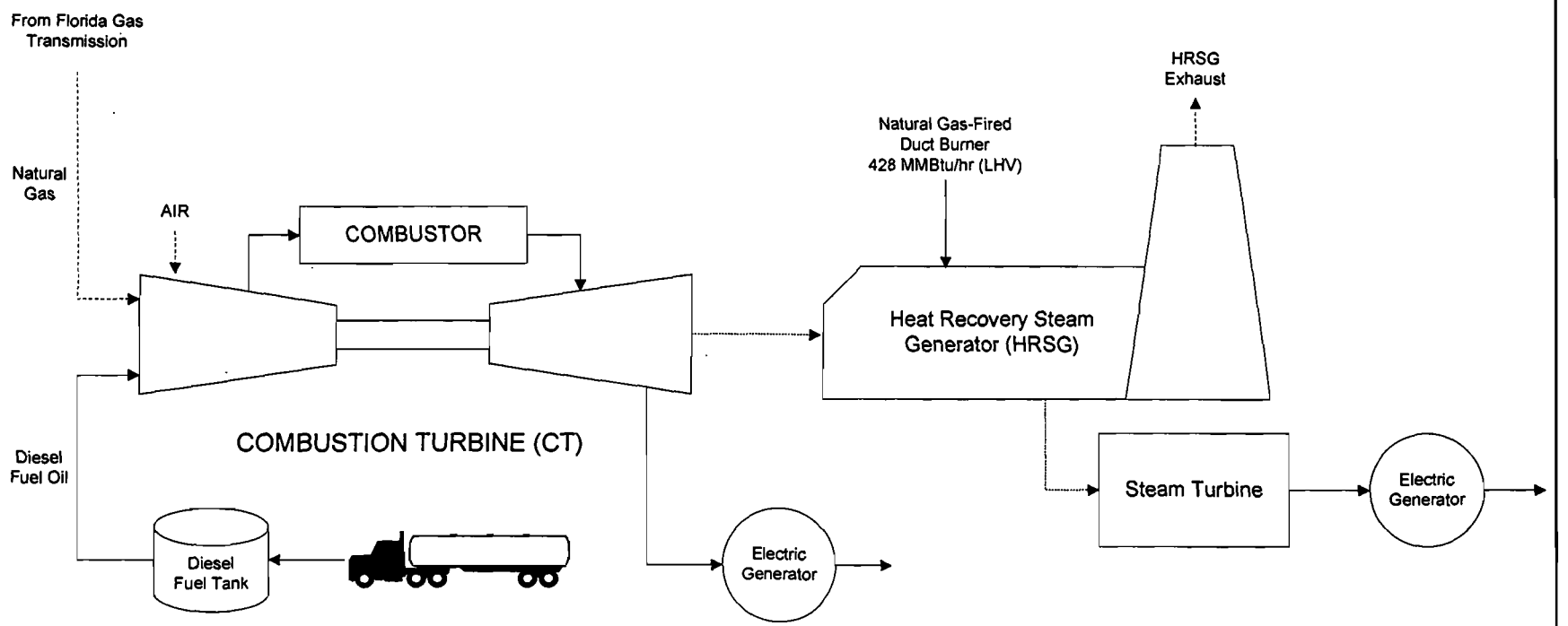
1. Identification of Applicable Requirements: ☒ Attached, Document ID: FPL-EU1-IV1
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation: ☒ Attached, Document ID: FPL-EU1-IV3 ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements Comment

Combined cycle units 1A-1C are exempt from the CAM requirements for NOx control using SCR as continuous compliance is required to be demonstrated by a CEMS.

ATTACHMENT FPL-EU1-I1

PROCESS FLOW DIAGRAM



Attachment FPL-EU1-I1
Process Flow Diagram for Each CT/HRSG Train
FPL West County Energy Center

Source: Golder, 2009.

Process Flow Legend
Solid/Liquid
Gas
Steam

FPL.

ATTACHMENT FPL-EU1-I2

FUEL ANALYSIS OR SPECIFICATIONS

Attachment FPL-EU1-12
Natural Gas Specifications

Total Sulfur (Florida Delivery Stations)	
Gas Day	**Avg Grains/hcf**
10/01/2009	0.156
09/30/2009	0.145
09/29/2009	0.181
09/28/2009	0.107
09/27/2009	0.154
09/26/2009	0.158
09/25/2009	0.173
09/24/2009	0.171
09/23/2009	0.181
09/22/2009	0.177
09/21/2009	0.176
09/20/2009	0.17
09/19/2009	0.169
09/18/2009	0.157
09/17/2009	0.158
09/16/2009	0.162
09/15/2009	0.156
09/14/2009	0.16
09/13/2009	0.157
09/12/2009	0.141
09/11/2009	0.168
09/10/2009	0.171
09/09/2009	0.166
09/08/2009	0.17

Notes:
From Florida Gas Transmission Data

Analytical Report 338204

for

FPL - Central Lab

Project Manager: Susan Mazur

West County Energy Center

24-JUL-09

10200 USA Today Way, Miramar, FL 33025
Ph:(305) 823-8500 Fax:(305) 823-8555

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Miramar (EPA Lab code: FL01246): Florida (E86349)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Houston - Dallas - San Antonio - Tampa - Miami - Midland - Corpus Christi - Atlanta - Latin America

24-JUL-09

Project Manager: **Susan Mazur**
FPL - Central Lab
6001-A Village Blvd
West Palm Beach, FL 33407

Reference: XENCO Report No: **338204**
West County Energy Center
Project Address:

Susan Mazur:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 338204. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 338204 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Terrence Anderson
Office Manager

KMT Labs
600 E 17th St S
Newton, IA 50208

ANALYTICAL REPORT

July 23, 2009

Work Order: 99G0011

Report To
Terrence Anderson
Xenco Laboratories
10200 USA Today Way
Miramar, FL 33025

Project : Sulfur in Diesel

Project Number: 338204

Analyte	Result	Method	Analyzed
Name:338204-001	NA	Matrix:Diesel Fuel	Collected: 07/14/09 10:40
Sulfur	**6.0 ppm (wt)**	ASTM D2622	07/23/09 11:32

End of Report

Kevstone Laboratories. Inc.

Josh King
Business Manager

CASE NARRATIVE SUMMARY

Client Name: ***FPL - Central Lab***

Project Name: ***West County Energy Center***

Project ID:
Work Order Number: *338204*

Report Date: *24-JUL-09*
Date Received: *16-JUL-09*

The Sulfur analysis ASTM D2622 was subcontracted to Keystone Materials Testing, 600 E. 17th Street, Newton, IA 50208. See report attached

Terrence Anderson
Office Manager

FPL.

FPL Central Lab
6001A Village Blvd
West Palm Beach, FL 33407

CHAIN-OF-CUSTODY FORM

33820

ENVIRO	NON-E	PAGE	OF

SAMPLER:
PRINT
SIGN
TELEPHONE #

INITIAL HERE:

ALL SAMPLES WERE TAKEN IN ACCORDANCE TO STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION SAMPLING REQUIREMENTS

SITE NAME/ADDRESS: West County Energy Center

(IF OTHER INDICATE BELOW)
OTHER:

CONTAINERS
(DESCRIBE SOURCE USING A-Z)

ANALYSES REQUIRED/PRESERVATION

SAMPLE NAME	DATE	TIME	*G/C	*#	*MATRIX	ULTRA LOW SULFUR								
COLB	7/14/09	10:40	G	1	O	✓								

SAMPLERS REMARKS:
ULTRA LOW SULFUR Diesel - RUSH!

SEND LAB REPORT TO:

3°C

CLEAN SAMPLE CONTAINERS RELINQUISHED BY:		DATE	TIME	CUSTODY SEAL	SHIPMENT METHOD	CLEAN SAMPLE CONTAINERS RECEIVED BY:		DATE	TIME	CUSTODY SEAL
RELINQUISHED BY:	AFFILIATION:	DATE	TIME	CUSTODY SEAL	SHIPMENT METHOD	RECEIVED BY:	AFFILIATION:	DATE	TIME	CUSTODY SEAL
[signature]	FPL	7/16/09	13:02	N/A		[signature]	Xenco	7/16/09	13.05	
RELINQUISHED BY:	AFFILIATION:	DATE	TIME	CUSTODY SEAL	SHIPMENT METHOD	RECEIVED BY:	AFFILIATION:	DATE	TIME	CUSTODY SEAL
[signature]	Xenco	7/16/09	16:20	N/A	Hand	[signature]	Xenco	7/16/09	16:20	NA
RELINQUISHED BY:	AFFILIATION:	DATE	TIME	CUSTODY SEAL	SHIPMENT METHOD	RECEIVED BY:	AFFILIATION:	DATE	TIME	CUSTODY SEAL

LAB REMARKS:

TEMP CHECK
PH CHECK

*GRAB OR COMPOSITE *# OF CONTAINERS *MATRIX: SOIL, WATER, OTHER

Prelogin / Nonconformance Report
Sample Log-In

Client: FIL-Central

Date / Time: 7/16/09

Lab ID#: 338204

Initials: DH

Sample Receipt Checklist

3.0°C DH 7/16/09

#1 Temperature of cooler?			~~3.0~~ °C	
#2 Shipping container in good condition?	(Yes)	No	None	
#3 Samples received on ice?	(Yes)	No	N/A	Blue/Water
#4 Custody Seals intact on sample container/cooler?	Yes	**No**	(N/A)	
#5 Custody Seasls intact on sample bottles/containers	Yes	**No**	(N/A)	
#6 Chain of Custody present?	(Yes)	No		
#7 Sample instructions complete of Chain of Custody?	(Yes)	No		
#8 Any missing/extra samples?	Yes	(No)		
#9 Chain of custody signed when relinquished/ received?	(Yes)	No		
#10 Chain of Cusody agrees with sample label(s)?	(Yes)	No		
#11 Container label(s) legible and intact?	(Yes)	No		
#12 Sample matrix/ properties agree with Chain of Cusotdy?	(Yes)	No		
#13 Sample in proper conatiner/bottle?	(Yes)	No		
#14 Samples properly preserved?	(Yes)	No	N/A	
#15 Sample container(s) intact?	(Yes)	No		
#16 Sufficient sample amount for indicated test (s)?	(Yes)	No		
#17 All samples received within sufficient hold time?	(Yes)	No	DH 7/16/09	
#18 Subcontract of sample(s)?	(Yes)	(No)		
#19 VOC samples have zero headspace?	Yes	No	(N/A)	

Nonconformance Documentation

Contact: _____ Contacted by: _____ Date/Time: _____

Regarding: Sub to Keystone Materials Testing, Inc.

Corrective Action Taken:

Check all that Apply: ☐ Client understand and would like to proceed with analysis

☐ Cooling process had begun shortly after sampling event

XENCO LABORATORIES
Container Receipt Verification Form

Xenco Job Number: 338264

Chain of Custody Number(s): 1

#	Matrix	32 oz amb/ Ultra Low Sulfur Cool	32 W M amb/	40ml/	40ml/	40ml/	40ml/	100mL/	4 PE/	8 PE/	8 PE/	16 PE/	16 PE/	16 PE/	32 PE/	32 PE/	8 WM/	8 WM/	8 WM/	4 WM/	4 WM/	2 WM/	2 WM/	Tedlar Bag	Ampules/	Other/	Comments
1		X																									
2																											
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											

[illegible] Number
32 [illegible]
[illegible]
[illegible] Amber

8 WM = 8oz Wide Mouth Jar
4 WM = 4oz Wide Mouth Jar
2 WM = 2oz Wide Mouth Jar

100mL = 100ml Sterile Container
Zip = Ziplock Bag
4 PE = 4oz Plastic Bottle

HCl = Hydrochloric Acid
H2SO4 = Sulfuric Acid
NaOH = Sodium Hydroxide
MeOH = Methanol
HNO3 = Nitric Acid
ZnAC = Zinc Acetate
Na2S2O3 = Sodium Thiosulfate

NH4Cl2 = Ammonium Chloride
DI H2O = DI Water
MCAA = Monochloroacetic Acid

Reviewed by: ______________

VALERO™

MATERIAL SAFETY DATA SHEET

Diesel Fuels

VALERO MARKETING & SUPPLY COMPANY
and Affiliates
P.O. Box 696000
San Antonio, TX 78269-6000

Emergency Phone Numbers
24 Hour Emergency: 866-565-5220
Chemtrec Emergency: 800-424-9300

General Assistance
General Assistance: 210-345-4593

BRAND NAMES: Valero, Diamond Shamrock, Shamrock, Ultramar, Beacon, Total

Section 1. Chemical Product and Company Identification

Common / Trade name : Diesel Fuels

Synonym : Diesel Fuels All Grades, Diesel Fuel No.2, Fuel Oil No.2, High Sulfur Diesel Fuel, Low Sulfur Diesel Fuel, Ultra Low Sulfur Diesel Fuel, Off-Road Diesel fuel, Dyed Diesel Fuel, X Grade Diesel Fuel, X-1 Diesel Fuel

SYNONYMS/COMMON NAMES: This Material Safety Data Sheet applies to the listed products and synonym descriptions for Hazard Communication purposes only. Technical specifications vary greatly depending on the product and are not reflected in this document. Consult specification sheets for technical information. This product contains ingredients that are considered to be hazardous as defined by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Material uses : Motor fuels. Heating fuels.

MSDS # : 102

CAS # : 68476-34-6

Section 2. Composition, information on ingredients

Name	CAS number	Concentration (%)
Diesel fuel	68476-34-6	85 - 95
Naphthalene	91-20-3	1 - 3
n-Nonane	111-84-2	1 - 3
Hexane (Other Isomers)	mixture	1 - 3
n-Heptane	142-82-5	1 - 2
n-Hexane	110-54-3	1 - 2
Octane (All Isomers)	111-65-9	1 - 2

Section 3. Hazards Identification

Danger! Diesel Exhaust has been Reported to be an Occupational hazard due to NIOSH-reported potential carcinogenic properties.

Danger! Product May Contain or Release Hydrogen Sulfide. H2S is a highly toxic, highly flammable gas which can be fatal if inhaled at certain concentrations.

May cause irritation to eyes, skin and respiratory system. Avoid liquid, mist and vapor contact. Harmful or fatal if swallowed. Aspiration hazard, can enter lungs and cause damage. May cause irritation or be harmful if inhaled or absorbed through the skin. Avoid prolonged or repeated skin contact. Combustible Liquid. Vapors may explode.

Physical state : Liquid. (May be dyed red.)

Continued on next page

Emergency overview : Danger!

CAUSES EYE BURNS.
HARMFUL IF SWALLOWED.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: BLOOD, KIDNEYS, LIVER, PERIPHERAL NERVOUS SYSTEM, RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.
SUSPECT CANCER HAZARD.
CONTAINS MATERIAL WHICH MAY CAUSE CANCER.
COMBUSTIBLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FIRE.

Do not ingest. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Risk of cancer depends on duration and level of exposure.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes : Corrosive to eyes. May cause severe irritation, redness, tearing, blurred vision and conjunctivitis.

Skin : Prolonged or repeated contact may cause moderate irritation, defatting (cracking), redness, itching, inflammation, dermatitis and possible secondary infection. High pressure skin injections are SERIOUS MEDICAL EMERGENCIES. Injury may not appear serious at first. Within a few hours, tissues will become swollen, discolored and extremely painful.

Inhalation : Nasal and respiratory tract irritation, central nervous system effects including excitation, euphoria, contracted eye pupils, dizziness, drowsiness, blurred vision, fatigue, nausea, headache, loss of reflexes, tremors, convulsions, seizures, loss of consciousness, coma, respiratory arrest and sudden death could occur as a result of long term and/or high concentration exposure to vapors. May also cause anemia and irregular heart rhythm. Repeated or prolonged exposure may cause behavioral changes. NIOSH Current Intelligence Bulletin 50 reports a potential occupational carcinogenic hazard exists due to human exposure to diesel exhaust.

Ingestion : Toxic if swallowed. May cause burns to mouth, throat and stomach. This product may be harmful or fatal if swallowed. This product may cause nausea, vomiting, diarrhea and restlessness. DO NOT INDUCE VOMITING. Aspiration into the lungs can cause severe chemical pneumonitis or pulmonary edema/hemorrhage, which can be fatal. May cause gastrointestinal disturbances. Symptoms may include irritation, depression, vomiting and diarrhea. May cause harmful central nervous system effects, similar to those listed under "inhalation".

Medical conditions aggravated by over-exposure : Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation, leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Over-exposure signs/symptoms : Nasal and respiratory tract irritation, central nervous system effects including excitation, euphoria, contracted eye pupils, dizziness, drowsiness, blurred vision, fatigue, nausea, headache, loss of reflexes, tremors, convulsions, seizures, loss of consciousness, coma, respiratory arrest or sudden death could occur as a result of long term and/or high concentration exposure to vapors. May also cause anemia and irregular heart rhythm.

See toxicological information (section 11)

Continued on next page

Section 4. First Aid Measures

Eye contact : Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if pain or redness continues.

Skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention. Wash exposed area thoroughly with soap and water. Remove contaminated clothing promptly and launder before reuse. Contaminated leather goods should be discarded. If irritation persists or symptoms described in the MSDS develop, seek medical attention. High pressure skin injections are SERIOUS MEDICAL EMERGENCIES. Get immediate medical attention.

Inhalation : If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Ingestion : This product may be harmful or fatal if swallowed. This product may cause nausea, vomiting, diarrhea and restlessness. DO NOT INDUCE VOMITING. Aspiration into the lungs can cause severe chemical pneumonitis or pulmonary edema/hemorrhage, which can be fatal. May cause gastrointestinal disturbances. Symptoms may include irritation, depression, vomiting and diarrhea. May cause harmful central nervous system effects, similar to those listed under "inhalation".

Notes to physician : In case of ingestion, gastric lavage with activated charcoal can be used promptly to prevent absorption. Consideration should be given to the use of an intratracheal tube, to prevent aspiration. Irregular heart beat may occur, use of adrenalin is not advisable. Individuals intoxicated by the product should be hospitalized immediately, with acute and continuing attention to neurological and cardiopulmonary function. Positive pressure ventilation may be necessary. After the initial episode, individuals should be monitored for changes in blood variables and the delayed appearance of pulmonary edema and chemical pneumonitis. Such patients should be monitored for several days or weeks for delayed effects, including bone marrow toxicity, hepatic and renal impairment. Individuals with chronic pulmonary disease will be more seriously impaired, and recovery from inhalation exposure may be complicated. In case of skin injection, prompt debridement of the wound is necessary to minimize necrosis and tissue loss.

Section 5. Fire Fighting Measures

Flammability of the product : Combustible.

Auto-ignition temperature : 257.2°C (495°F)

Flash point : Closed cup: 51.67 to 87.78°C (125 to 190°F).

Flammable limits : Lower: 0.4% Upper: 8%

Products of combustion : These products are carbon oxides (CO, CO_2), nitrogen and sulfur oxides (NO_x, SO_x), particulate matter, VOC's.

Fire hazards in the presence of various substances : Flammable in the presence of open flames, sparks and static discharge.

Explosion hazards in the presence of various substances : Explosive in the presence of open flames, sparks and static discharge.

Fire-fighting media and instructions : Combustible Liquid. Use dry chemical, foam or carbon dioxide to extinguish the fire. Consult foam manufacturer for appropriate media, application rates and water/foam ratio. Water can be used to cool fire- exposed containers, structures and to protect personnel. If a leak or spill has not ignited, ventilate area and use water spray to disperse gas or vapor and to protect personnel attempting to stop a leak. Use water to flush spills away from sources of ignition. Do not flush down public sewers.

Collect contaminated fire-fighting water separately. It must not enter the sewage system. Dike area of fire to prevent runoff. Decontaminate emergency personnel and equipment with soap and water.

Continued on next page

Combustible liquid and vapor. Vapor may cause flash fire. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards : No additional remark.

Special remarks on explosion hazards : No additional remark.

Section 6. Accidental Release Measures

Personal precautions : Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Do not touch or walk through spilled material. Tanks, vessels or other confined spaces which have contained product should be freed of vapors before entering. The container should be checked to ensure a safe atmosphere before entry. Empty containers may contain toxic,flammable/combustible or explosive residues or vapors. Do not cut, grind, drill, weld or reuse empty containers that contained this product. Do not transfer this product to another container unless the container receiving the product is labeled with proper DOT shipping name, hazard class and other information that describes the product and its hazards.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Extremely flammable. Review Fire and Explosion Hazard Data before proceeding with clean up. Keep all sources of ignition (flames, smoking, flares, etc.) and hot surfaces away from release. Contain spill in smallest possible area. Recover as much product as possible (e.g., by vacuuming). Stop leak if it can be done without risk. Use water spray to disperse vapors. Spilled material may be absorbed by an appropriate absorbent, and then handled in accordance with environmental regulations. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact the National Response Center at 800-424- 8802. For highway or railway spills, contact Chemtrec at 800-424-9300.

Methods for cleaning up : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion-proof means to transfer material to a sealable, appropriate container for disposal. For large spills, dike spilled material or otherwise contain it to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

Section 7. Handling and Storage

Handling : Do not ingest. Do not get in eyes, on skin or on clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Wash thoroughly after handling. Use only in well ventilated locations. Keep away from heat, spark and flames. In case of fire, use water spray, foam, dry chemical or carbon dioxide as described in the Fire and Explosion Hazard Data section of the MSDS. Do not pressurize, cut, weld, braze, solder, drill on or near this container. "Empty" container contains residue (liquid and/or vapor) and may explode in heat of a fire.

Continued on next page

Keep out of reach of children. Failure to use caution may cause serious injury or illness. Never siphon by mouth. For use as a motor fuel only. Do not use as a cleaning solvent or for other non-motor fuel uses. Wash thoroughly after handling. To prevent ingestion and exposure - Do not siphon by mouth to transfer product between containers. Use good personal hygiene practices. After handling this product, wash hands before eating, drinking, or using toilet facilities.

Storage : Store in tightly closed containers in cool, dry, isolated and well ventilated area away from heat, sources of ignition and incompatible materials. Use non-sparking tools and explosion proof equipment. Ground lines, containers, and other equipment used during product transfer to reduce the possibility of a static induced spark. Do not "switch load" because of possible accumulation of a static charge resulting in a source of ignition. Use good personal hygiene practices.

Section 8. Exposure controls, personal protection

Engineering controls : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Flame Retardant Clothing is recommended.

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Personal protective equipment (Pictograms) : Consult your supervisor or S.O.P. for special handling direction.

Personal protection in case of a large spill : Splash goggles. Full suit. Vapor respirator. Boots. Gloves. Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product. Suggested protective clothing might not be adequate. Consult a specialist before handling this product.

Component	Exposure limits
Diesel fuel	**ACGIH TLV (United States, 1/2004). Skin Notes: 2002 Adoption.** TWA: 100 mg/m^3 8 hour/hours. Form: Total hydrocarbons
Naphthalene	**NIOSH REL (United States, 6/2001).** STEL: 15 ppm 15 minute/minutes. Form: All forms TWA: 10 ppm 10 hour/hours. Form: All forms **OSHA PEL (United States, 6/1993).** TWA: 10 ppm 8 hour/hours. Form: All forms **ACGIH TLV (United States, 5/2004). Notes: 1996 Adoption Refers to Appendix A -- Carcinogens.** STEL: 15 ppm 15 minute/minutes. Form: All forms TWA: 10 ppm 8 hour/hours. Form: All forms
n-Nonane	**NIOSH REL (United States, 6/2001).** TWA: 200 ppm 10 hour/hours. Form: All forms

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	ACGIH TLV (United States, 9/2004). TWA: 200 ppm 8 hour/hours. Form: All forms
Hexane (Other Isomers)	**ACGIH TLV (United States, 9/2004).** STEL: 1000 ppm 15 minute/minutes. Form: All forms TWA: 500 ppm 8 hour/hours. Form: All forms **NIOSH REL (United States, 6/2001).** CEIL: 510 ppm 15 minute/minutes. Form: All forms
n-Heptane	**ACGIH TLV (United States, 9/2004).** STEL: 500 ppm 15 minute/minutes. Form: All forms TWA: 400 ppm 8 hour/hours. Form: All forms **NIOSH REL (United States, 6/2001).** TWA: 350 mg/m³ 10 hour/hours. Form: All forms **OSHA PEL (United States, 6/1993).** TWA: 500 ppm 8 hour/hours. Form: All forms
n-Hexane	**OSHA PEL (United States, 6/1993).** TWA: 500 ppm 8 hour/hours. Form: All forms **ACGIH TLV (United States, 9/2004). Skin** TWA: 50 ppm 8 hour/hours. Form: All forms **NIOSH REL (United States, 6/2001).** TWA: 50 ppm 10 hour/hours. Form: All forms
Octane (All Isomers)	**NIOSH REL (United States, 6/2001).** CEIL: 385 ppm 15 minute/minutes. Form: All forms TWA: 75 ppm 10 hour/hours. Form: All forms **OSHA PEL (United States, 6/1993).** TWA: 500 ppm 8 hour/hours. Form: All forms **ACGIH TLV (United States, 3/2004). Notes: 1999 Adoption.** TWA: 300 ppm 8 hour/hours. Form: All forms

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state	: Liquid. (May be dyed red.)
Color	: Clear. Straw.
Odor	: Kerosene (Strong.)
Boiling point	: 162.78 to 371.11°C (325 to 700°F)
Melting/freezing point	: May start to solidify at -51.15°C (-60.1°F) based on data for: n-Nonane. Weighted average: -92.6°C (-134.7°F)
Specific gravity	: 0.84 to 0.93 (Water = 1) (@ 60 °F)
Vapor pressure	: <0.7 kPa (<5.2 mm Hg) (at 20°C)
Vapor density	: 3 (Air = 1)
Volatility	: Negligilble
Evaporation rate	: 0.02

Section 10. Stability and reactivity data

Stability and reactivity	: The product is stable.
Incompatibility with various substances	: Reactive with oxidizing agents, acids, alkalis.
Hazardous decomposition products	: These products are carbon oxides (CO, CO_2), nitrogen and sulfur oxides (NO_x, SO_x), particulate matter, VOC's.
Hazardous polymerization	: Will not occur.

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Section 11. Toxicological Information

Toxicity data

DIESEL EXHAUST FUMES have been reported to be a potential occupational carcinogen in humans by NIOSH Current Intelligence Bulletin 50.

HEPTANE can affect the body if it is inhaled, comes in contact with the eyes or skin, or is swallowed. Heptane vapor is a narcotic. Concentrations of 10,000 to 15,000 ppm produced narcosis in mice within 30 to 60 minutes, while 15,000 to 20,000 ppm caused convulsions and death. At 48,000 ppm, respiratory arrest was produced in mice in 3 to 4 minutes from the start of exposure. Human subjects exposed to 1,000 ppm for 6 minutes, or to 2,000 ppm for 4 minutes, reported slight vertigo. At 5,000 ppm for 4 minutes, there was marked vertigo, inability to walk a straight line, hilarity, and incoordination, but no complaints of eye and upper respiratory tract or mucous membrane irritation. A 15-minute exposure at 5,000 ppm produced in some subjects a state of stupor lasting for 30 minutes after exposure. These subjects also reported loss of appetite, slight nausea, and a taste resembling gasoline for several hours after exposure. Although chronic nervous system affects have not been attributed to heptane, polyneuritis has been reported following prolonged exposure to a petroleum fraction with boiling range between 70C and 100C, and this fraction would normally contain various isomers of heptane as major ingredients.

n-HEXANE can affect the body if it is inhaled, comes in contact with the eyes or skin, or is swallowed. Hexane vapor is a narcotic and a mild upper respiratory irritant. Polyneuropathy (peripheral nerve damage) has been reported to occur in workers exposed to hexane vapors, characterized by progressive weakness and numbness in the extremities, loss of deep tendon reflexes and reduction of motor nerve conduction velocity. Recovery ranges from no recovery to complete recovery depending upon the duration of exposure and severity of nerve damage. Concentrations of 30,000 ppm produced narcosis in mice within 30 to 60 minutes, convulsions and death occurred at 35,000 to 40,000 ppm, and at 64,000 ppm respiratory arrest was produced in 2.5 to 4.5 minutes from the start of exposure. Concentrations up to 8000 ppm produced no anesthesia. In human subjects, 2000 ppm for 10 minutes produced no effects, but 5000 ppm resulted in dizziness and a sensation of giddiness. Other investigators reported slight nausea, headache and irritation of the eyes and throat at 1400 to 1500 ppm. In industrial practice, mild narcotic symptoms such as dizziness have been observed when concentrations exceeded 1000 ppm, but not below 500 ppm.

NONANE causes a four hour LC50 in rats at concentrations of 3200 ppm, or at about the same level as VM&P Naphtha. This level is markedly lower than the lethal concentrations reported in earlier mice studies involving octane (13,500 ppm) and heptane (16,000 ppm), supporting the lower limit for nonane.

OCTANE can affect the body if it is inhaled, comes in contact with the skin or eyes or is swallowed. Octane vapor is a mild narcotic and mucous membrane irritant. Concentrations of 6600 to 13,700 ppm produced narcosis in mice in 30 to 90 minutes, the fatal concentration for animals is near 13,500 ppm. No chronic systemic effects have been reported in humans.

NAPHTHALENE can affect the body if it is inhaled, comes into contact with the eyes or the skin or if it is swallowed. Naphthalene vapor causes hemolysis and eye irritation, and may cause cataracts. Severe intoxication from ingestion of the solid results in characteristic manifestations of marked intravascular hemolysis and its consequences, including potentially fatal hyperkalemia. Initial symptoms include eye irritation, headache, confusion, excitement, malaise, profuse sweating, nausea, vomiting, abdominal pain, and irritation of the bladder. There may be progression to jaundice, hematuria, hemoglobinuria, renal tubular blockage, and acute renal shutdown. Hematologic features include red cell fragmentation, icterus, severe anemia with nucleated red cells, leukocytosis, and dramatic decreases in hemoglobin, hematocrit and red cell count; sometimes there is formation of Heinz bodies and methemoglobin. Individuals with a deficiency of glucose-6-phosphate dehydrogenase in erythrocytes may be more susceptible to hemolysis by naphthalene. Cataracts and ocular irritation have been produced experimentally in animals and have been described in humans. Of 21 workers exposed to high concentrations of fume or vapor for 5 years, 8 had peripheral lens opacities; in other studies, no abnormalities of the eyes have been detected in workers exposed to naphthalene for several years. The vapor causes eye irritation at 15 ppm. Eye contact with the solid may result in conjunctivitis, superficial injury to the cornea, chorioretinitis, scotoma, and diminished visual acuity. Naphthalene on the skin may cause hypersensitivity dermatitis, chronic dermatitis is rare.

HEXANE ISOMERS are three times as toxic to mice as is pentane. Narcosis was produced in mice within 30-60 minutes at concentrations of 30,000 ppm. In man, concentrations for 10 minutes at 2000 ppm produced no effects, but 5000 ppm caused dizziness and a sense of giddiness. Concentrations of 1400-1500 ppm produced slight nausea, headache, eye, and throat irritation.

Ingredient name	Test	Result	Route	Species
Naphthalene	LD50	490 mg/kg	Oral	Rat
	LD50	316 mg/kg	Oral	Mouse
	LD50	1200 mg/kg	Oral	Guinea pig
	LD50	>2500 mg/kg	Dermal	Rat
	LDLo	100 mg/kg	Oral	child
	LDLo	400 mg/kg	Oral	Dog

Chronic effects on humans : **CARCINOGENIC EFFECTS**: Classified A3 (Proven for animals.) by ACGIH, 3 (Possible for humans.) by European Union [Diesel fuel]. Classified 3 (Not classifiable for humans.) by IARC [Diesel fuel]. Classified 2B (Possible for humans.) by IARC [Naphthalene]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Naphthalene].
Contains material which causes damage to the following organs: blood, kidneys, liver, peripheral nervous system, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

Other toxic effects on humans : Very hazardous in case of eye contact (corrosive).
Hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant).

Continued on next page

Special remarks on toxicity to animals : No additional remark.

Special remarks on chronic effects on humans : No additional remark.

Special remarks on other toxic effects on humans : No additional remark.

Specific effects

Carcinogenic effects : Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.

Target organs : Contains material which causes damage to the following organs: blood, kidneys, liver, peripheral nervous system, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

Section 12. Ecological Information

Ecotoxicity data

Ingredient name	Species	Period	Result
Naphthalene	Daphnia magna (EC50)	48 hour/hours	1.6 mg/l
	Daphnia magna (EC50)	48 hour/hours	2.194 mg/l
	Daphnia magna (EC50)	48 hour/hours	2.55 mg/l
	Daphnia pulex (LC50)	96 hour/hours	1 mg/l
	Oncorhynchus mykiss (LC50)	96 hour/hours	1.6 mg/l
	Oncorhynchus mykiss (LC50)	96 hour/hours	1.8 mg/l
n-Hexane	Pimephales promelas (LC50)	96 hour/hours	2.5 mg/l

Products of degradation : These products are carbon oxides (CO, CO_2) and water.

Toxicity of the products of biodegradation : The products of degradation are less toxic than the product itself.

Section 13. Disposal Considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Consult your local or regional authorities.

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN1202	Diesel fuel	3 Combustible liquid.	III		Not available.
TDG Classification	UN1202	Diesel fuel Mixture	3	III		Not available.

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Section 15. Regulatory Information

United States

U.S. Federal regulations : TSCA 4(a) final test rules: Hexane (Other Isomers); n-Hexane
TSCA 8(a) PAIR: Naphthalene; n-Heptane; n-Nonane
TSCA 8(b) inventory: Hexane (Other Isomers); Naphthalene; n-Heptane; n-Hexane; n-Nonane; Diesel fuel; Octane (All Isomers); Toluene; Benzene

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Hexane (Other Isomers); Naphthalene; n-Heptane; n-Hexane; n-Nonane; Octane (All Isomers)
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Hexane (Other Isomers): Fire hazard, Immediate (acute) health hazard; Naphthalene: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; n-Heptane: Fire hazard; n-Hexane: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; n-Nonane: Fire hazard, Immediate (acute) health hazard; Octane (All Isomers): Fire hazard

Clean Water Act (CWA) 307: Naphthalene; Toluene; Benzene

Clean Water Act (CWA) 311: Naphthalene; Toluene; Benzene

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements :	Naphthalene	91-20-3	1 - 3
	n-Hexane	110-54-3	1 - 2
Supplier notification :	Naphthalene	91-20-3	1 - 3
	n-Hexane	110-54-3	1 - 2

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations : Connecticut carcinogen reporting list.: Benzene
Connecticut hazardous material survey.: Naphthalene; n-Hexane; Toluene; Benzene
Illinois toxic substances disclosure to employee act: Naphthalene; n-Hexane; Toluene; Benzene
Rhode Island RTK hazardous substances: Naphthalene; n-Hexane; Toluene; Benzene
Pennsylvania RTK: Hexane (Other Isomers): (generic environmental hazard); Naphthalene: (environmental hazard, generic environmental hazard); n-Heptane: (generic environmental hazard); n-Hexane: (generic environmental hazard); n-Nonane: (generic environmental hazard); Octane (All Isomers): (generic environmental hazard); Toluene: (environmental hazard, generic environmental hazard); Benzene: (special hazard, environmental hazard, generic environmental hazard)
Florida: Naphthalene; n-Hexane; Toluene; Benzene
Michigan critical material: Toluene; Benzene
Massachusetts RTK: Hexane (Other Isomers); Naphthalene; n-Heptane; n-Hexane; n-Nonane; Octane (All Isomers); Toluene; Benzene
New Jersey: Naphthalene; n-Heptane; n-Hexane; n-Nonane; Diesel fuel; Octane (All Isomers); Toluene; Benzene

WARNING: This product contains chemical/chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.: Naphthalene; Toluene; Benzene
WARNING: This product contains chemical/chemicals known to the state of California to cause reproductive harm (male).: Benzene
California prop. 65 (no significant risk level): Benzene
California prop. 65 (Maximum Acceptable Dosage Level): Toluene; Benzene
WARNING: This product contains chemical/chemicals known to the state of California to cause birth defects or other reproductive harm.: Toluene; Benzene
WARNING: This product contains chemical/chemicals known to the state of California to

Continued on next page

cause cancer.: Naphthalene; Benzene

Canada

WHMIS (Canada) : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).
Class D-1B: Material causing immediate and serious toxic effects (Toxic).
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).
Class E: Corrosive liquid.
CEPA DSL: Hexane (Other Isomers); Naphthalene; n-Heptane; n-Hexane; n-Nonane; Diesel fuel; Octane (All Isomers); Toluene; Benzene

Section 16. Other Information

Label requirements : CAUSES EYE BURNS.
HARMFUL IF SWALLOWED.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: BLOOD, KIDNEYS, LIVER, PERIPHERAL NERVOUS SYSTEM, RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.
SUSPECT CANCER HAZARD.
CONTAINS MATERIAL WHICH MAY CAUSE CANCER.
COMBUSTIBLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FIRE.

Hazardous Material Information System (U.S.A.) :

Health	0
Fire hazard	2
Physical Hazard	0
Personal protection	

National Fire Protection Association (U.S.A.) :

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Version : 1.01

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Continued on next page

Definitions of Material Safety Data Sheet Terminology

GOVERNMENT AGENCIES AND PRIVATE ASSOCIATIONS

ACGIH - American Conference of Governmental Industrial Hygienists, (private association)
DOT - United States Department of Transportation
EPA - United States Environmental Protection Agency
IARC - International Agency for Research on Cancer, (private association)
NFPA - National Fire Protection Association, (private association)
MSHA - Mine Safety and Health Administration, U.S. Department of Labor
NIOSH - National Institute of Occupational Safety and Health, U.S. Department of Health and Human Services
NTP - National Toxicology Program, (private association)
OSHA - Occupational Safety and Health Administration, U.S. Department of Labor
WHMIS- Workplace Hazardous Material Information System
CSA- Canadian Standards Association

HAZARD AND EXPOSURE INFORMATION

Acute Hazard - An adverse health effect which occurs rapidly as a result of short term exposure.
CAS # - American Chemical Society's Chemical Abstract service registry number which identifies the product and/or ingredients.
Ceiling - The concentration that should not be exceeded during any part of the working exposure
Chronic Hazard - An adverse health effect which generally occurs as a result of long term exposure or short term exposure with delayed health effects and is of long duration
Fire Hazard - A material that poses a physical hazard by being flammable, combustible, phyrophoric or an oxidizer as defined by 29 CFR 1910.1200
Hazard Class - DOT hazard classification
Hazardous Ingredients - Names of ingredients which have been identified as health hazards
IDLH- Immediately Dangerous to Life and Health, the airborne concentration below which a person can escape without respiratory protection and exposure up to 30 minutes, and not suffer debilitating or irreversible health effects. Established by NIOSH.
mg/m3 - Milligrams of contaminant per cubic meter of air, a mass to volume ratio
N/A - Not available or no relevant information found
NA - Not applicable
PEL - OSHA permissible exposure limit; an action level of one half this value may be applicable
ppm - Part per million (one volume of vapor or gas in one million volumes of air)
Pressure Hazard - A material that poses a physical hazard due to the potential of a sudden release of pressure such as explosive or a compressed gas as defined by 29 CFR 1910.1200
Reactive Hazard - A material that poses a physical hazard due to the potential to become unstable reactive, water reactive or that is an organic peroxide as defined by 29 CFR 1910.1200.
STEL - The ACGIH Short-Term Exposure Limit, a 15-minute Time-Weighted Average exposure which should not be exceeded at any time during a workday, even if the 8-hour TWA is less than the TLV.
TLV - ACGIH Threshold Limit Value, represented herein as an 8-hour TWA concentration.
8-hour TWA - The time weighted average concentration for a normal 8-hour workday and a 40-hour workweek, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect.
LD50 – Single dose of a substance that, when administered by a defined route in an animal assay, is expected to the cause the death of 50% of the defined animal population.
LC50 - The concentration of a substance in air that, when administered by means of inhalation over a specified length of time in an animal assay, is expected to cause the death of 50% of a defined animal population.

Material Safety Data Sheet

MSDS ID NO.: 0291MAR019
Revision date: 02/10/2007

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name: Marathon No. 2 Ultra Low Sulfur Diesel Dyed 15 ppm Sulfur Max
Synonym: Ultra Low Sulfur Diesel No. 2 Dyed 15 ppm Sulfur Max; No. 2 Diesel, Tax Exempt-Motor Vehicle Use, Dyed; ULSD No. 2 Diesel Dyed 15 ppm Sulfur Max; No. 2 MV 15 Diesel Dyed.
Chemical Family: Petroleum Hydrocarbon
Formula: Mixture

Manufacturer:
Marathon Petroleum Company LLC
539 South Main Street Findlay OH 45840

Other information: 419-421-3070
Emergency telephone number: 877-627-5463

2. COMPOSITION/INFORMATION ON INGREDIENTS

No. 2 Ultra Low Sulfur Diesel is a complex mixture of paraffins, cycloparaffins, olefins and aromatic hydrocarbon chain lengths predominantly in the range of C9-C16. Can contain small amounts of red dye and additives (<0.15%) which are not considered hazardous at the concentrations used.

Product information:

Name	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA - Vacated PELs - Time Weighted Ave	Other:
Marathon No. 2 Ultra Low Sulfur Diesel	68476-30-2	100	Skin - potential significant contribution to overall exposure by the cutaneous route = 100 mg/m^3 TWA		

Component Information:

Name	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA - Vacated PELs - Time Weighted Ave	Other:
Saturated Hydrocarbons	Mixture	70-80			
Aromatic Hydrocarbons	Mixture	17-25			
Unsaturated Hydrocarbons	Mixture	3-6			
Naphthalene	91-20-3	0.01-0.5	Skin - potential significant contribution to overall exposure by the cutaneous route = 10 ppm TWA = 15 ppm STEL	= 10 ppm TWA = 50 mg/m^3 TWA = 15 ppm STEL = 75 mg/m^3 STEL	

Notes: The manufacturer has voluntarily elected to reflect exposure limits contained in OSHA's 1989 air contaminants standard in its MSDS's, even though certain of those exposure limits were vacated in 1992.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

NO. 2 DIESEL IS A RED COLORED LIQUID. THIS PRODUCT IS CONSIDERED TO BE A COMBUSTIBLE LIQUID PER THE OSHA HAZARD COMMUNICATION STANDARD AND SHOULD BE KEPT AWAY FROM HEAT, FLAME AND SOURCES OF IGNITION. NEVER SIPHON THIS PRODUCT BY MOUTH. IF SWALLOWED, THIS PRODUCT MAY GET SUCKED INTO THE LUNGS (ASPIRATED) AND CAUSE LUNG DAMAGE OR EVEN DEATH. PROLONGED OR REPEATED SKIN CONTACT CAN CAUSE DEFATTING AND DRYING OF THE SKIN WHICH MAY PRODUCE SEVERE IRRITATION OR DERMATITIS.

OSHA WARNING LABEL:

WARNING.
COMBUSTIBLE LIQUID.
ASPIRATION (INADVERTENT SUCTION) OF LIQUID INTO THE LUNGS CAN PRODUCE CHEMICAL PNEUMONIA OR EVEN DEATH.
PRODUCES SKIN IRRITATION UPON PROLONGED OR REPEATED CONTACT.

CONSUMER WARNING LABEL:

A CONSUMER WARNING LABEL IS NOT APPLICABLE FOR THIS PRODUCT.

Inhalation: Exposure to high vapor concentrations may produce headache, giddiness, vertigo, and anesthetic stupor.

Ingestion: Ingestion may result in nausea, vomiting, diarrhea and restlessness. Aspiration (inadvertent suction) of liquid into the lungs must be avoided as even small quantities in the lungs can produce chemical pneumonitis, pulmonary edema/hemorrhage and even death.

Skin contact: Prolonged and repeated liquid contact can cause defatting and drying of the skin and can lead to irritation and/or dermatitis.

Eye contact: Produces little or no irritation on direct contact with the eye.

Carcinogenic Evaluation:

Product information:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
Marathon No. 2 Ultra Low Sulfur Diesel 68476-30-2	NE		A3 - Confirmed animal carcinogen with unknown relevance to humans (as total hydrocarbons)	

Notes: The International Agency for Research on Cancer (IARC) has determined that there is inadequate evidence for the carcinogenicity of diesel fuel/fuel oil in humans. IARC determined that there was limited evidence for the carcinogenicity of marine diesel fuel in animals. Distillate (light) diesel fuels were not classifiable as to their carcinogenicity to humans (Group 3A).

IARC has determined that there is sufficient evidence for the carcinogenicity in experimental animals of diesel engine exhaust and extracts of diesel engine exhaust particles. IARC determined that there is only limited evidence for the carcinogenicity in humans of diesel engine exhaust. However, IARC's overall evaluation has resulted in the IARC designation of diesel engine exhaust as probably carcinogenic to humans (Group 2A) because of the presence of certain engine exhaust components.

Component Information:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
Naphthalene 91-20-3	Monograph 82, 2002	Reasonably Anticipated To Be A Carcinogen Listed	A4 - Not Classifiable as a Human Carcinogen	Present

Notes: The International Agency for Research on Cancer (IARC) and the Environmental Protection Agency (EPA) have determined that naphthalene could be a possible human carcinogen.

4. FIRST AID MEASURES

Inhalation: If affected, move person to fresh air. If breathing is difficult, administer oxygen. If not breathing or if no heartbeat, give artificial respiration or cardiopulmonary resuscitation (CPR). Immediately call a physician. If symptoms or irritation occur with any exposure, call a physician.

Skin contact: Wash with soap and large amounts of water. Remove contaminated clothing. If symptoms or irritation occur, call a physician.

Ingestion: If swallowed, do not induce vomiting and do not give liquids. Immediately call a physician.

Eye contact: Flush eyes with large amounts of tepid water for at least 15 minutes. If symptoms or irritation occur, call a physician.

Medical conditions aggravated by exposure: Pre-existing skin conditions and respiratory disorders may be aggravated by exposures to components of this product.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: For small fires, Class B fire extinguishing media such as CO2, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFT/ATC) can be used. Fire fighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Specific hazards: This product has been determined to be a combustible liquid per the OSHA Hazard Communication Standard and should be handled accordingly. For additional fire related information, see NFPA 30 or the North American Emergency Response Guide 128.

Special protective equipment for firefighters: Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Keep surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Keep run-off water out of sewers and water sources.

Flash point: 120-190 F
Autoignition temperature: 489 F
Flammable limits in air - lower (%): 0.7
Flammable limits in air - upper (%): 5.0

NFPA rating:
Health: 1
Flammability: 2

HMIS classification:
Health: 1
Flammability: 2

Reactivity: 1
Other: -

Reactivity: 1
Special: *See Section 8 for guidance in selection of personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources. Advise authorities and National Response Center (800-424-8802) if substance has entered a watercourse or sewer. Notify local health and pollution control agencies, if appropriate. Contain liquid with sand or soil. Recover and return free product to proper containers. Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids.

7. HANDLING AND STORAGE

Handling:

Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements. Use appropriate grounding and bonding practices. Store in properly closed containers that are appropriately labeled and in a cool well-ventilated area. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues.

Avoid repeated and prolonged skin contact. Never siphon this product by mouth. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

Engineering measures: Local or general exhaust required when using at elevated temperatures that generate vapors or mists.

Respiratory protection: Use approved organic vapor chemical cartridge or supplied air respirators when material produces vapors that exceed permissible limits or excessive vapors are generated. Observe respirator protection factor criteria cited in ANSI Z88.2. Self-contained breathing apparatus should be used for fire fighting.

Skin and body protection: Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride and polyurethane gloves to prevent skin contact.

Eye protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields.

Hygiene measures: No special protective clothing is normally required. Select protective clothing depending on industrial operations. Use mechanical ventilation equipment that is explosion-proof.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:	Red Liquid
Physical state (Solid/Liquid/Gas):	Liquid
Substance type (Pure/Mixture):	Mixture
Color:	Red
Odor:	Not applicable.
Molecular weight:	180
pH:	Neutral
Boiling point/range (5-95%):	360-550 F
Melting point/range:	Not determined.

Decomposition temperature:	Not applicable.
Specific gravity:	C.A. 0.8
Density:	6.76 lbs/gal
Bulk density:	No data available.
Vapor density:	4-5
Vapor pressure:	1-10 mm Hg @ 100 F
Evaporation rate:	No data available.
Solubility:	Negligible
Solubility in other solvents:	No data available.
Partition coefficient (n-octanol/water):	No data available.
VOC content(%):	10%
Viscosity:	1.3-2.1 @ 50 C

10. STABILITY AND REACTIVITY

Stability:	The material is stable at 70 F, 760 mm pressure.
Polymerization:	Will not occur.
Hazardous decomposition products:	Combustion produces carbon monoxide, aldehydes, aromatic and other hydrocarbons.
Materials to avoid:	Strong oxidizers such as nitrates, perchlorates, chlorine, fluorine.
Conditions to avoid:	Excessive heat, sources of ignition and open flames.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Product information:

Name	CAS Number	Inhalation:	Dermal:	Oral:
Marathon No. 2 Ultra Low Sulfur Diesel	68476-30-2	No data available	No data available	No data available

Lifetime skin painting studies in animals with similar distillate fuels have produced weak to moderate carcinogenic activity following prolonged and repeated exposure. Similar middle distillates, when tested at nonirritating dose levels, did not show any significant carcinogenic activity indicating that this tumorigenic response is likely related to chronic irritation and not to dose. Repeated dermal application has produced severe irritation and systemic toxicity in subacute toxicity studies. Some components of this product, have been shown to produce a species specific, sex hormonal dependent kidney lesion in male rats from repeated oral or inhalation exposure. Subsequent research has shown that the kidney damage develops via the formation of a alpha-2μ-globulin, a mechanism unique to the male rat. Humans do not form alpha-2μ-globulin, therefore, the kidney effects resulting from this mechanism are not relevant in humans. Some components of this product were found to be positive in a few mutagenicity tests while negative in the majority of others. The exact relationship between these results and human health is not known.

Summary of health effect data on distillate fuel components:

This product may contain >0.1% naphthalene. Exposure to naphthalene at 30 ppm for two years caused lung tumors in female mice. Male mice with the same exposure did not develop tumors. Exposure to 10-60 ppm naphthalene for 2 years caused tumors in the tissue lining of the nose and respiratory tract in male and female rats. Oral administration of 133-267 mg/kg/day of naphthalene in mice for up to 90 days did not produce mortality, systemic toxicity, adversely affect organ or body weight or produce changes in blood. Repeated oral administration of naphthalene produced an anemia in dogs. Repeated intraperitoneal doses of naphthalene produced lung damage in mice. Repeated high doses of naphthalene has caused the formation of cataracts and retinotoxicity in the eyes of rats and rabbits due to accumulation of 1,2-naphthoquinone, a toxic metabolite. Effects in human eyes is uncertain and not well documented. Pregnant rats administered intraperitoneal doses of naphthalene during gestation gave birth to offspring that had delayed heart and bone development. Pregnant mice given near lethal doses of naphthalene showed no significant maternal toxicity and a reduction in the number of pups per litter, but no gross abnormalities in offspring. Suppressed spermatogenesis and progeny development have been reported in mice, rats and guinea pigs after exposure to high concentrations of naphthalene in their drinking water. Certain groups or individuals, i.e., infants, Semites, Arabs, Asians and Blacks, with a certain blood enzyme deficiency (glucose-6-phosphate dehydrogenase) are particularly susceptible to hemolytic agents and can rapidly develop hemolytic anemia and systemic poisoning from ingestion or inhalation of naphthalene.

Summary of health effect information on diesel engine exhaust:

Chronic inhalation studies of whole diesel engine exhaust in mice and rats produced a significant increase in lung tumors. Combustion of kerosine and/or diesel fuels produces gases and particulates which include carbon monoxide, carbon dioxide, oxides of nitrogen and/or sulfur and hydrocarbons. Significant exposure to carbon monoxide vapors decreases the oxygen carrying capacity of the blood and may cause tissue hypoxia via formation of carboxyhemoglobin.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects:

Product can cause fouling of shoreline and may be harmful to aquatic life in low concentrations. The 96 hour LL50 values for an accomadated fraction (WAF) of fuel oil ranged from 3.2 to 65 mg/l in fish and 2-210 mg/l in invertebrates. EL50 values for inhibition of algal growth ranged from 1.8 to 2.9 mg/l for No. 2 fuel oil and from 10 to 78 mg/l for diesel fuel. This product does not concentrate or accumulate in the food chain. If released to soil and water, this product is expected to biodegrade under both aerobic and anaerobic conditions.

13. DISPOSAL CONSIDERATIONS

Cleanup Considerations:

This product as produced is not specifically listed as an EPA RCRA hazardous waste according to federal regulations (40 CFR 261). However, when discarded or disposed of, it may meet the criteria of an "characteristic" hazardous waste. This material could become a hazardous waste if mixed or contaminated with a hazardous waste or other substance(s). It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations.

14. TRANSPORT INFORMATION

49 CFR 172.101:

DOT:

Transport Information: This material when transported via US commerce would be regulated by DOT Regulations.

Proper shipping name:	Fuel Oil, No. 2
UN/Identification No:	NA 1993
Hazard Class:	3
Packing group:	III
DOT reportable quantity (lbs):	Not applicable.

TDG (Canada):

Proper shipping name:	Fuel Oil, No. 2
UN/Identification No:	NA 1993
Hazard Class:	3
Packing group:	III
Regulated substances:	Not applicable.

15. REGULATORY INFORMATION

Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

OSHA Hazard Communication Standard: This product has been evaluated and determined to be hazardous as defined in OSHA's Hazard Communication Standard.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product contains the following component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List:

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Saturated Hydrocarbons	NA
Aromatic Hydrocarbons	NA
Unsaturated Hydrocarbons	NA
Naphthalene	NA

SARA Section 304: This product contains the following component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Saturated Hydrocarbons	NA
Aromatic Hydrocarbons	NA
Unsaturated Hydrocarbons	NA
Naphthalene	= 0.454 kg final RQ = 1 lb final RQ = 100 lb final RQ = 45.4 kg final RQ

SARA Section 311/312: The following EPA hazard categories apply to this product:

Acute Health Hazard
Fire Hazard
Chronic Health Hazard

SARA Section 313: This product contains the following component(s) that may be subject to reporting on the Toxic Release Inventory (TRI) From R:

Name	CERCLA/SARA 313 Emission reporting:
Saturated Hydrocarbons	None
Aromatic Hydrocarbons	None
Unsaturated Hydrocarbons	None
Naphthalene	= 0.1 % de minimis concentration

State and Community Right-To-Know Regulations:
The following component(s) of this material are identified on the regulatory lists below:

Saturated Hydrocarbons

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Aromatic Hydrocarbons

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Unsaturated Hydrocarbons

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Naphthalene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Listed
New Jersey Right-To-Know:	Listed
Pennsylvania Right-To-Know:	Listed
Massachusetts Right-To Know:	Listed
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Listed
Illinois - Toxic Air Contaminants	Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Listed

Canadian Regulatory Information:

Canada DSL/NDSL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Naphthalene	B4, D2A	1 %

16. OTHER INFORMATION

Additional Information: No data available.

Prepared by: Craig M. Parker Manager, Toxicology and Product Safety

The information and recommendations contained herein are based upon tests believed to be reliable. However, Marathon Petroleum Company LLC (MPC) does not guarantee their accuracy or completeness nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of the goods, the merchantability of the goods, or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage maybe required. MPC assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

End of Safety Data Sheet

ATTACHMENT FPL-EU1-I3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT FPL-EU1-I3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

West County Units 1 & 2, both utilize Selective Catalytic Reduction (SCR) for the reduction of oxides of Nitrogen (NO_x) for emission control. The SCR process reduces the NO_x into molecular nitrogen (N_2) and water (H_2O). The NO_x breaks down when it reacts with a reducing agent, in this case ammonia (NH_3), in the presence of a catalyst. The NH_3 is mixed thoroughly with the flue gas prior to the catalyst. The catalyst, by providing active reaction sites, allows the reaction to occur at temperatures between 300 and 1,050 F. The NH_3 diffuses into the catalyst pore structure and is adsorbed onto an active catalyst site. The NO_x then reacts with the adsorbed NH_3 completing the reaction. The following discusses the catalyst and the ammonia system for the SCR.

Each unit incorporates the use of Cormetech® SCR Catalyst. These catalysts are extruded ceramic components, in a honeycomb structure with high geometric surface area, composed of inorganic oxides (titanium-tungsten). The catalysts are assembled into steel modules that are arranged in the SCR reactor to efficiently contact the flue gases during system operation. At West County, there are forty (40) SCR modules in each HRSG.

The ammonia system, built by Peerless Manufacturing Co., is installed on each HRSG to provide the reducing agent for the SCR. Each system consists of the following:

- Aqueous ammonia, ~19% by wt, is supplied to an ammonia flow control unit (AFCU). Two fans, a primary and secondary, are used to direct the gas through the skid and the distribution piping. They are designed to provide 5,467 ACFM.
- Process gas, a combination of exhaust gas and vaporized ammonia is distributed from the AFCU skid through interconnecting piping to the Manifold and Ammonia Injection Grid (AIG). The gas is then injected upstream of the internal structure frame containing the catalyst modules.

Control of the SCR system is achieved through the Distributed Control System (DCS).

ATTACHMENT FPL-EU1-I4

PROCEDURES FOR STARTUP AND SHUTDOWN

ATTACHMENT FPL-EU1-I4
PROCEDURES FOR STARTUP/SHUTDOWN

Startup for the combustion turbine (CT)/heat recovery steam generator (HRSG) system begins with an electric control system using a switch to initiate the unit startup cycle. A period of several hours is required to allow metal temperatures in the HRSG and in the steam turbine to equilibrate without undue metal stress, before putting the unit "on the line" and sending electric power to the grid.

The CTs can be started on either natural gas or distillate fuel oil. The CTs utilize Dry Low-NO_x (DLN) combustion technology during natural gas firing and water injection during oil firing to reduce emissions of nitrogen oxides (NO_x). A selective catalytic reduction (SCR) system is also used to further reduce NO_x emissions. Excess emissions are allowed during startup, shutdown, fuel switches, and malfunctions, and best operational practices are employed to minimize the amount and duration of excess emissions during these periods.

- *Steam Turbine/HRSG System Cold Startup:* For cold startup of the steam turbine system, excess emissions from any CT/HRSG system will not exceed 8 hours in any 24-hour period. A "cold startup of the steam turbine system" is defined as startup of the 3-on-1 combined cycle system following a shutdown of the steam turbine lasting at least 48 hours. During a cold startup of the steam turbine system, each gas turbine/HRSG system is sequentially brought on line at low load to gradually increase the temperature of the steam-electrical turbine and prevent metal fatigue. Since this excess emission condition applies to any gas turbine/HRSG system and each gas turbine/HRSG system is sequentially brought on line, the entire period of sequential excess emissions could be up to 24 hours. As a result, the total time of maximum excess emissions authorized for the cold startup of the steam turbine in the 3-on-1 combined cycle system, is 24-hours with excess emissions for each gas turbine/HRSG not exceeding 8-hours in any 24-hour period
- *Shutdown Combined Cycle Operation:* For shutdown of the combined cycle operation, excess emissions from any CT/HRSG system will not exceed 3 hours in any 24-hour period.
- *CT/HRSG System Cold Startup:* For cold startup of a CT/HRSG system, excess emissions will not exceed 4 hours in any 24-hour period. "Cold startup of a CT/HRSG system" is defined as a startup after the pressure in the high-pressure steam drum falls below 450 pounds per square inch gauge (psig) for at least a 1-hour period.
- *Fuel Switching:* For fuel switching, excess emissions will not exceed 2 hours in any 24-hour period. This specific condition authorizes fuel switching for oil-to-gas and gas-to-oil, which are approved alternate methods of operation.

Shutdown is performed by reducing the unit load (electrical production) to a minimum level, opening the breaker (which disconnects the unit generator from the system electrical grid), shutting off the fuel, and coasting to a stop.

ATTACHMENT FPL-EU1-IV1

IDENTIFICATION OF APPLICABLE REQUIREMENTS

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary - Designee

PERMITTEE:

Florida Power and Light Company (FPL)
700 Universe Boulevard
Juno Beach, Florida 33408

Authorized Representative:
Randall R. LaBauve, Vice President

FPL West County Energy Center
DEP File No. 0990646-001-AC
Permit No. PSD-FL-354
SIC No. 4911
Expires: December 31, 2011

PROJECT AND LOCATION

This permit authorizes the construction of two nominal 1,250 megawatt combined cycle units at the proposed Florida Power and Light Company (FPL) West County Energy Center.

The proposed project will be located at 20505 State Road 80, Loxahatchee, Florida 33470. This site encompasses 220 acres of which approximately 40 acres will be used for two combined cycle units.

UTM coordinates are Zone 17; 562.19 km E; 2953.04 km N.

STATEMENT OF BASIS

This PSD construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The project was processed in accordance with the requirements of Rule 62-212.400, F.A.C., the preconstruction review program for the Prevention of Significant Deterioration (PSD) of Air Quality. Pursuant to Chapter 62-17, F.A.C. and Chapter 403 Part II, F.S., the project is also subject to Electrical Power Plant Siting. The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

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Joseph Kahn, Director (Date) 1/10/2007
Division of Air Resource Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final Permit) and all copies were sent electronically (with Received Receipt) or by certified mail* (Return Receipt Requested) before the close of business on 1/10/07 to the person(s) listed:

Randall R. LaBauve, FPL: randall_labauve@fpl.com
Chair, Palm Beach County BCC: Agreene@co.palm-beach.fl.us
Mayor, Village of Royal Palm Beach: dlodwick@royalpalm.com
Mayor, Village of Wellington: twenham@ci.wellington.fl.us
John Benjamin, Everglades National Park: EVER_Superintendent@nps.gov
Gregg Worley, U.S. EPA Region 4, Atlanta GA: worley.gregg@epa.gov
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Patricia D. Curry: GremlinLtd@aol.com
Sharon Waite*

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Mary J. Harrop 1/10/07
(Clerk) (Date)

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Ms. Sharon Waite
15058 75th Lane North
Loxahatchee, Florida 33470

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X R Waite ☐ Agent ☑ Addressee

B. Received by (Printed Name) Richard White C. Date of Delivery 1/13

D. Is delivery address different from item 1? ☐ Yes
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PS Form 3800, May 2000 See Reverse for Instructions

FACILITY DESCRIPTION

The FPL West County Energy Center will be a nominal 2,500 megawatt (MW) greenfield power plant. The initial phase is the construction of two nominal 1,250 MW gas-fired combined cycle units that will use ultralow sulfur (ULS) fuel oil as backup fuel. The two combined cycle units are designated as Unit 1 and Unit 2.

Each combined cycle unit will consist of: three nominal 250 megawatt Model 501G gas turbine-electrical generator sets with evaporative inlet cooling systems; three supplementary-fired heat recovery steam generators (HRSG's) with SCR reactors; one nominal 428 mmBtu/hour (LHV) gas-fired duct burner located within each of the three HRSG's; three 149 feet exhaust stacks; one 26 cell mechanical draft cooling tower; and a common nominal 500 MW steam-electrical generator.

Additional ancillary equipment will include: four emergency generators; two natural gas fired fuel heaters; two diesel fuel storage tanks; two auxiliary steam boilers; and other associated support equipment.

{Note: Throughout this permit, the electrical generating capacities represent nominal values for the given operating conditions.}

NEW EMISSIONS UNITS

This permit authorizes construction and installation of the following new emissions units.

ID	Emission Unit Description
001	Unit 1A – one nominal 250 MW gas turbine with supplementary-fired heat recovery steam generator
002	Unit 1B – one nominal 250 MW gas turbine with supplementary-fired heat recovery steam generator
003	Unit 1C – one nominal 250 MW gas turbine with supplementary-fired heat recovery steam generator
004	Unit 2A – one nominal 250 MW gas turbine with supplementary-fired heat recovery steam generator
005	Unit 2B – one nominal 250 MW gas turbine with supplementary-fired heat recovery steam generator
006	Unit 2C – one nominal 250 MW gas turbine with supplementary-fired heat recovery steam generator
007	Two nominal 6.3 million distillate fuel oil storage tanks*
008	Two 26 cell mechanical draft cooling towers
009	Two nominal 85,000 lb/hr (99.8 MMBtu/hr) auxiliary boilers
010	Two nominal 10 MMBtu/hr gas-fired process heaters
011	Four nominal 2,250 KW (~ 21 MMBtu/hr) emergency generators
012	One emergency diesel fire pump engine (< 300 hp) and 500 gallon fuel oil storage tank

* This capacity will allow approximately 108 hours of on-site oil storage

REGULATORY CLASSIFICATION

Title III: This facility will be major for hazardous air pollutants (HAPs).

Title IV: The facility will operate emissions units subject to the acid rain provisions of the Clean Air Act.

Title V: Because potential emissions of at least one regulated pollutant exceed 100 tons per year, the new facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

PSD: The facility is located in an area designated as "attainment," "maintenance," or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. The facility is considered a "fossil fuel fired steam electric plant of more than 250 million BTU per hour of heat input", which is one of the 28 PSD source categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a PSD-major source of air pollution with respect to Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) of Air Quality.

NSPS: This project is subject to applicable requirements of 40 CFR 60, NSPS-Subpart KKKK (Standards of Performance for Stationary Combustion Turbines for Which Construction is Commenced After February 18, 2005). This project is also subject to applicable requirements of 40 CFR 60, NSPS-Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units) and to 40 CFR 60, NSPS-Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (ICE).

NESHAPs: This project is subject to applicable requirements of 40 CFR 63, Subpart YYYY, National Emissions Standards for Hazardous Air Pollutants for Stationary Combustion Gas Turbines. This project is also subject to applicable requirements of 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Reciprocating Internal Combustion Engines (RICE); and to 40 CFR 63, Subpart DDDDD National Emissions Standards for Industrial, Commercial, or Institutional Boilers and Process Heaters.

Siting: The facility is subject to Electrical Power Plant Siting in accordance with Chapter 62-17, F.A.C. and Chapter 403, Part II, F.S.

PERMITTING AUTHORITY

All documents related to applications for permits to construct, operate or modify an emissions unit shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP) at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Copies of all such documents shall also be submitted to the Compliance Authority.

COMPLIANCE AUTHORITY

All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department of Environmental Regulation Southeast District office (DEP-SED), 400 North Congress Avenue, Suite 200, West Palm Beach, FL 33401.

APPENDICES

The following Appendices are attached as part of this permit.

Appendix A: Subparts A from NSPS 40 CFR 60 and NESHAP 40 CFR 63; Identification of General Provisions.

Appendix BD: Final BACT Determinations and Emissions Standards.

Appendix Dc: NSPS Requirements for Small Steam Generating Units, 40 CFR 60, Subpart Dc.

Appendix DDDDD: NESHAP Requirements for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD.

Appendix GC: General Conditions.

Appendix IIII: NSPS Requirements for Compression Ignition Internal Combustion Engines (ICE).

Appendix KKKK: NSPS Requirements for Gas Turbines, 40 CFR 60, Subpart KKKK.

Appendix SC: Standard Conditions.

Appendix XS: Semiannual NSPS Excess Emissions Report.

Appendix YYYY: NESHAP Requirements for Gas Turbines, 40 CFR 63, Subpart YYYY.

Appendix ZZZZ: NESHAP Requirements for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ.

RELEVANT DOCUMENTS

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action and are on file with the Department.

- Permit application received on April 14, 2005;
- Department PSD Application Sufficiency comments dated June 13, 2005;
- Sufficiency Responses received August 12, 2005;
- Letter from FPL to DEP dated December 29, 2005 regarding equipment selection, capacities, etc.;
- Draft permit package issued on March 1, 2006;
- FPL's comments on the Draft Permit and TEPD received March 31, 2006;
- Public Meeting comments received at the Royal Palm Beach Cultural Center on April 19, 2006 and by e-mails, telephone and letters;
- The Final Order of the Siting Board approving Certification dated December 26, 2006; and
- Final Determination distributed concurrently with Final PSD Permit.

1. General Conditions: The permittee shall operate under the attached General Conditions listed in Appendix GC of this permit. General Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

2. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and the Title 40, Parts 51, 52, 60, 63, 72, 73, and 75 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
[Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

3. Construction and Expiration: The permit expiration date includes sufficient time to complete construction, perform required testing, submit test reports, and submit an application for a Title V operation permit to the Department. Approval to construct shall become invalid for any of the following reasons: construction is not commenced within 18 months after issuance of this permit; construction is discontinued for a period of 18 months or more; or construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. In conjunction with an extension of the 18-month period to commence or continue construction (or to construct the project in phases), the Department may require the permittee to demonstrate the adequacy of any previous determination of Best Available Control Technology (BACT) for emissions units regulated by the project. For good cause, the permittee may request that this PSD air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, 62-210.300(1), and 62-212.400(6)(b), F.A.C.]

4. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

5. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Chapters 62-210 and 62-212, F.A.C.]

6. Application for Title IV Permit: At least 24 months before the date on which the new units begin serving an electrical generator greater than 25 MW, the permittee shall submit an application for a Title IV Acid Rain Permit to the Department's Bureau of Air Regulation in Tallahassee and a copy to the Region 4 Office of the U.S. Environmental Protection Agency in Atlanta, Georgia. [40 CFR 72]

7. Application for Title V Permit: The permittee shall submit an application, pursuant to Chapter 62-213, F.A.C, for a Title V air operation permit at least 90 days before the expiration of this permit, but no later than 180 days after commencing operation of the new units. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, a Compliance Assurance Monitoring Plan (as necessary), and such additional information as the Department may by law require.

SECTION III - EMISSIONS UNITS SPECIFIC CONDITIONS

A. COMBINED CYCLE UNITS 1 AND 2 – GAS TURBINES (EUs 001, 002, 003, 004, 005, and 006)

This section of the permit addresses the following emissions units.

Combined Cycle Units 1 and 2 and associated equipment

Description: Emissions units 001, 002, 003, 004, 005, and 006. Each emission unit consists of: a Model 501G combustion gas turbine-electrical generator set with automated gas turbine control, inlet air filtration system and evaporative cooling, a gas-fired heat recovery steam generator (HRSG) with duct burner, a HRSG stack, and associated support equipment. Each combined cycle unit is comprised of three of the described emission units. The project also includes two steam turbine-electrical generators, each of which serves a combined cycle unit.

Fuels: Each gas turbine fires natural gas as the primary fuel and ultra low sulfur distillate fuel oil as a restricted alternate fuel.

Generating Capacity: Each of the six gas turbine-electrical generator sets has a nominal generating capacity of 250 MW. Each of the two steam turbine-electrical generators has a nominal generating capacity of 500 MW. The total nominal generating capacity of each of the "3 on 1" combined cycle unit is approximately 1,250 MW. The total nominal generating capacity of the proposed project is 2,500 MW.

Controls: The efficient combustion of natural gas and restricted firing of ultra low sulfur distillate fuel oil minimizes the emissions of CO, PM/PM_{10}, SAM, SO_2 and VOC. Dry Low-NO_X (DLN) combustion technology for gas firing and water injection for oil firing reduce NOx emissions. A selective catalytic reduction (SCR) system further reduces NO_X emissions.

Stack Parameters: Each HRSG has a stack at least 149 feet tall with a nominal diameter of 22 feet. The Department may require the permittee to perform additional air dispersion modeling should the actual specified stack dimensions change. The following summarizes the exhaust characteristics without the duct burners:

Fuel	Heat Input Rate (LHV)	Compressor Inlet Temp.	Exhaust Temp., °F	Flow Rate ACFM
Gas	2,333 MMBtu/hour	59° F	195° F	1,330,197
Oil	2,117 MMBtu/hour	59° F	293° F	1,533,502

Continuous Monitors: Each stack is equipped with continuous emissions monitoring systems (CEMS) to measure and record CO and NO_X emissions as well as flue gas oxygen or carbon dioxide content.

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: Determinations of the Best Available Control Technology (BACT) were made for carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter (PM/PM_{10}), sulfuric acid mist (SAM), sulfur dioxide (SO_2) and volatile organic compounds (VOC).

   See Appendix BD of this permit for a summary of the final BACT determinations.
   [Rule 62-212.400(BACT), F.A.C.]

2. NSPS Requirements: The combustion turbines shall comply with all applicable requirements of 40 CFR 60, listed below, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The Department determines that compliance with the BACT emissions performance requirements also assures compliance with the New Source Performance Standards given in 40 CFR 60, Subpart KKKK. Some separate reporting and monitoring may be required by the individual subparts.

   a *Subpart A, General Provisions*, including:

   - 40 CFR 60.7, Notification and Record Keeping
   - 40 CFR 60.8, Performance Tests

- 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
- 40 CFR 60.12, Circumvention
- 40 CFR 60.13, Monitoring Requirements
- 40 CFR 60.19, General Notification and Reporting Requirements

b *Subpart KKKK, Standards of Performance for Stationary Gas Turbines*: These provisions include standards for combustion gas turbines and duct burners.

3. NESHAP Requirements: The combustion turbines are subject to 40 CFR 63, Subpart A, Identification of General Provisions and 40 CFR 63, Subpart YYYY, National Emissions Standard for Hazardous Air Pollutants for Stationary Combustion Gas Turbines. The project must comply with the Initial Notification requirements set forth in Sec. 63.6145 but need not comply with any other requirement of Subpart YYYY until EPA takes final action to require compliance and publishes a document in the Federal Register. (Reference: Appendix YYYY and Appendix A, NESHAP Subpart A of this permit).

EQUIPMENT AND CONTROL TECHNOLOGY

4. Gas Turbines: The permittee is authorized to install, tune, operate, and maintain six Model 501G gas turbine-electrical generator sets each with a nominal generating capacity of 250 MW. Each gas turbine shall include an automated gas turbine control system and have dual-fuel capability. Ancillary equipment includes an inlet air filtration system and an evaporative inlet air-cooling system. The gas turbines will utilize DLN combustors. [Application; Design]

5. HRSGs: The permittee is authorized to install, operate, and maintain six new heat recovery steam generators (HRSGs) with separate HRSG exhaust stacks. Each HRSG shall be designed to recover exhaust heat energy from one of the six gas turbines (1A to 1C and 2A to 2C) and deliver steam to one of the two steam turbine electrical generators. Each HRSG may be equipped with a gas-fired duct burner having a nominal heat input rate of 428 MMBtu per hour (LHV).

6. Gas Turbine/Supplementary-fired HRSG Emission Controls

a. *DLN Combustion*: The permittee shall operate and maintain the DLN system to control NO_X emissions from each gas turbine when firing natural gas. Prior to the initial emissions performance tests required for each gas turbine, the DLN combustors and automated gas turbine control system shall be tuned to achieve sufficiently low CO and NO_X values to meet the CO and NO_X limits with the additional SCR control technology described below. Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations.

b. *Water Injection*: The permittee shall install, operate, and maintain a water injection system to reduce NO_X emissions from each gas turbine when firing distillate fuel oil. Prior to the initial emissions performance tests required for each gas turbine, the water injection system shall be tuned to achieve sufficiently low CO and NO_X values to meet the CO and NO_X limits with the additional SCR control technology described below. Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations.

c. *Selective Catalytic Reduction (SCR) System*: The permittee shall install, tune, operate, and maintain an SCR system to control NO_X emissions from each gas turbine when firing either natural gas or distillate fuel oil. The SCR system consists of an ammonia (NH_3) injection grid, catalyst, ammonia storage, monitoring and control system, electrical, piping and other ancillary equipment. The SCR system shall be designed, constructed and operated to achieve the permitted levels for NO_X and NH_3 emissions.

d. *Oxidation Catalyst*: The permittee shall design and build the project to facilitate possible future installation of oxidation catalyst system to control CO emissions from each gas combustion

turbine/supplementary-fired heat recovery steam generator. The permittee may install the oxidation catalyst during project construction or, after notifying the Department, at a future date as described in Specific Condition 12.h.

e. *Ammonia Storage:* In accordance with 40 CFR 60.130, the storage of ammonia shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68.

[Design; Rule 62-212.400(BACT), F.A.C.]

PERFORMANCE RESTRICTIONS

7. Permitted Capacity - Gas Turbines: The nominal heat input rate to each gas turbine is 2,333 MMBtu per hour when firing natural gas and 2,117 MMBtu per hour when firing distillate fuel oil (based on a compressor inlet air temperature of 59° F, the lower heating value (LHV) of each fuel, and 100% load). Heat input rates will vary depending upon gas turbine characteristics, ambient conditions, alternate methods of operation, and evaporative cooling. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(PTE), F.A.C.]

8. Permitted Capacity - HRSG Duct Burners: The total nominal heat input rate to the duct burners for each HRSG is 428 MMBtu per hour based on the lower heating value (LHV) of natural gas. Only natural gas shall be fired in the duct burners. [Rule 62-210.200(PTE), F.A.C.]

9. Authorized Fuels: The gas turbine shall fire natural gas as the primary fuel, which shall contain no more than 2.0 grains of sulfur per 100 standard cubic feet of natural gas. As a restricted alternate fuel, the gas turbine may fire ultra low sulfur distillate fuel oil containing no more than 0.0015% sulfur by weight. Each gas turbine shall fire no more than 500 hours of fuel oil, during any calendar year. [Rules 62-210.200(PTE) and 62-212.400 (BACT), F.A.C.]

10. Hours of Operation: Subject to the operational restrictions of this permit, the gas turbines may operate throughout the year (8760 hours per year). Restrictions on individual methods of operation are specified below.

11. Methods of Operation: Subject to the restrictions and requirements of this permit, the gas turbines may operate under the following methods of operation.

    a. *Combined Cycle Operation*: Each gas turbine/HRSG system may operate to produce direct, shaft-driven electrical power and steam-generated electrical power from the steam turbine-electrical generator as a three-on-one combined cycle unit subject to the restrictions of this permit. In accordance with the specifications of the SCR and HRSG manufacturers, the SCR system shall be on line and functioning properly during combined cycle operation or when the HRSG is producing steam.

    b. *Inlet Conditioning*: In accordance with the manufacturer's recommendations and appropriate ambient conditions, the evaporative cooling system may be operated to reduce the compressor inlet air temperature and provide additional direct, shaft-driven electrical power.

    c. *Duct Firing*: When firing natural gas, each HRSG system may fire natural gas in the duct burners to provide additional steam-generated electrical power. The total combined heat input rate to the duct burners (all six HRSGs) shall not exceed 7,395,840 MMBtu (LHV) during any consecutive 12 months.

    [Application; Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C.]

A. COMBINED CYCLE UNITS 1 AND 2 – GAS TURBINES (EUs 001, 002, 003, 004, 005, and 006)

EMISSIONS STANDARDS

12. Emissions Standards: Emissions from each gas turbine shall not exceed the following standards.

Pollutant	Fuel	Method of Operation	Stack Test, 3-Run Average		CEMS Block Average
			ppmvd @ 15% O_2	lb/hr [g]	ppmvd @ 15% O_2
CO [a]	Oil	Combustion Turbine (CT)	8.0	42.0	8.0, 24-hr 6, 12-month [h]
	Gas	CT & Duct Burner (DB)	7.6	52.5	
		CT Normal	4.1	23.2	
NO_X [b]	Oil	CT	8.0	82.4	8.0, 24-hr
	Gas	CT & DB	2.0	24.2	2.0, 24-hr
		CT Normal	2.0	20.0	
PM/PM_{10} [c]	Oil/Gas	All Modes	2 gr S/100SCF of gas, 0.0015% sulfur fuel oil		
			Visible emissions shall not exceed 10% opacity for each 6-minute block average.		
SAM/SO_2 [d]	Oil/Gas	All Modes	2 gr S/100 SCF of gas, 0.0015% sulfur fuel oil		
VOC [e]	Oil	CT	6.0	19.6	NA
	Gas	CT & DB	1.5	5.4	
		CT Normal	1.2	4.1	
Ammonia [f]	Oil/Gas	CT, All Modes	5	NA	NA

a. Compliance with the continuous 24-hour CO standards shall be demonstrated based on data collected by the required CEMS. The initial and annual EPA Method 10 tests associated with the certification of the CEMS instruments shall also be used to demonstrate compliance with the individual standards for natural gas, fuel oil, and basic duct burner modes. The stacks test limits apply only at high load (90-100% of the combustion turbine capacity).

b. Compliance with the continuous NO_X standards shall be demonstrated based on data collected by the required CEMS. The initial and annual EPA Method 7E or Method 20 tests associated with demonstration of compliance with 40 CFR 60, Subpart KKKK or certification of the CEMS instruments shall also be used to demonstrate compliance with the individual standards for natural gas, fuel oil, and duct burner modes during the time of those tests. NO_X mass emission rates are defined as oxides of nitrogen expressed as NO_2.

c. The sulfur fuel specifications combined with the efficient combustion design and operation of each gas turbine represents (BACT) for PM/PM_{10} emissions. Compliance with the fuel specifications, CO standards, and visible emissions standards shall serve as indicators of good combustion. Compliance with the fuel specifications shall be demonstrated by keeping records of the fuel sulfur content. Compliance with the visible emissions standard shall be demonstrated by conducting tests in accordance with EPA Method 9.

d. The fuel sulfur specifications effectively limit the potential emissions of SAM and SO_2 from the gas turbines and represent BACT for these pollutants. Compliance with the fuel sulfur specifications shall be determined by the ASTM methods for determination of fuel sulfur as detailed in the permit.

e. Compliance with the VOC standards shall be demonstrated by conducting tests in accordance with EPA Method 25A. Optionally, EPA Method 18 may also be performed to deduct emissions of methane and ethane. The emission standards are based on VOC measured as methane. The limits apply only at high load (90-100% of the

combustion turbine capacity). Compliance with the CO CEMS based limits at lower loads shall be deemed as compliance with the VOC limit.

f. Compliance with the ammonia slip standard shall be demonstrated by conducting tests in accordance with EPA Method CTM-027.

g. The mass emission rate standards are based on a turbine inlet condition of 59° F and may be adjusted to actual test conditions in accordance with the performance curves and/or equations on file with the Department.

h. Rolling Average. Enforcement discretion may be exercised for up to 12 months with respect to the 6 ppmvd @15% O_2 limit for any combustion turbine/supplementary-fired heat recovery steam generator upon notification by the permittee of intent to install the oxidation catalyst. The permittee shall have 12 months to complete the oxidation catalyst installation. After completing the installation of the catalyst all prior partial or complete calendar months shall be excluded from the 12-month rolling average.

{"DB" means duct burning. "SCR" means selective catalytic reduction. "NA" means not applicable}.

[Rule 62-212.400(BACT), F.A.C.]

13. Duct Burners: The duct burners are also subject to the provisions of Subpart KKKK of the New Source Performance Standards in 40 CFR 60, which are summarized in Appendix KKKK.

{Permitting Note: The BACT limits applicable during duct firing are much more stringent than the standards of NSPS Subpart KKKK for duct burners. Therefore, compliance with the BACT limits insures compliance with the emission limitations in Subpart KKKK.} [40 CFR 60, Subpart KKKK]

EXCESS EMISSIONS

{Permitting Note: The following conditions apply only to the SIP-based emissions standards specified in Condition No. 12 of this section. Rule 62-210.700, F.A.C. (Excess Emissions) cannot vary or supersede any federal provision of the NSPS, or Acid Rain programs.}

14. Operating Procedures: The Best Available Control Technology (BACT) determinations established by this permit rely on "good operating practices" to reduce emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the gas turbines, HRSGs, and pollution control systems in accordance with the guidelines and procedures established by each manufacturer. The training shall include good operating practices as well as methods of minimizing excess emissions. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

15. Alternate Visible Emissions Standard: Visible emissions due to startups, shutdowns, and malfunctions shall not exceed 10% opacity except for up to ten, 6-minute averaging periods during a calendar day, which shall not exceed 20% opacity. [Rule 62-212.400(BACT), F.A.C.]

16. Definitions

a. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions. [Rule 62-210.200(245), F.A.C.]

b. *Shutdown* is the cessation of the operation of an emissions unit for any purpose. [Rule 62-210.200(230), F.A.C.]

c. *Malfunction* is defined as any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner. [Rule 62-210.200(159), F.A.C.]

17. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure that may reasonably be prevented during startup,

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

18. Excess Emissions Allowed: As specified in this condition, excess emissions resulting from startup, shutdown, oil-to-gas fuel switches and documented malfunctions are allowed provided that operators employ the best operational practices to minimize the amount and duration of emissions during such incidents. For each gas turbine/HRSG system, excess emissions resulting from startup, shutdown, or documented malfunctions shall not exceed two hours in any 24-hour period except for the specific cases listed below. A "documented malfunction" means a malfunction that is documented within one working day of detection by contacting the Compliance Authority by telephone, facsimile transmittal, or electronic mail.

    a. *Steam Turbine/HRSG System Cold Startup*: For cold startup of the steam turbine system, excess emissions from any gas turbine/HRSG system shall not exceed eight hours in any 24-hour period. A cold "startup of the steam turbine system" is defined as startup of the 3-on-1 combined cycle system following a shutdown of the steam turbine lasting at least 48 hours.

    {Permitting Note: During a cold startup of the steam turbine system, each gas turbine/HRSG system is sequentially brought on line at low load to gradually increase the temperature of the steam-electrical turbine and prevent thermal metal fatigue. Note that shutdowns and documented malfunctions are separately regulated in accordance with the requirements of this condition.}

    b. *Shutdown Combined Cycle Operation*: For shutdown of the combined cycle operation, excess emissions from any gas turbine/HRSG system shall not exceed three hours in any 24-hour period.

    c. *Gas Turbine/HRSG System Cold Startup*: For cold startup of a gas turbine/HRSG system, excess emissions shall not exceed four hours in any 24-hour period. "Cold startup of a gas turbine/HRSG system" is defined as a startup after the pressure in the high-pressure (HP) steam drum falls below 450 psig for at least a one-hour period.

    d. *Fuel Switching*: For fuel switching, excess emissions shall not exceed 2 hours in any 24-hour period.

19. Ammonia Injection: Ammonia injection shall begin as soon as operation of the gas turbine/HRSG system achieves the operating parameters specified by the manufacturer. As authorized by Rule 62-210.700(5), F.A.C., the above conditions allow excess emissions only for specifically defined periods of startup, shutdown, fuel switching, and documented malfunction of the gas turbines.
[Design; Rules 62-212.400(BACT) and 62-210.700, F.A.C.]

20. DLN Tuning: CEMS data collected during initial or other major DLN tuning sessions shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer's specifications. A "major tuning session" would occur after completion of initial construction, a combustor change-out, a major repair or maintenance to a combustor, or other similar circumstances. Prior to performing any major tuning session, the permittee shall provide the Compliance Authority with an advance notice of at least 14 days that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail.
[Design; Rule 62-4.070(3), F.A.C.]

EMISSIONS PERFORMANCE TESTING

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

Method	Description of Method and Comments
CTM-027	Procedure for Collection and Analysis of Ammonia in Stationary Source {Notes: This is an EPA conditional test method. The minimum detection limit shall be 1 ppm.}
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography {Note: EPA Method 18 may be used (optional) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions.}
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines
25A	Determination of Volatile Organic Concentrations

Method CTM-027 is published on EPA's Technology Transfer Network Web Site at www.epa.gov/ttn/emc/ctm.html
The other methods are described in Appendix A of 40 CFR 60, adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department.
[Rules 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

22. Initial Compliance Determinations: Each gas turbine shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_X, VOC, visible emissions, and ammonia slip. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each unit configuration. Each unit shall be tested when firing natural gas, when using the duct burners and when firing distillate fuel oil. Referenced method data collected during the required Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the initial CO and NO_X standards. With appropriate flow measurements (or fuel measurements and approved F-factors), CEMS data may be used to demonstrate compliance with the CO and NO_X mass rate emissions standards. CO and NO_X emissions recorded by the CEMS shall also be reported for each run during tests for visible emissions, VOC and ammonia slip. The Department may require the permittee to conduct additional tests after major replacement or major repair of any air pollution control equipment, such as the SCR catalyst, oxidation catalyst, DLN combustors, etc.
[Rule 62-297.310(7)(a)1, F.A.C. and 40 CFR 60.8]

23. Continuous Compliance: The permittee shall demonstrate continuous compliance with the 24-hour CO and NO_X emissions standards based on data collected by the certified CEMS. Within 45 days of conducting any RATA on a CEMS, the permittee shall submit a report to the Compliance Authority summarizing results of the RATA. Compliance with the CO emission standards also serves as an indicator of efficient fuel combustion and oxidation catalyst operation, which reduces emissions of particulate matter and volatile organic compounds. The Department also reserves the right to use data from the continuous monitoring record and from annual RATA tests to determine compliance with the short term CO and NO_X limits for each method of operation given in Condition 12 above. [Rule 62-212.400 (BACT), F.A.C.]

24. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), each gas turbine shall be tested to demonstrate compliance with the emission standards for visible emissions. NO_X and CO emissions data collected during the required continuous monitor Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the CO and NO_x standards. Annual testing to determine the ammonia slip shall be conducted while firing the primary fuel. NO_X emissions recorded by the CEMS shall

be reported for each ammonia slip test run. CO emissions recorded by the CEMS shall be reported for the visible emissions observation period.

{Permitting Note: After initial compliance with the VOC standards is demonstrated, annual compliance tests for VOC emissions are not required. Compliance with the continuously monitored CO standards shall indicate efficient combustion and low VOC emissions. The Department retains the right to require VOC testing if CO limits are exceeded or for the reasons given in Appendix SC, Condition 17, Special Compliance Tests.}

[Rules 62-212.400 (BACT) and 62-297.310(7)(a)4, F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

25. CEM Systems: The permittee shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) to measure and record the emissions of CO and NO_X from the combined cycle gas turbine in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this section. Each monitoring system shall be installed, calibrated, and properly functioning prior to the initial performance tests. Within one working day of discovering emissions in excess of a CO or NO_X standard (and subject to the specified averaging period), the permittee shall notify the Compliance Authority.

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

    b. *NO_X Monitors.* Each NO_X monitor shall be certified, operated, and maintained in accordance with the requirements of 40 CFR 75. Record keeping and reporting shall be conducted pursuant to Subparts F and G in 40 CFR 75. The RATA tests required for the NO_X monitor shall be performed using EPA Method 20 or 7E in Appendix A of 40 CFR 60.

    c. *Diluent Monitors.* The oxygen (O_2) or carbon dioxide (CO_2) content of the flue gas shall be monitored at the location where CO and NO_X are monitored to correct the measured emissions rates to 15% oxygen. If a CO_2 monitor is installed, the oxygen content of the flue gas shall be calculated using F-factors that are appropriate for the fuel fired. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.

26. CEM Data Requirements:

    a. *Data Collection*: Emissions shall be monitored and recorded at all times including startup, operation, shutdown, and malfunction except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over an hour. If the CEMS measures concentration on a wet basis, the CEM system shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the owner or operator may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Final results of the CEMS shall be expressed as ppmvd corrected to 15% oxygen. The CEMS shall be used to demonstrate compliance with the CEMS emission standards for CO and NO_X as specified in this permit. For purposes of determining compliance with the CEMS emissions standards of this permit, missing (or

excluded) data shall not be substituted. Upon request by the Department, the CEMS emission rates shall be corrected to ISO conditions.

b. *Valid Hour*: Hourly average values shall begin at the top of each hour. Each hourly average value shall be computed using at least one data point in each fifteen-minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, an hourly value shall be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour). If less than two such data points are available, the hourly average value is not valid. An hour in which any oil is fired is attributed towards compliance with the permit standards for oil firing. The permittee shall use all valid measurements or data points collected during an hour to calculate the hourly average values.

c. *24-hour Block Averages*: A 24-hour block shall begin at midnight of each operating day and shall be calculated from 24 consecutive hourly average emission rate values. If a unit operates less than 24 hours during the block, the 24-hour block average shall be the average of all available valid hourly average emission rate values for the 24-hour block. For purposes of determining compliance with the 24-hour CEMS standards, the missing data substitution methodology of 40 CFR Part 75, subpart D, shall not be utilized. Instead, the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block. [Rule 62-212.400(BACT), F.A.C.]

{Permitting Note: There may be more than one 24-hour compliance demonstration required for CO and NO_X emissions depending on the use of alternate methods of operation}

d. *Data Exclusion:* Each CEMS shall monitor and record emissions during all operations including episodes of startup, shutdown, malfunction, fuel switches and DLN tuning. Some of the CEMS emissions data recorded during these episodes may be excluded from the corresponding CEMS compliance demonstration subject to the provisions of Condition Nos. 17 and 18 of this section. All periods of data excluded shall be consecutive for each such episode and only data obtained during the described episodes (startup, shutdown, malfunction, fuel switches, DLN tuning) may be used for the appropriate exclusion periods. The permittee shall minimize the duration of data excluded for such episodes to the extent practicable. Data recorded during such episodes shall not be excluded if the episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented. Best operational practices shall be used to minimize hourly emissions that occur during such episodes. Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented, shall be prohibited.

e. *Availability*: Monitor availability for the CEMS shall be 95% or greater in any calendar quarter. The quarterly excess emissions report shall be used to demonstrate monitor availability. In the event 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit, except as otherwise authorized by the Department's Compliance Authority.

[Rule 62-297.520, F.A.C.; 40 CFR 60.7(a)(5) and 40 CFR 60.13; 40 CFR Part 51, Appendix P; 40 CFR 60, Appendix B - Performance Specifications; 40 CFR 60, Appendix F - Quality Assurance Procedures; and Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

27. Ammonia Monitoring Requirements: In accordance with the manufacturer's specifications, the permittee shall install, calibrate, operate and maintain an ammonia flow meter to measure and record the ammonia

injection rate to the SCR system by the time of the initial compliance tests. The permittee shall document and periodically update the general range of ammonia flow rates required to meet permitted emissions levels over the range of load conditions allowed by this permit by comparing NO_X emissions recorded by the CEM system with ammonia flow rates recorded using the ammonia flow meter. During NO_X monitor downtimes or malfunctions, the permittee shall operate at the ammonia flow rate and, as applicable for fuel oil firing, the water-to-fuel ratio, that are consistent with the documented flow rate for the combustion turbine load condition. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

RECORDS AND REPORTS

28. Monitoring of Capacity: The permittee shall monitor and record the operating rate of each gas turbine and HRSG duct burner system on a daily average basis, considering the number of hours of operation during each day (including the times of startup, shutdown and malfunction). Such monitoring shall be made using a monitoring component of the CEM system required above, or by monitoring daily rates of consumption and heat content of each allowable fuel in accordance with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

29. Monthly Operations Summary: By the fifth calendar day of each month, the permittee shall record the following for each fuel in a written or electronic log for each gas turbine for the previous month of operation: fuel consumption, hours of operation, hours of duct firing, and the updated 12-month rolling totals for each. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request by the Department. The fuel consumption shall be monitored in accordance with the provisions of 40 CFR 75 Appendix D.
[Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

30. Fuel Sulfur Records: The permittee shall demonstrate compliance with the fuel sulfur limits specified in this permit by maintaining the following records of the sulfur contents.

    a. *Natural Gas Sulfur Limit*: Compliance with the fuel sulfur limit for natural gas shall be demonstrated by keeping reports obtained from the vendor indicating the average sulfur content of the natural gas being supplied from the pipeline for each month of operation. Methods for determining the sulfur content of the natural gas shall be ASTM methods D4084-82, D4468-85, D5504-01, D6228-98 and D6667-01, D3246-81 or more recent versions.

    b. *Distillate Fuel Oil Sulfur Limit*: Compliance with the distillate fuel oil sulfur limit shall be demonstrated by taking a sample, analyzing the sample for fuel sulfur, and reporting the results to each Compliance Authority before initial startup. Sampling the fuel oil sulfur content shall be conducted in accordance with ASTM D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, and one of the following test methods for sulfur in petroleum products: ASTM methods D5453-00, D129-91, D1552-90, D2622-94, or D4294-90. More recent versions of these methods may be used. For each subsequent fuel delivery, the permittee shall maintain a permanent file of the certified fuel sulfur analysis from the fuel vendor. At the request of a Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content.

    The above methods shall be used to determine the fuel sulfur content in conjunction with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3) and 62-4.160(15), F.A.C.]

31. Emissions Performance Test Reports: A report indicating the results of any required emissions performance test shall be submitted to the Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. and in Appendix SC of this permit. [Rule 62-297.310(8), F.A.C.].

32. Excess Emissions Reporting:

    a. *Malfunction Notification:* If emissions in excess of a standard (subject to the specified averaging period) occur due to malfunction, the permittee shall notify the Compliance Authority within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident.

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

    c. *NSPS Semi-Annual Excess Emissions Reports*: For purposes of reporting emissions in excess of NSPS Subpart KKKK, excess emissions from the gas turbine are defined as: a specified averaging period over which either the NO_X emissions are higher than the applicable emission limit in 60.4320; or the total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in 60.4330. Within thirty (30) days following each calendar semi-annual period, the permittee shall submit a report on any periods of excess emissions that occurred during the previous semi-annual period to the Compliance Authority.

    {Note: If there are no periods of excess emissions as defined in NSPS Subpart KKKK, a statement to that effect may be submitted with the SIP Quarterly Report to suffice for the NSPS Semi-Annual Report.}

    [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7, and 60.4420]

33. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating hours and emissions from this facility. The permittee shall also keep records sufficient to determine the annual throughput of distillate fuel oil for the fuel oil storage tank for use in the Annual Operating Report. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.

B. DISTILLATE FUEL OIL STORAGE TANK (EU 007)

This section of the permit addresses the following emissions unit.

ID	Emission Unit Description
007	Two Nominal 6.3 million gallon distillate fuel oil storage tanks

NSPS APPLICABILITY

1. NSPS Subpart Kb Applicability: The distillate fuel oil tanks are not subject to Subpart Kb, which applies to any storage tank with a capacity greater than or equal to 10,300 gallons (40 cubic meters) that is used to store volatile organic liquids for which construction, reconstruction, or modification is commenced after July 23, 1984. Tanks with a capacity greater than or equal to 40,000 gallons (151 cubic meters) storing a liquid with a maximum true vapor pressure less than 3.5 kPa are exempt from the General Provisions (40 CFR 60, Subpart A) and from the provisions of NSPS Subpart Kb,. [40 CFR 60.110b(a) and (c); Rule 62-204.800(7)(b), F.A.C.]

   The listed emission units shall comply with 40 CFR 60, Subpart Kb only to the extent that the regulations apply to the emission unit and its operations.

EQUIPMENT SPECIFICATIONS

2. Equipment: The permittee is authorized to install, operate, and maintain two 6.3 million gallon distillate fuel oil storage tank designed to provide ultra low sulfur fuel oil to the gas turbines. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

EMISSIONS AND PERFORMANCE REQUIREMENTS

3. Hours of Operation: The hours of operation are not restricted (8760 hours per year). [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

NOTIFICATION, REPORTING AND RECORDS

4. Oil Tank Records: The permittee shall keep readily accessible records showing the dimension of each storage vessel and an analysis showing the capacity of each storage tank. Records shall be retained for the life of the facility. The permittee shall also keep records sufficient to determine the annual throughput of distillate fuel oil for each storage tank for use in the Annual Operating Report. [Rule 62-4.070(3) F.A.C]

5. Fuel Oil Records: The permittee shall keep readily accessible records showing the maximum true vapor pressure of the stored liquid. The maximum true vapor pressure shall be less than 3.5 kPa. Compliance with this condition may be demonstrated by using the information from the respective MSDS for the ultra low sulfur fuel oil(s) stored in the tanks. [62-4.070(3) F.A.C.]

   {Permitting Note: An evaluation of several Material Safety Data Sheets (MSDS) by the Department and applicant demonstrated that the vapor pressure is much less than 3.5 kPa for ultralow sulfur fuel oil.}

C. COOLING TOWER (EU 008)

This section of the permit addresses the following new emissions unit.

ID	Emission Unit Description
008	Two 26-cell mechanical draft cooling towers

EQUIPMENT

1. Cooling Tower: The permittee is authorized to install two new 26-cell mechanical draft cooling towers with the following nominal design characteristics: a circulating water flow rate of 306,000 gpm; design hot/cold water temperatures of 105° F/87° F; a design air flow rate of 1,500,000 per cell; a liquid-to-gas air flow ratio of 1.045; and drift eliminators. The permittee shall submit the final design details within 60 days of selecting the vendor. [Application; Design]

EMISSIONS AND PERFORMANCE REQUIREMENTS

2. Drift Rate: Within 60 days of commencing operation, the permittee shall certify that the cooling tower was constructed to achieve the specified drift rate of no more than 0.0005 percent of the circulating water flow rate. [Rule 62-212.400(BACT), F.A.C.]

   {Permitting Note: This work practice standard is established as BACT for PM/PM_{10} emissions from the cooling tower. Based on this design criteria, potential emissions are expected to be less than 100 tons of PM per year and less than 5 tons of PM_{10} per year. Actual emissions are expected be lower than these rates.}.

This section of the permit addresses the following emissions units.

ID	Emission Unit Description
014	Two limited use gas-fueled auxiliary boilers (99.8 MMBTU/h and 85,000 lb/hr)
015	Two gas-fueled 10 MMBtu/hr process heaters

NESHAP APPLICABILITY

1. NESHAP Subpart DDDDD Applicability: These emissions units are subject to Subpart DDDDD, which applies to an industrial, commercial, or institutional boiler or process heater as defined in Sec. 63.7575 that is located at, or is part of, a major source of HAP as defined in Sec. 40 CFR 63.2.

   The listed emission units shall comply with 40 CFR 63, NESHAP Subpart DDDDD only to the extent that the regulations apply to the emission unit and its operations (e.g. limited use gas-fueled or small gas-fueled categories.

   [40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, or Institutional Boiler or Process Heater]

NSPS APPLICABILITY

2. NSPS Subpart Dc Applicability: Each 99.8 MMBTU/hr (85,000 lb/hr) auxiliary boiler is subject to all applicable requirements of 40 CFR 60, Subpart Dc which applies to Small Industrial, Commercial, or Institutional Boiler. Specifically, each emission unit shall comply with 40 CFR60.48c Reporting and Recordkeeping Requirements.

   [Rule 62-204.800(7)(b) and 40 CFR 60, NSPS-Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, attached as Appendix Dc].

EMISSIONS AND TESTING REQUIREMENTS

3. Auxiliary Boiler BACT Emissions Limits:

NO_X	CO	VOC, SO_2, PM/PM_{10}
0.05 lb/MMBtu	0.08 lb/MMBtu	2 gr S/100SCF natural gas spec and 10% Opacity

4. Auxiliary Boilers Testing Requirements: Each unit shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_X and visible emissions. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each combined cycle unit.

   [Rule 62-297.310(7)(a)1, F.A.C. and 40 CFR 63.7]

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

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}

5. Annual CO Performance Test for Auxiliary Boilers: Pursuant to 40 CFR 63.7515(e) permittee shall conduct an annual CO test according to Sec. 63.7520. Each annual performance test must be conducted between 10 and 12 months after the previous performance test.

   [40 CFR 63.7515 and Rule 62-204.800(11)(b)84. F.A.C.]

6. Natural Gas Fired Process Heaters BACT Emissions Limits:

NO_X	CO	VOC, SO_2, PM/PM_{10}
0.095 lb/MMBtu	0.08 lb/MMBtu	2 gr S/100SCF natural gas spec and 10% Opacity

7. Natural Gas Fired Process Heaters Testing Requirements: Each unit shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_X and visible emissions. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each combined cycle unit. As an alternative, a Manufacturer certification of emissions characteristics of the purchased model that are at least as stringent as the BACT values can be used to fulfill this requirement.

   [Rule 62-297.310(7)(a)1, F.A.C. and 40 CFR 60.8]

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

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}

EQUIPMENT SPECIFICATIONS

8. Equipment: The permittee is authorized to install, operate, and maintain two auxiliary boilers with a maximum design heat input of 99.8 MMBtu/hr (85,000 lb/hr) each to produce steam during start up of the CTs and two 10 MMBtu/hr process heaters for the purpose of heating the natural gas supply to the CTs. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

PERFORMANCE REQUIREMENTS

9. Hours of Operation: The hours of operation of each limited use gas-fueled auxiliary boiler shall not exceed 500 hours per year. The gas-fueled process heaters are allowed to operate continuously (8760 hours per year). [Applicant Request; Rule 62-210.200(PTE), F.A.C. and 40 CFR 63.7575]

NOTIFICATION, REPORTING AND RECORDS

10. Notification: Initial notification is required for the two limited use 99.8 MMBtu/hr gas-fueled auxiliary boilers. Initial notification is not required for the two small gas-fueled 10 MMBtu/hr process heaters. [40 CFR 63.9, 40 CFR 63.7506(c) and Rule 62-204.800(11)(b) F.A.C.]

11. Reporting: The permittee shall maintain records of the amount of natural gas used in the heaters and auxiliary boilers. These records shall be submitted to the Compliance Authority on an annual basis or upon request. [Rule 62-4.070(3] F.A.C.]

EMERGENCY GENERATOR (011)

This section of the permit addresses the following emissions unit.

ID	Emission Unit Description
011	Four nominal 2,250 Kw Liquid Fueled Emergency Generators – Reciprocating Internal Combustion Engines

NESHAPS APPLICABILITY

1. NESHAPS Subpart ZZZZ Applicability: These emergency generators are Liquid Fueled Reciprocating Internal Combustion Engines (RICE) and are subject to 40 CFR 63, Subpart ZZZZ. They shall comply with 40 CFR 63, NESHAP Subpart ZZZZ only to the extent that the regulations apply to the emissions unit and its operations.

   [40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) and Rule 62-204.800(11)(b)80, F.A.C.]

NSPS APPLICABILITY

2. NSPS Subpart IIII Applicability: These emergency generators are Stationary Compression Ignition Internal Combustion Engines (Stationary ICE) and are subject to 40 CFR 60, Subpart IIII. They shall comply with 40 CFR 60, Subpart IIII only to the extent that the regulations apply to the emission unit and its operations (e.g. non-road, emergency, displacement, capacity, model year selected).

   [40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines]

EQUIPMENT SPECIFICATIONS

3. Equipment: The permittee is authorized to install, operate, and maintain four 2,250 Kw emergency generators. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

EMISSIONS AND PERFORMANCE REQUIREMENTS

4. Hours of Operation and Fuel Specifications: The hours of operation shall not exceed 160 hours per year per each generator. The generators are allowed to burn 0.0015% sulfur fuel oil.
   [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

5. Emergency Generators BACT Emissions Limits:

NO_X	CO	Hydrocarbons[1]	SO_2	PM/PM_{10}
6.9 gm/bhp-hr	8.5 gm/bhp-hr	1.0 gm/bhp-hr	0.0015% S F.O.	0.4 gm/bhp-hr

   Note 1. Hydrocarbons are surrogate for VOC.

   {The BACT limits are equal to the values corresponding to the Tier 1 values cited in the proposed rule 40 CFR 60, Subpart IIII}

6. Emergency Generators Testing Requirements: Each unit shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_X and visible emissions. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each combined cycle unit. As an alternative, an EPA Certification of emissions characteristics of the purchased model that are at least as stringent as the BACT values and the use of ULS fuel oil can be used to fulfill this requirement.
   [Rule 62-297.310(7)(a)1, F.A.C.; 40 CFR 60.8 and 40 CFR 60.4211]

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

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}

NOTIFICATION, REPORTING AND RECORDS

7. Notifications: Initial notification are required pursuant to 40 CFR 60.7, 40 CFR 63.9, and 40 CFR 63.6590 (b) (i) for the four 2,250 Kw RICE units.

8. Reporting: The permittee shall maintain records of the amount of liquid fuel used. These records shall be submitted to the Compliance Authority on an annual basis or upon request. [Rule 62-4.070(3] F.A.C.].

EMERGENCY FIRE PUMP (012)

This section of the permit addresses the following emissions unit.

ID	Emission Unit Description
012	One emergency diesel fire pump engine (< 300 hp) and 500 gallon fuel oil storage tank.

NSPS APPLICABILITY

1. NSPS Subpart IIII Applicability: The fire pump engine is an Emergency Stationary Compression Ignition Internal Combustion Engine (Stationary ICE) and is subject to 40 CFR 60, Subpart IIII. It shall comply with 40 CFR 60, Subpart IIII only to the extent that the regulations apply to the emissions unit and its operations (e.g. fire pumps, horsepower, model year selected).

   [40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.]

EQUIPMENT SPECIFICATIONS

2. Equipment: The permittee is authorized to install, operate, and maintain one diesel engine driven fire pump (< 300 hp) and an associated 500 gallon fuel oil storage tank.

EMISSIONS AND PERFORMANCE REQUIREMENTS

3. Hours of Operation: The fire pump may operate in response to emergency conditions and 80 non-emergency hours per year for maintenance testing.
   [Applicant Request; Rule 62-210.200 (PTE), F.A.C.]

4. Authorized Fuel: This unit shall fire low sulfur fuel oil (or superior fuel), which shall contain no more than 0.05% sulfur by weight. [Rules 62-210.200(PTE) and 62-212.400 (BACT), F.A.C.]

   Compliance with the distillate fuel oil sulfur limit shall be demonstrated by taking a sample, analyzing the sample for fuel sulfur, and reporting the results to each Compliance Authority before initial startup. Sampling the fuel oil sulfur content shall be conducted in accordance with ASTM D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, and one of the following test methods for sulfur in petroleum products: ASTM methods D5453-00, D129-91, D1552-90, D2622-94, or D4294-90. More recent versions of these methods may be used. For each subsequent fuel delivery, the permittee shall maintain a permanent file of the certified fuel sulfur analysis from the fuel vendor. At the request of a Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content.

5. Fire Pump Engine BACT Emissions Limits:

The following limits apply based on the size category of the fire pump located at the facility.

Size (hp)	CO	NMHC+NO_X	PM
$175 \leq hp < 300$	2.6	7.8	0.40

Note 1. Non-Methane Hydrocarbons (NMHC) are surrogate for VOC.

{The BACT limits are equal to the values corresponding to the size class indicated above and cited in 40 CFR 60, Subpart IIII}

6. Fire Pump Engine Certification: Manufacturer certification shall be provided to the Department in lieu of actual testing. [Rule 62-212.400 (BACT), F.A.C. and 40 CFR 60.411]

SECTION IV. APPENDICES

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SECTION IV. APPENDIX A

NSPS SUBPART A, IDENTIFICATION OF GENERAL PROVISIONS

The provisions of this Subpart may be provided in full upon request. Emissions units subject to a New Source Performance Standard of 40 CFR 60 are also subject to the applicable requirements of Subpart A, the General Provisions, including:

§ 60.1 Applicability.

§ 60.2 Definitions.

§ 60.3 Units and abbreviations.

§ 60.4 Address.

§ 60.5 Determination of construction or modification.

§ 60.6 Review of plans.

§ 60.7 Notification and Record Keeping.

§ 60.8 Performance Tests.

§ 60.9 Availability of information.

§ 60.10 State Authority.

§ 60.11 Compliance with Standards and Maintenance Requirements.

§ 60.12 Circumvention.

§ 60.13 Monitoring Requirements.

§ 60.14 Modification.

§ 60.15 Reconstruction.

§ 60.16 Priority List.

§ 60.17 Incorporations by Reference.

§ 60.18 General Control Device Requirements.

§ 60.19 General Notification and Reporting Requirements.

Individual subparts may exempt specific equipment or processes from some or all of these requirements. The general provisions may be provided in full upon request.

NESHAP - SUBPART A, IDENTIFICATION OF GENERAL PROVISIONS

The provisions of this Subpart may be provided in full upon request. Emissions units subject to a National Emission Standards for Hazardous Air Pollutants of 40 CFR 63 are also subject to the applicable requirements of Subpart A, the General Provisions, including:

§ 63.1 Applicability.

§ 63.2 Definitions.

§ 63.3 Units and abbreviations.

§ 63.4 Prohibited Activities and Circumvention.

§ 63.5 Preconstruction Review and Notification Requirements.

§ 63.6 Compliance with Standards and Maintenance Requirements.

§ 63.7 Performance Testing Requirements.

§ 63.8 Monitoring Requirements.

§ 63.9 Notification Requirements.

§ 63.10 Recordkeeping and Reporting Requirements.

§ 63.11 Control Device Requirements.

§ 63.12 State Authority and Delegations.

§ 63.13 Addresses of State Air Pollution Control Agencies and EPA Regional Offices.

§ 63.14 Incorporation by Reference.

§ 63.15 Availability of Information and Confidentiality.

Individual subparts may exempt specific equipment or processes from some or all of these requirements. The general provisions may be provided in full upon request.

SECTION IV. APPENDIX BD

FINAL BACT DETERMINATIONS AND EMISSIONS STANDARDS

Refer to the BACT proposal discussed in the initial Technical Evaluation for this project and to the Final Determination issued with the Final permit for the rationale regarding the following BACT determination.

Pollutant	Fuel	Method of Operation	Stack Test, 3-Run Average		CEMS Block Average
			ppmvd @ 15% O_2	lb/hr [g]	ppmvd @ 15% O_2
CO [a]	Oil	Combustion Turbine (CT)	8.0	42.0	8.0, 24-hr 6, 12-month [h]
	Gas	CT & Duct Burner (DB)	7.6	52.5	
		CT Normal	4.1	23.2	
NO_X [b]	Oil	CT	8.0	82.4	8.0, 24-hr
	Gas	CT & DB	2.0	24.2	2.0, 24-hr
		CT Normal	2.0	20.0	
PM/PM_{10} [c]	Oil/Gas	All Modes	2 gr S/100SCF of gas, 0.0015% sulfur fuel oil		
			Visible emissions shall not exceed 10% opacity for each 6-minute block average.		
SAM/SO_2 [d]	Oil/Gas	All Modes	2 gr S/100 SCF of gas, 0.0015% sulfur fuel oil		
VOC [e]	Oil	CT	6.0	19.6	NA
	Gas	CT & DB	1.5	5.4	
		CT Normal	1.2	4.1	
Ammonia [f]	Oil/Gas	CT, All Modes	5	NA	NA

a. Compliance with the continuous 24-hour CO standards shall be demonstrated based on data collected by the required CEMS. The initial and annual EPA Method 10 tests associated with the certification of the CEMS instruments shall also be used to demonstrate compliance with the individual standards for natural gas, fuel oil, and basic duct burner modes. The stacks test limits apply only at high load (90-100% of the combustion turbine capacity).

b. Compliance with the continuous NO_X standards shall be demonstrated based on data collected by the required CEMS. The initial and annual EPA Method 7E or Method 20 tests associated with demonstration of compliance with 40 CFR 60, Subpart GG or certification of the CEMS instruments shall also be used to demonstrate compliance with the individual standards for natural gas, fuel oil, and duct burner modes during the time of those tests. NO_X mass emission rates are defined as oxides of nitrogen expressed as NO_2.

c. The sulfur fuel specifications combined with the efficient combustion design and operation of each gas turbine represents (BACT) for PM/PM_{10} emissions. Compliance with the fuel specifications, CO standards, and visible emissions standards shall serve as indicators of good combustion. Compliance with the fuel specifications shall be demonstrated by keeping records of the fuel sulfur content. Compliance with the visible emissions standard shall be demonstrated by conducting tests in accordance with EPA Method 9.

d. The fuel sulfur specifications effectively limit the potential emissions of SAM and SO_2 from the gas turbines and represent BACT for these pollutants. Compliance with the fuel sulfur specifications shall be determined by the ASTM methods for determination of fuel sulfur as detailed in the draft permit.

e. Compliance with the VOC standards shall be demonstrated by conducting tests in accordance with EPA Method 25A. Optionally, EPA Method 18 may also be performed to deduct emissions of methane and ethane. The emission standards are based on VOC measured as methane. The limits apply only at high load (90-100% of the combustion turbine capacity). Compliance with the CO CEMS based limits at lower loads shall be deemed as compliance with the VOC limit.

f. Compliance with the ammonia slip standard shall be demonstrated by conducting tests in accordance with EPA Method CTM-027.

g. The mass emission rate standards are based on a turbine inlet condition of 59° F and may be adjusted to actual test conditions in accordance with the performance curves and/or equations on file with the Department.

h. Rolling Average. Enforcement discretion may be exercised for up to 12 months with respect to the 6 ppmvd @15% O_2 limit-for any combustion turbine/supplementary-fired heat recovery steam generator upon notification by the permittee of intent to install oxidation catalyst. The permittee shall have 12 months to complete the oxidation catalyst installation. After completing the installation of the catalyst all prior partial or complete calendar months shall be excluded from the 12-month rolling average.

A 99.8 MMBTu/hr (85,000 lb/hr) auxiliary boilers will serve each combined cycle unit system to produce steam during start up of the CTs. They are regulated as Emissions Unit 009. The provisions of this Subpart may be provided in full upon request.

{Note: Only applicable definitions have been included.}

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraph (d) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million Btu per hour (Btu/hr)) or less, but greater than or equal to 2.9 MW (10 million Btu/hr).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, § 60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units which meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO_2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§ 60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in § 60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under § 60.14.

§ 60.41c Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam ch a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Natural gas means (1) a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane, or (2) liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835-86, 87, 91, or 97, "Standard Specification for Liquefied Petroleum Gases" (incorporated by reference -- see § 60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

§ 60.42c Standard for sulfur dioxide.

§ 60.43c Standard for particulate matter.

§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.

§ 60.45c Compliance and performance test methods and procedures for particulate matter.

§ 60.46c Emission monitoring for sulfur dioxide

§ 60.47c Emission monitoring for particulate matter.

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by § 60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO_2 emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of § 60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(g) The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

GENERAL CONDITIONS

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

   a. Have access to and copy and records that must be kept under the conditions of the permit;
   b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
   c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

   Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

   a. A description of and cause of non-compliance; and

   b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

   The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida

Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

    a. Determination of Best Available Control Technology (X);
    b. Determination of Prevention of Significant Deterioration (X);
    c. Compliance with National Emission Standards for Hazardous Air Pollutants (X); and
    d. Compliance with New Source Performance Standards (X).

14. The permittee shall comply with the following:

    a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

    b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

    c. Records of monitoring information shall include:

        1) The date, exact place, and time of sampling or measurements;
        2) The person responsible for performing the sampling or measurements;
        3) The dates analyses were performed;
        4) The person responsible for performing the analyses;
        5) The analytical techniques or methods used; and
        6) The results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

The two combined cycle unit systems ("3-on-1") are regulated as Emissions Units 001, 002, 003, 004, 005, and 006. The gas turbines and the HRSG duct burners are part of these combined cycle unit systems. These emissions units shall comply with all applicable requirements of this Subpart.

NEW SOURCE PERFORMANCE STANDARDS (NSPS)

On July 6, 2006, EPA published the final NSPS Subpart KKKK (40 CFR 60) provisions for combustion turbines in the Federal Register. Although not yet adopted by Rule 62-204.800(8), F.A.C., the combustion turbine shall comply with the applicable federal requirements. The provisions of this Subpart may be provided in full upon request.

Source: Federal Register dated 7/6/06

Subpart KKKK--Standards of Performance for Stationary Combustion Turbines

Introduction
60.4300 What is the purpose of this subpart?

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60.4305 Does this subpart apply to my stationary combustion turbine?
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60.4315 What pollutants are regulated by this subpart?
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Definitions

60.4420 What definitions apply to this subpart?

Table 1 to Subpart KKKK of Part 60-Nitrogen Oxide Emission Limits for New Stationary Combustion Turbines.

Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at this facility.

EMISSIONS AND CONTROLS

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]

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

3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]

4. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permitee shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]

6. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]

7. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and62-210.200(203), F.A.C.]

8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. [Rule 62-296.320(4)(b)1, F.A.C.]

9. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

TESTING REQUIREMENTS

10. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]

11. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]

12. Calculation of Emission Rate: For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

13. Test Procedures: Tests shall be conducted in accordance with all applicable requirements of Chapter 62-297, F.A.C.

    a. Required Sampling Time. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be thirty (30) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur.

    b. Minimum Sample Volume. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet.

    c. Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.

    [Rule 62-297.310(4), F.A.C.]

14. Determination of Process Variables

    a. Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

    b. Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

    [Rule 62-297.310(5), F.A.C.]

15. Sampling Facilities: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C.

16. Test Notification: The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9, F.A.C.]

17. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

18. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide

sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

1) The type, location, and designation of the emissions unit tested.
2) The facility at which the emissions unit is located.
3) The owner or operator of the emissions unit.
4) The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5) The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6) The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7) A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8) The date, starting time and duration of each sampling run.
9) The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10) The number of points sampled and configuration and location of the sampling plane.
11) For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12) The type, manufacturer and configuration of the sampling equipment used.
13) Data related to the required calibration of the test equipment.
14) Data on the identification, processing and weights of all filters used.
15) Data on the types and amounts of any chemical solutions used.
16) Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17) The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18) All measured and calculated data required to be determined by each applicable test procedure for each run.
19) The detailed calculations for one run that relate the collected data to the calculated emission rate.
20) The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21) A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

RECORDS AND REPORTS

19. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]

20. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

SECTION IV. APPENDIX XS

SEMIANNUAL NSPS EXCESS EMISSIONS REPORT

FIGURE 1. SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

[Note: This form is referenced in 40 CFR 60.7, Subpart A-General Provisions]

Pollutant *(Circle One)*: SO_2 NO_X TRS H_2S CO Opacity

Reporting period dates: From _____ to _____

Company: _____

Emission Limitation: _____

Address: _____

Monitor Manufacturer: _____

Model No.: _____

Date of Latest CMS Certification or Audit: _____

Process Unit(s) Description: _____

Total source operating time in reporting period [1]: _____

Emission data summary [1]	CMS performance summary [1]
1. Duration of excess emissions in reporting period due to:	1. CMS downtime in reporting period due to:
a. Startup/shutdown ..... ____	a. Monitor equipment malfunctions ..... ____
b. Control equipment problems ..... ____	b. Non-Monitor equipment malfunctions ..... ____
c. Process problems ..... ____	c. Quality assurance calibration ..... ____
d. Other known causes ..... ____	d. Other known causes ..... ____
e. Unknown causes ..... ____	e. Unknown causes ..... ____
2. Total duration of excess emissions ..... ____	2. Total CMS Downtime ..... ____
3. Total duration of excess emissions x (100) / [Total source operating time] ..... ____ %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time] ..... ____ %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted.

Note: On a separate page, describe any changes since the last in CMS, process or controls.

I certify that the information contained in this report is true, accurate, and complete.

Name: _____

Signature: _____ *Date*: _____

Title: _____

SECTION IV. APPENDIX YYYY
NESHAP REQUIREMENTS FOR COMBUSTION TURBINES

The gas turbines are subject to the applicable requirements of this 40 CFR 63, Subpart YYYY. The provisions of this Subpart may be provided in full upon request. The gas turbines are regulated as Emissions Units 001, 002, 003, 004, 005, and 006.

Applicability of NESHAP Subpart YYYY

The West County Energy Center will be a major source of hazardous air pollutant emissions. As such, the proposed new combustion turbines are subject to NESHAP Subpart YYYY, which became final on March 5, 2004. According to the final rule, each unit is considered a "new lean premix gas-fired stationary combustion turbine". Therefore, each new combustion turbine is subject to an emissions standard for formaldehyde of no more than 91 parts per billion by volume, dry (ppbvd @ 15% O_2). Compliance must be demonstrated by initial and annual performance tests. In addition, acceptable operating parameters must be specified that show continuous compliance with the standard. These operating parameters must be continuously monitored that ensure continuous compliance.

Staying of the Rule

On August 18, 2004, EPA stayed the effectiveness of 40 CFR 63, Subpart YYYY for lean premix gas turbines such as those proposed for the West County Project. Following is the change in 40 CFR 63 that stays effectiveness:

§ 63.6095(d) Stay of standards for gas-fired subcategories.

If you start up a new or reconstructed stationary combustion turbine that is a lean premix gas-fired stationary combustion turbine or diffusion flame gas-fired stationary combustion turbine as defined by this subpart, you must comply with the Initial Notification requirements set forth in Sec. 63.6145 but need not comply with any other requirement of this subpart until EPA takes final action to require compliance and publishes a document in the Federal Register.

Requirements

The applicable requirements in Subpart YYYY are:

§ 63.6145 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.7(b) and (c), 63.8(e), 63.8(f)(4), and 63.9(b) and (h) that apply to you by the dates specified.

(b) As specified in § 63.9(b)(2), if you start up your new or reconstructed stationary combustion turbine before March 5, 2004, you must submit an Initial Notification not later than 120 calendar days after March 5, 2004.

(c) As specified in § 63.9(b), if you start up your new or reconstructed stationary combustion turbine on or after March 5, 2004, you must submit an Initial Notification not later than 120 calendar days after you become subject to this subpart.

(d) If you are required to submit an Initial Notification but are otherwise not affected by the emission limitation requirements of this subpart, in accordance with § 63.6090(b), your notification must include the information in § 63.9(b)(2)(i) through (v) and a statement that your new or reconstructed stationary combustion turbine has no additional emission limitation requirements and must explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary combustion turbine).

(e) If you are required to conduct an initial performance test, you must submit a notification of intent to conduct an initial performance test at least 60 calendar days before the initial performance test is scheduled to begin as required in § 63.7(b)(1).

(f) If you are required to comply with the emission limitation for formaldehyde, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). For each performance test required to demonstrate compliance with the emission limitation for formaldehyde, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test.

[Rules 62-4.070(3) and 62-204.800, F.A.C.; Subparts A and YYYY in 40 CFR 63]

SECTION IV. APPENDIX DDDDD
NESHAPS REQUIREMENTS FOR INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS AND PROCESS HEATERS

The auxiliary boilers and process heaters are subject to the applicable requirements of this 40 CFR 63, Subpart DDDDD. The provisions of this Subpart may be provided in full upon request. These emissions units are regulated as Emissions Units 009 and 010.

Source: Federal Register Dated 9/12/04

What This Subpart Covers
63.7480 What is the purpose of this subpart?
63.7485 Am I subject to this subpart?
63.7490 What is the affected source of this subpart?
63.7491 Are any boilers or process heaters not subject to this subpart?
63.7495 When do I have to comply with this subpart?

Emission Limits and Work Practice Standards
63.7499 What are the subcategories of boilers and process heaters?
63.7500 What emission limits, work practice standards, and operating limits must I meet?

General Compliance Requirements
63.7505 What are my general requirements for complying with this subpart?
63.7506 Do any boilers or process heaters have limited requirements?
63.7507 What are the health-based compliance alternatives for the hydrogen chloride (HCl) and total selected metals (TSM) standards?

Testing, Fuel Analyses, and Initial Compliance Requirements
63.7510 What are my initial compliance requirements and by what date must I conduct them?
63.7515 When must I conduct subsequent performance tests or fuel analyses?
63.7520 What performance tests and procedures must I use?
63.7521 What fuel analyses and procedures must I use?
63.7522 Can I use emission averaging to comply with this subpart?
63.7525 What are my monitoring, installation, operation, and maintenance requirements?
63.7530 How do I demonstrate initial compliance with the emission limits and work practice standards?

Continuous Compliance Requirements
63.7535 How do I monitor and collect data to demonstrate continuous compliance?
63.7540 How do I demonstrate continuous compliance with the emission limits and work practice standards?
63.7541 How do I demonstrate continuous compliance under the emission averaging provision?

Notifications, Reports, and Records
63.7545 What notifications must I submit and when?
63.7550 What reports must I submit and when?
63.7555 What records must I keep?
63.7560 In what form and how long must I keep my records?

Other Requirements and Information
63.7565 What parts of the General Provisions apply to me?
63.7570 Who implements and enforces this subpart?
63.7575 What definitions apply to this subpart?

Tables to Subpart DDDDD of Part 63

Table 1 to Subpart DDDDD of Part 63--Emission Limits and Work Practice Standards

Table 2 to Subpart DDDDD of Part 63--Operating Limits for Boilers and Process Heaters With Particulate Matter Emission Limits

Table 3 to Subpart DDDDD of Part 63--Operating Limits for Boilers and Process Heaters With Mercury Emission Limits and Boilers and Process Heaters That Choose to Comply With the Alternative Total Selected Metals Emission Limits

Table 4 to Subpart DDDDD of Part 63--Operating Limits for Boilers and Process Heaters With Hydrogen Chloride Emission Limits

Table 5 to Subpart DDDDD of Part 63--Performance Testing Requirements

Table 6 to Subpart DDDDD of Part 63--Fuel Analysis Requirements

Table 7 to Subpart DDDDD of Part 63--Establishing Operating Limits

Table 8 to Subpart DDDDD of Part 63--Demonstrating Continuous Compliance

Table 9 to Subpart DDDDD of Part 63--Reporting Requirements

Table 10 to Subpart DDDDD of Part 63--Applicability of General Provisions to Subpart DDDDD (See Appendix B)

Appendices to Subpart DDDDD

Appendix A to Subpart DDDDD--Methodology and Criteria for Demonstrating Eligibility for the Health-Based Compliance Alternatives Specified for the Large Solid Fuel Subcategory

Appendix B to Subpart DDDDD--Applicability of General Provisions to Subpart DDDDD

SECTION IV. APPENDIX ZZZZ
NESHAPS REQUIREMENTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES

The emergency generators are subject to the applicable requirements of this 40 CFR 63, Subpart ZZZZ. The provisions of this Subpart may be provided in full upon request. These emissions units are regulated as Emissions Unit 011.

Source: Federal Register dated 6/15/04; updated 4/20/06

What This Subpart Covers
63.6580 The purpose of subpart ZZZZ
63.6585 Subject to this subpart
63.6590 Parts of my plant does this subpart cover
63.6595 Compliance with this subpart

Emission Limitations
63.6600 Emission limitations and operating limitations

General Compliance Requirements
63.6605 General requirements for complying with this subpart

Testing and Initial Compliance Requirements
63.6610 Dates to conduct the initial performance tests or other initial compliance demonstrations
63.6615 Subsequent performance tests
63.6620 Performance tests and other procedures
63.6625 Monitoring, installation, operation, and maintenance requirements
63.6630 Initial compliance with the emission limitations and operating limitations

Continuous Compliance Requirements
63.6635 Monitoring and collecting data to demonstrate continuous compliance
63.6640 Continuous compliance with the emission limitations and operating limitations

Notification, Reports, and Records
63.6645 Notifications
63.6650 Reports
63.6655 Records
63.6660 Records form and retention

Other Requirements and Information
63.6665 General Provisions
63.6670 implementation and enforcement
63.6675 Definitions

Tables to Subpart ZZZZ of Part 63
Table 1a to Subpart ZZZZ of Part 63--Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE
Table 1b to Subpart ZZZZ of Part 63--Operating Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE
Table 2a to Subpart ZZZZ of Part 63--Emission Limitations for New and Reconstructed Lean Burn and Compression Ignition Stationary RICE
Table 2b to Subpart ZZZZ of Part 63--Operating Limitations for New and Reconstructed Lean Burn and Compression Ignition Stationary RICE
Table 3 to Subpart ZZZZ of Part 63--Subsequent Performance Tests

Table 4 to Subpart ZZZZ of Part 63--Requirements for Performance Tests
Table 5 to Subpart ZZZZ of Part 63--Initial Compliance with Emission Limitations and Operating Limitations
Table 6 to Subpart ZZZZ of Part 63--Continuous Compliance with Emission Limitations and Operating Limitations
Table 7 to Subpart ZZZZ of Part 63--Requirements for Reports
Table 8 to Subpart ZZZZ of Part 63--Applicability of General Provisions to Subpart ZZZZ- See Appendix A to Subpart ZZZZ

Appendix A to Subpart ZZZZ of Part 63- Applicability of General Provisions to Subpart ZZZZ

The emergency fired pump and the emergency generators are subject to the applicable requirements of this 40 CFR 60, Subpart IIII. The provisions of this Subpart may be provided in full upon request. These emissions units are regulated as Emissions Units 011 and 012.

Source Federal Register Dated 7/11/06. Updated 7/19/06 - EFFECTIVE 9/11/06

Subpart IIII--Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

What This Subpart Covers
60.4200 Am I subject to this subpart?

Emission Standards for Manufacturers
60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?
60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?
60.4203 How long must my engines meet the emission standards if I am a stationary CI internal combustion engine manufacturer?

Emission Standards for Owners and Operators
60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?
60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?
60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Fuel Requirements for Owners and Operators
60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

Other Requirements for Owners and Operators
60.4208 What is the deadline for importing and installing stationary CI ICE produced in the previous model year?
60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

Compliance Requirements
60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?
60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

Testing Requirements for Owners and Operators
60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?
60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Notification, Reports, and Records for Owners and Operators
60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

Special Requirements
60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?
60.4216 What requirements must I meet for engines used in Alaska?
60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

General Provisions
60.4218 What parts of the General Provisions apply to me?

Definitions
60.4219 What definitions apply to this subpart?

Tables to Subpart IIII of Part 60
Table 1 to Subpart IIII of Part 60--Emission Standards for Stationary Pre-2007 Model Year Engines with a displacement of < 10 liters per cylinder and 2007-2010 Model Year Engines >2,237 KW (3,000 HP) and with a displacement of < 10 liters per cylinder
Table 2 to Subpart IIII of Part 60--Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE < 37 KW (50 HP) and with a Displacement of < 10 liters per cylinder
Table 3 to Subpart IIII of Part 60--Certification Requirements for Stationary Fire Pump Engines
Table 4 to Subpart IIII of Part 60--Emission Standards for Stationary Fire Pump Engines
Table 5 to Subpart IIII of Part 60--Labeling and Recordkeeping Requirements for New Stationary Emergency Engines
Table 6 to Subpart IIII of Part 60--Optional 3-Mode Test Cycle for Stationary Fire Pump Engines
Table 7 to Subpart IIII of Part 60--Requirements for Performance Tests for Stationary CI ICE with a displacement of >=30 liters per cylinder
Table 8 to Subpart IIII of Part 60--Applicability of General Provisions to Subpart IIII

ATTACHMENT FPL-EU1-IV3

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT FPL-EU1-IV3

ALTERNATIVE METHODS OF OPERATION COMBINED CYCLE UNITS 1 AND 2

West County Energy Center (WCEC) combined cycle combustion turbine (CT)/heat recovery steam generator (HRSG) units 1 (1A, 1B, 1C) and 2 (2A, 2B, 2C) can operate on both natural gas and No. 2 fuel oil. The maximum sulfur content of natural gas is limited to 2 grains per 100 standard cubic feet (scf) and of the fuel oil to 0.0015 percent by weight. These units can operate for the entire year (i.e., 8,760 hours) with natural gas and for 500 hours/year each combustion turbine with fuel oil. These units may operate at various loads. Evaporative cooling may be used to lower the inlet air temperature and provide additional electric power.

Maximum heat input to each unit is limited to 2,333 million British thermal units (MMBtu) per hour when firing natural gas and 2,117 MMBtu/hr when firing fuel oil based on 59 F ambient temperature, 100-percent load, and lower heating value of each fuel. The heat input rate varies with inlet temperatures. The CT/HRSG units are equipped with duct burners rated at 428 MMBtu/hr (LHV). The duct burners are fired with natural gas only. Duct firing is limited to total combined 7,395,840 MMBtu/yr for all CT/HRSGs.

Heat input rates will vary depending upon gas turbine characteristics, ambient conditions, alternative methods of operation, and evaporative cooling. FPL will provide manufacturer's performance curves that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves submitted to the Department.

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.

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:
Three Mitsubishi Frame G combustion turbine (CT)/heat recovery steam generators (HRSGs).

3. Emissions Unit Identification Number: **004, 005, and 006**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
A	**March 16, 2006**	**2A: Sept 22, 2009** **2B: Sept 07, 2009** **2C: Aug 27, 2009**	**49**

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

☒ Acid Rain Unit

☒ CAIR Unit

☐ Hg Budget Unit

9. Package Unit:
Manufacturer: **Mitsubishi Power Systems** Model Number: **501G**

10. Generator Nameplate Rating: **750** MW

11. Emissions Unit Comment:
Combined Cycle Unit 2 consists of three nominal 250 megawatt gas turbine-electrical generator sets with evaporative inlet cooling system, three supplementary-fired HRSG, and one nominal 428 MMBtu/hr (LHV) gas fired duct burner within each of the three HRSGs. The HRSGs supply steam to a nominal 500-MW steam-electric generator.

Emissions Unit Control Equipment/Method: Control 1 of 3

1. Control Equipment/Method Description: **Selective Catalytic Reduction System**
2. Control Device or Method Code: **065**

Emissions Unit Control Equipment/Method: Control 2 of 3

1. Control Equipment/Method Description: **Water Injection**
2. Control Device or Method Code: **028**

Emissions Unit Control Equipment/Method: Control 3 of 3

1. Control Equipment/Method Description: **Dry Low-NOx Combustion**
2. Control Device or Method Code: **025**

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: **6,999** million Btu/hr (MMBtu/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: **Maximum heat input rate based on heat input of 2,333 MMBtu/hr for each of the three CT/HRSGs firing natural gas (LHV) at 100-percent load and 59°F ambient temperature. Maximum heat input rate is 6,351 MMBtu/hr when firing distillate fuel oil (LHV) at 100-percent load and 59°F ambient temperature. Maximum heat input to the duct burners is 1,284 MMBtu/hr (three duct burners, each 428 MMBtu/hr) based on LHV of natural gas.** **Emission estimates, heat input rates, fuel usage, and exhaust parameters based on manufacturers specifications at 59 °F ambient temperature. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves. Manufacturer's performance curves that correct for site conditions will be submitted to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing.**	

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: **Units 2A, 2B, and 2C.**	2. Emission Point Type Code: **1**	
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: **V**	6. Stack Height: **149** feet	7. Exit Diameter: **22** feet
8. Exit Temperature: **293**°F	9. Actual Volumetric Flow Rate: **1,533,502** 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: **Exit temperature and flow rate are for each CT/HRSG and based on distillate fuel oil firing at 100-percent load at 59°F ambient temperature. Exit temperature and flow rate for each CT/HRSG are 195°F and 1,330,197 acfm, respectively, based on natural gas firing at 100-percent load and 59°F ambient temperature.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): **Internal Combustion Engines: Electric Generation; Natural Gas; Turbine Generator**		
2. Source Classification Code (SCC): **2-01-002-01**	3. SCC Units: **Million cubic feet**	
4. Maximum Hourly Rate: **2.5**	5. Maximum Annual Rate: **21,905**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **933**
10. Segment Comment: **Maximum hourly and annual rates are for each CT/HRSG and based on 59°F turbine inlet temperature.** **Maximum hourly rate = 2,333 MMBtu/hr ÷ 933 MMBtu/MMft^3 = 2.5 MMft^3/hr** **Maximum annual rate = 2.5 MMft^3/hr x 8,760 hrs/yr = 21,905 MMft^3/yr**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): **Internal Combustion Engines: Electric Generation; Distillate Oil (No. 2); Turbine Generator**		
2. Source Classification Code (SCC): **2-01-001-01**	3. SCC Units: **1,000 Gallons**	
4. Maximum Hourly Rate: **16.2**	5. Maximum Annual Rate: **8,100**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.0015**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **131**
10. Segment Comment: **Maximum hourly and annual rates are for each CT/HRSG and based on 59°F turbine inlet temperature.** **Maximum hourly rate = 2,117 MMBtu/hr ÷ 131 MMBtu/10^3 gallons = 16.2x10^3 gallons** **Maximum annual rate = 16.2x10^3 gallons x 500 hrs/yr = 8,100x10^3 gallons/yr** **Fuel heat content based on 18,387 Btu/lb (LHV) and 7.1 lb/gallon.**		

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			EL
PM10			EL
SO2			EL
NOx	025, 028	065	EL
CO			EL
VOC			EL
SAM			EL
Ammonia			EL
H095			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: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **108** lb/hour **205.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly emissions based on distillate oil firing at 59°F inlet condition.
Hourly emissions of one CT/HRSG = 36 lb/hr.
Hourly emissions of three CT/HRSGs = 36 lb/hr x 3 = 108 lb/hr.

Potential annual emissions based on TEPD of permit No. 0990646-001-AC/PSD-FL-354.
Annual emissions of two combined cycle units = 511 TPY (CT + DB) – 100 TPY (Cooling Towers) = 411 TPY.
Annual emissions of one combined cycle unit = 411 TPY/2 = 205.5 TPY.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Distillate oil firing limited to 500 hr/yr per CT/HRSG.
Duct-firing limited to 7,395,840 MMBtu for six CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).

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 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 gr S/100 SCF of gas**	4. Equivalent Allowable Emissions: **44.4** lb/hour **205.5** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing: Fuel sulfur content limited to 2 grains per 100 standard cubic feet of natural gas. Equivalent hourly emissions based on 59°F inlet condition.** **Hourly emissions of one CT/HRSG with DB = 14.8 lb/hr.** **Hourly emissions of three CT/HRSGs with DB = 14.8 x 3 = 44.4 lb/hr.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0015-percent sulfur fuel oil**	4. Equivalent Allowable Emissions: **108** lb/hour **205.5** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for fuel oil firing: Fuel sulfur content limited to 0.0015 percent, by weight.** **Equivalent hourly emissions based on 59°F inlet condition.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **VE<10-percent opacity**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: **EPA Method 9, 6 minute block average**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas and fuel oil firing.**	

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: **PM10**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **108** lb/hour **103** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly emissions based on distillate oil firing at 59°F inlet condition.
Hourly emissions of one CT/HRSG = 36 lb/hr.
Hourly emissions of three CT/HRSG = 36 lb/hr x 3 = 108 lb/hr.

Potential annual emissions based on TEPD of permit No. 0990646-001-AC/PSD-FL-354.
Annual emissions of two combined cycle units = 211 TPY (CT + DB) – 5 TPY (Cooling Towers) = 206 TPY.
Annual Emissions of one combined cycle unit = 206 TPY/2 = 103 TPY.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Distillate oil firing limited to 500 hr/yr per CT/HRSG.
Duct-firing limited to 7,395,840 MMBtu for six CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).

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 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 gr S/100 SCF of gas**	4. Equivalent Allowable Emissions: **44.4** lb/hour **103** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing: Fuel sulfur content limited to 2 grains per 100 standard cubic feet of natural gas. Equivalent hourly emissions based on 59°F inlet condition. Hourly emissions of one CT/HRSG with DB = 14.8 lb/hr. Hourly emissions of three CT/HRSGs with DB = 14.8 x 3 = 44.4 lb/hr.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0015-percent sulfur fuel oil**	4. Equivalent Allowable Emissions: **108** lb/hour **103** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for fuel oil firing: Fuel sulfur content limited to 0.0015 percent, by weight. Equivalent hourly emissions based on 59°F inlet condition.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **VE<10-percent opacity**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: **EPA Method 9, 6 minute block average**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas and fuel oil firing.**	

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: **50.7** lb/hour **203.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly emissions based on natural gas firing with DB at 59°F inlet conditions.
Hourly emissions of one CT/HRSG = 16.9 lb/hr.
Hourly emissions of three CT/HRSGs = 16.9 lb/hr x 3 = 50.7 lb/hr.

Potential annual emissions based on TEPD of Permit No. 0990646-001-AC/PSD-FL-354.
Annual emissions of two combined cycle units = 407 TPY.
Annual emissions of one combined cycle unit = 407/2 = 203.5 TPY.

Hourly emissions for CT only, oil firing, 59°F inlet conditions = 3.4 lb/hr per CT/HRSG.
Hourly emissions for CT only, natural gas firing, 59°F inlet conditions = 14.0 lb/hr per CT/HRSG

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Distillate oil firing limited to 500 hr/yr per CT/HRSG.
Duct-firing limited to 7,395,840 MMBtu for six CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).

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 **2**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 gr S/100 SCF of gas**	4. Equivalent Allowable Emissions: **50.7** lb/hour **203.5** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing: Fuel sulfur content limited to 2 grains per 100 standard cubic feet of natural gas. Equivalent hourly emissions based on 59°F inlet condition.**	

Allowable Emissions Allowable Emissions **2** of **2**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0015-percent sulfur fuel oil**	4. Equivalent Allowable Emissions: **10.2** lb/hour **203.5** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for fuel oil firing: Fuel sulfur content limited to 0.0015 percent. Equivalent hourly emissions based on 59°F inlet condition.** **Hourly emissions of one CT/HRSG = 3.4 lb/hr.** **Hourly emissions of three CT/HRSGs = 3.4 lb/hr x 3 = 10.2 lb/hr.**	

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: **SAM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **7.77** lb/hour **3.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly emissions based on natural gas firing with DB at 59°F inlet conditions.
Hourly emissions of one CT/HRSG = 2.59 lb/hr.
Hourly emissions of three CT/HRSGs = 2.59 lb/hr x 3 = 7.77 lb/hr.

Potential annual emissions based on TEPD of Permit No. 0990646-001-AC/PSD-FL-354.
Annual emissions of two combined cycle units = 7 TPY.
Annual emissions of one combined cycle unit = 7/2 = 3.5 TPY.

Hourly emissions for CT only, oil firing, 59°F inlet conditions = 1.1 lb/hr per CT/HRSG.
Hourly emissions for CT only, natural gas firing, 59°F inlet conditions = 2.1 lb/hr per CT/HRSG.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Distillate oil firing limited to 500 hr/yr per CT/HRSG.
Duct-firing limited to 7,395,840 MMBtu for six CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).

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 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 gr S/100 SCF of gas**	4. Equivalent Allowable Emissions: **7.77** lb/hour **3.5** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing: Fuel sulfur content limited to 2 grains per 100 standard cubic feet of natural gas. Equivalent hourly emissions based on 59°F inlet condition.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0015-percent sulfur fuel oil**	4. Equivalent Allowable Emissions: **3.3** lb/hour **3.5** tons/year
5. Method of Compliance: **Fuel Analysis Records**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for fuel oil firing: Fuel sulfur content limited to 0.0015 percent. Equivalent hourly emissions based on 59°F inlet condition.** **Hourly emissions of one CT/HRSG = 1.1 lb/hr.** **Hourly emissions of three CT/HRSGs = 1.1 lb/hr x 3 = 3.3 lb/hr.**	

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: **247.2** lb/hour **420.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly emissions based on fuel oil firing at 59°F inlet condition.
Hourly emissions of one CT/HRSG = 82.4 lb/hr.
Hourly emissions of three CT/HRSG = 82.4 x 3 = 247.2 lb/hr.

Potential annual emissions based on TEPD of Permit No. 0990646-001-AC/PSD-FL-354.
Annual emissions of two combined cycle units = 841 TPY.
Annual emissions of one combined cycle units = 841/2 = 420.5 TPY.

Hourly emissions for CT only, natural gas firing, 59°F inlet condition = 20.0 lb/hr per CT/HRSG.
Hourly emissions for CT + DB, natural gas firing, 59°F inlet condition = 24.2 lb/hr per CT/HRSG.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Distillate oil firing limited to 500 hr/yr per CT/HRSG.
Duct-firing limited to 7,395,840 MMBtu for six CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).

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 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **8.0 ppmvd @ 15-Percent O_2**	4. Equivalent Allowable Emissions: **247.2** lb/hour **420.5** tons/year
5. Method of Compliance: **CEMS 24-hr block average, stack test using EPA Methods 7E or 20**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for fuel oil firing.** **Equivalent hourly emissions based on 59°F inlet condition.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2.0 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **72.6** lb/hour **420.5** tons/year
5. Method of Compliance: **CEMS 24-hr block average, stack test using EPA Methods 7E or 20.**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing with duct burners.** **Equivalent hourly emissions based on 59°F inlet condition.** **Hourly emissions for one CT/HRSG = 24.2 lb/hr.** **Hourly emissions for three CT/HRSG = 24.2 lb/hr x 3 = 72.6 lb/hr.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2.0 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **60.0** lb/hour **420.5** tons/year
5. Method of Compliance: **CEMS 24-hr block average, stack test using EPA Methods 7E or 20.**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing CT only.** **Equivalent hourly emissions based on 59°F inlet condition.** **Hourly emissions for one CT/HRSG = 20 lb/hr.** **Hourly emissions for three CT/HRSG = 20 lb/hr x 3 = 60 lb/hr.**	

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: **157.5** lb/hour **484.0** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly emissions based on natural gas firing with DB at 59°F inlet condition.
Hourly emissions of one CT/HRSG = 52.5 lb/hr.
Hourly emissions of three CT/HRSGs = 52.5 lb/hr x 3 = 157.5 lb/hr.

Potential annual emissions based on TEPD of Permit No. 0990646-001-AC/PSD-FL-354.
Annual emissions of two combined cycle units = 968 TPY.
Annual emissions of one combined cycle unit = 968/2 = 484 TPY.

Hourly emissions for CT only, natural gas firing, 59°F inlet condition = 23.2 lb/hr per CT/HRSG.
Hourly emissions for CT only, oil firing, 59°F inlet condition = 42.0 lb/hr per CT/HRSG.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Distillate oil firing limited to 500 hr/yr per CT/HRSG.
Duct-firing limited to 7,395,840 MMBtu for six CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).

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 4

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **8.0 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **126** lb/hour **420.5** tons/year
5. Method of Compliance: **CEMS 24-hour block average, annual stack test using EPA Method 10**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for Fuel oil firing. Oil firing limited to 500 hr/yr per CT/HRSG. Equivalent hourly emissions based on 59°F inlet condition. Hourly emissions for one CT/HRSG = 42 lb/hr. Hourly emissions for three CT/HRSG = 42 lb/hr x 3 = 126 lb/hr.**	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **7.6 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **157.5** lb/hour **420.5** tons/year
5. Method of Compliance: **Annual stack test (EPA Method 10)**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing with duct burners. Duct firing limited to 2,880 hr/yr per CT/HRSG. Annual stack test limit applies only at 90-100 percent load. Equivalent hourly emissions based on 59°F inlet condition.**	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **4.1 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **69.6** lb/hour **420.5** tons/year
5. Method of Compliance: **Annual stack test (EPA Method 10)**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing CT only. Annual stack test limit applies only at high load. Hourly emissions of one CT/HSRG = 23.2 lb/hr. Hourly emissions of three CT/HSRG = 23.2 lb/hr x 3 = 69.6 lb/hr. Equivalent hourly emissions based on 59°F inlet condition.**	

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 **4** of **4**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **6 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: lb/hour **420.5** tons/year
5. Method of Compliance: **CEMS 12-month rolling average**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas or fuel oil firing.**	

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: **58.8** lb/hour **88** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly emissions based on fuel oil firing at 59°F inlet condition.
Hourly emissions of one CT/HRSG = 19.6 lb/hr.
Hourly emissions of three CT/HRSG = 19.6 lb/hr x 3 = 58.8 lb/hr.

Potential annual emissions based on TEPD of Permit No. 0990646-001-AC/PSD-FL-354.
Annual emissions of two combined cycle units = 176 TPY.
Annual emissions of one combined cycle unit = 176/2 = 88 TPY.

Hourly emissions for CT + DB, natural gas firing, 59°F inlet condition = 5.4 lb/hr.
Hourly emissions for CT only, natural gas firing, 59°F inlet condition = 4.1 lb/hr per CT/HRSG.

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Distillate oil firing limited to 500 hr/yr per CT/HRSG.
Duct-firing limited to 7,395,840 MMBtu for six CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).

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 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **6.0 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **58.8** lb/hour **88** tons/year
5. Method of Compliance: **Annual stack test using EPA Methods 25A or 18**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for fuel oil firing. Fuel oil firing limited to 500 hr/yr per CT/HRSG. Limit applies only at high load (90 - 100-percent). Compliance with the CO CEMS based limits at lower loads represents compliance with the VOC limit.** **Equivalent hourly emissions based on 59°F inlet condition.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.5 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **16.2** lb/hour **88** tons/year
5. Method of Compliance: **Annual Stack test using EPA Methods 25A or 18**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing with duct burners. Limit applies only at high load (90 – 100-percent). Equivalent hourly emissions based on 59°F inlet condition. Compliance with the CO CEMS based limits at lower loads represents compliance with the VOC limit.** **Hourly emissions for one CT/HRSG = 5.4 lb/hr.** **Hourly emissions for three CT/HRSG = 5.4 lb/hr x 3 = 16.2 lb/hr.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.2 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: **12.3** lb/hour **88** tons/year
5. Method of Compliance: **Annual Stack test using EPA Methods 25A or 18**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing CT only. Limit applies only at high load (90 – 100-percent). Compliance with the CO CEMS based limits at lower loads represents compliance with the VOC limit.** **Hourly emissions for one CT/HRSG = 4.1 lb/hr.** **Hourly emissions for three CT/HRSGs = 4.1 lb/hr x 3 = 12.3 lb/hr.**	

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: **NH3**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **See Comment** lb/hour tons/year	4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	7. Emissions Method Code:
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:	
11. Potential, Fugitive, and Actual Emissions Comment: **Ammonia slip limited to 5 ppmvd @ 15-percent O_2. State requirement only. Ammonia is not a regulated air pollutant under Title V or NSPS.**	

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 ppmvd @ 15-percent O_2**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: **Annual stack test using EPA Method CTM-027**	
6. Allowable Emissions Comment (Description of Operating Method): **For natural gas and fuel oil firing including duct burner operation.**	

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 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Limit based on BACT for PM/PM10. Visible emissions limited for each 6-minute block average.**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: **20** % Maximum Period of Excess Opacity Allowed: **See Comment** min/hour	
4. Method of Compliance: **None**	
5. Visible Emissions Comment: **Rule 62-210.400, F.A.C. Visible emissions due to startup, shutdown, and malfunction limited to ten, 6-minute periods per calendar day.**	

H. CONTINUOUS MONITOR INFORMATION

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

Continuous Monitoring System: Continuous Monitor 1 of 9

1. Parameter Code: **EM**	2. Pollutant(s): **NO_x**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **TECO** Model Number: **42i - LS**	Serial Number: **0821027621**
5. Installation Date: **09/09/2009**	6. Performance Specification Test Date: **Pending**
7. Continuous Monitor Comment: **Continuous monitoring of NOx emissions. Unit 2A 40 CFR Part 75**	

Continuous Monitoring System: Continuous Monitor 2 of 9

1. Parameter Code: **EM**	2. Pollutant(s): **CO**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **TECO** Model Number: **42i - CLS**	Serial Number: **0802826480**
5. Installation Date: **09/09/2009**	6. Performance Specification Test Date: **Pending**
7. Continuous Monitor Comment: **Continuous monitoring of CO emissions. Unit 2A 40 CFR Part 75**	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

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

Continuous Monitoring System: Continuous Monitor 3 of 9

1. Parameter Code: **O2**	2. Pollutant(s):
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Servomex** Model Number: **1440D**	Serial Number: **01440DIV02/4098**
5. Installation Date: **09/09/2009**	6. Performance Specification Test Date: **Pending**
7. Continuous Monitor Comment: **Monitoring of O_2 for dilution with NOx and CO monitors. Unit 2A 40 CFR Part 75**	

Continuous Monitoring System: Continuous Monitor 4 of 9

1. Parameter Code: **EM**	2. Pollutant(s): **NOx**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **TECO** Model Number: **42i - LS**	Serial Number: **0821027624**
5. Installation Date: **09/09/2009**	6. Performance Specification Test Date: **Pending**
7. Continuous Monitor Comment: **Continuous monitoring of NOx emissions. Unit 2B 40 CFR Part 75**	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

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

Continuous Monitoring System: Continuous Monitor 5 of 9

1. Parameter Code: **EM**	2. Pollutant(s): **CO**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **TECO** Model Number: **42i - CLS**	Serial Number: **08217027619**
5. Installation Date: **09/09/2009**	6. Performance Specification Test Date: **Pending**
7. Continuous Monitor Comment: **Continuous monitoring of CO emissions. Unit 2B 40 CFR Part 75**	

Continuous Monitoring System: Continuous Monitor 6 of 9

1. Parameter Code: **O2**	2. Pollutant(s):
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Servomex** Model Number: **1440D**	Serial Number: **01440DIV02/4099**
5. Installation Date: **09/09/2009**	6. Performance Specification Test Date: **Pending**
7. Continuous Monitor Comment: **Monitoring of O_2 for dilution with NOx and CO monitors. Unit 2B 40 CFR Part 75**	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

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

Continuous Monitoring System: Continuous Monitor 7 of 9

1. Parameter Code: **EM**	2. Pollutant(s): **NOx**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **TECO** Model Number: **42i - LS**	Serial Number: **0821027625**
5. Installation Date: **09/09/2009**	6. Performance Specification Test Date: **Pending**
7. Continuous Monitor Comment: **Continuous monitoring of NOx emissions. Unit 2C 40 CFR Part 75**	

Continuous Monitoring System: Continuous Monitor 8 of 9

1. Parameter Code: **EM**	2. Pollutant(s): **CO**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **TECO** Model Number: **42i - CLS**	Serial Number: **0821027620**
5. Installation Date: **09/09/2009**	6. Performance Specification Test Date: **Pending**
7. Continuous Monitor Comment: **Continuous monitoring of CO emissions. Unit 2C 40 CFR Part 75**	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

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

Continuous Monitoring System: Continuous Monitor **9** of **9**

1. Parameter Code: **O2**	2. Pollutant(s):
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Servomex** Model Number: **1440D**	Serial Number: **0144DIV02/4102**
5. Installation Date: **09/09/2009**	6. Performance Specification Test Date: **Pending**
7. Continuous Monitor Comment: **Monitoring of O_2 for dilution with NOx and CO monitors. Unit 2C. 40 CFR Part 75**	

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: **FPL-EU1-I1** ☐ 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: **FPL-EU1-I2** ☐ 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: **FPL-EU1-I3** ☐ 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: **FPL-EU1-I4** ☐ 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): **Within 45 days of completion of the last test run. RATA tests planned on the following dates: 11/10/09 – Unit 2C, 11/11/09 – Unit 2B, 11/12/09 – Unit 2A.**
   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: **FPL-EU1-IV1**
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation: ☒ Attached, Document ID: **FPL-EU1-IV3** ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements Comment

Combined cycle units 2A-2C are exempt from the CAM requirements for NOx control using SCR as continuous compliance is required to be demonstrated by a CEMS.

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 [3]
Cooling Towers

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 26-cell Mechanical Draft Cooling Towers

3. Emissions Unit Identification Number: **008**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
A	**March 16, 2006**	**May 16, 2009**	**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:
Two 26-cell mechanical draft cooling towers serving Combined Cycle Units 1 and 2. Final design details of cooling tower submitted to FDEP dated November 19, 2007.

EMISSIONS UNIT INFORMATION
Section [3]
Cooling Towers

Emissions Unit Control Equipment/Method: Control 1 of 1

1. Control Equipment/Method Description: **Drift Eliminators**
2. Control Device or Method Code: **152**

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: **306,000 gallons/minute***	
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	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment: ***Nominal design flow rate per cooling tower from Air Construction Permit No. 0990646-001-AC/PSD-FL-354. Actual flow rate 303,810 gallons/minute per cooling tower.**	

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. 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: **V**	6. Stack Height: **63** feet	7. Exit Diameter: **35** feet
8. Exit Temperature: **105°F**	9. Actual Volumetric Flow Rate: **1,357,912** 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: **Design exit diameter and volumetric flow rate are per cooling tower cell. Exit temperature based on design specifications.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Industrial Processes; Cooling Tower; Process Cooling; Mechanical Draft**		
2. Source Classification Code (SCC): **3-85-001-01**	3. SCC Units: **1,000 Gallons**	
4. Maximum Hourly Rate: **18,360**	5. Maximum Annual Rate: **160,833,600**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Maximum hourly and annual rate above are for each cooling tower. Process rates based on design water circulation rate.**		

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			WP
PM10			WP

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: **23.0** lb/hour **<100** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
Hourly emission rate based on PSD Permit application dated April 2005. Emission rates above are for each cooling tower.

11. Potential, Fugitive, and Actual Emissions Comment:
Work practice standard only. Design drift rate limited to 0.0005% of circulating water flow rate.

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):	

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: **PM10**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **1.17** lb/hour **<5** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
Hourly emission rate based on PSD Permit application dated April 2005. Emission rates above are for each cooling tower.

11. Potential, Fugitive, and Actual Emissions Comment:
Work practice standard only. Design drift rate limited to 0.0005% of circulating water flow rate.

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 _____ 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:	

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: **FPL-EU3-I1** ☐ 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: **FPL-EU3-I3** ☐ 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: **11/19/07**
   Test Date(s)/Pollutant(s) Tested: **Certification that cooling tower was constructed to achieve drift rate of no more than 0.0005 percent of circulating water rate.**
   ☐ 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

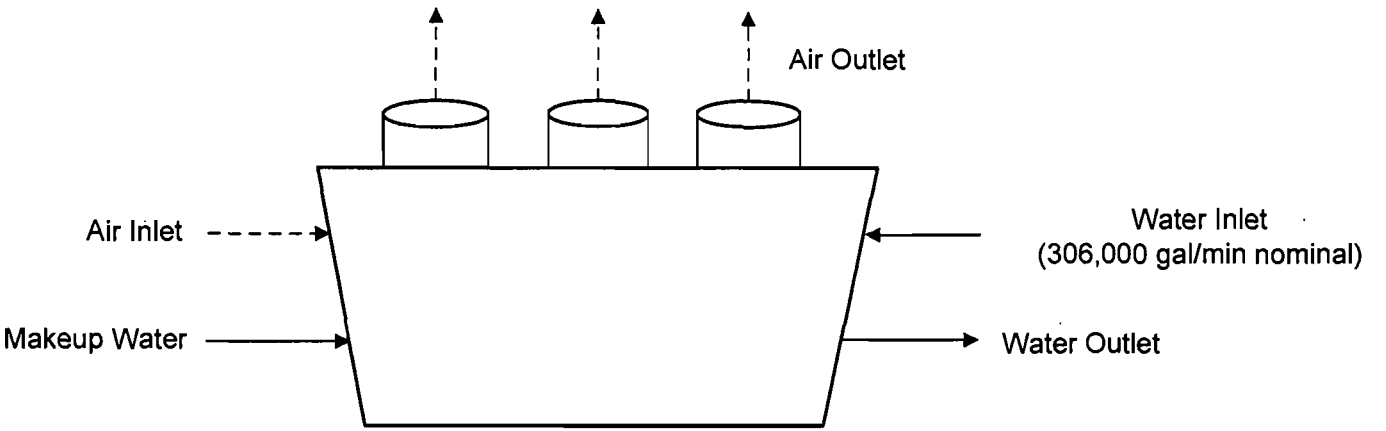
Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☒ Attached, Document ID: **FPL-EU1-IV1**
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

ATTACHMENT FPL-EU3-I1

PROCESS FLOW DIAGRAM



Attachment FPL-EU3-I1
Process Flow Diagram
26-Cell Wet Circulating Water Cooling Tower
FPL West County Energy Center

Process Flow Legend
Solid/Liquid
Gas
Steam

FPL.

ATTACHMENT FPL-EU3-I3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT FPL-EU3-I3
DETALED DESCRIPTION OF CONTROL EQUIPMENT

Drift Eliminators	Data
Type	Cellular
Manufacturer	CE Shepard
Model No.	SDRU-Plus (DRU 1.5)
Total area, per tower, (ft^2)	67,392
Number of passes per layer	3
Number of layers	1
Depth per layer, in.	5.5
Support method	Bottom
Support size, in. by in.	2 x 4
Suport coating	N/A

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 [4]
Auxiliary Boiler

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:
One 97.7-MMBtu/hr auxiliary boiler

3. Emissions Unit Identification Number: **009**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
A	**March 16, 2009**		**49**

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

☐ Acid Rain Unit

☐ CAIR Unit

☐ Hg Budget Unit

9. Package Unit:
Manufacturer: **Babcock & Wilcox Company** Model Number: **FM103-79 F.M.**

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
One 97.7 MMBtu/hr auxiliary steam boiler serving Units 1 and 2.

Emissions Unit Control Equipment/Method: Control **1** of **1**

1. Control Equipment/Method Description: **Low NOx Burners**
2. Control Device or Method Code: **205**

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: **63,900 lb/hr (Steam Production)**	
3. Maximum Heat Input Rate: **97.7** million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**1,500** hours/year
6. Operating Capacity/Schedule Comment: **Natural gas fired auxiliary boiler** **Maximum production rate based on net steam flow.** **Maximum annual operation per Draft Air Construction Permit No. 0990646-003-AC.**	

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. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **Auxiliary Boiler for Power Blocks 1 and 2.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **60** feet	7. Exit Diameter: **5.5** feet
8. Exit Temperature: **275**°F	9. Actual Volumetric Flow Rate: **17,718** acfm	10. Water Vapor: **1.9** %
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: **Stack parameters based on stack testing performed on July 30, 2009. Stack gas flow rate from stack test data reported as SCFM.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **External Combustion Boilers; Industrial; Natural Gas; 10-100 Million Btu/hr**		
2. Source Classification Code (SCC): **1-02-006-02**	3. SCC Units: **Million Cubic Feet**	
4. Maximum Hourly Rate: **0.095**	5. Maximum Annual Rate: **142.5**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,026**
10. Segment Comment: **Maximum annual rate based on 1,500 hr/yr. Maximum sulfur content of natural gas limited to 2 grains/100 scf.** **Maximum hourly rate = 97.7 MMBtu/hr ÷ 1,026 MMBtu/MMft^3 = 0.095 MMft^3/hr.** **Maximum annual rate = 0.095 MMft^3/hr x 1,500 hr/yr = 47.5 MMft^3/yr.**		

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
CO			EL
PM/PM10			EL
NOx	205		EL
SO2			EL
VOC			EL

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: **7.82** lb/hour **5.87** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.08 lb/MMBtu** Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
Hourly: 97.7 MMBtu/hr x 0.08 lb/MMBtu = 7.82 lb/hr
Annual: 7.82 lb/hr x 1,500 hr/yr x 1 ton/2,000 lbs = 5.87 TPY

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: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.08 lb/MMBtu**	4. Equivalent Allowable Emissions: **7.82** lb/hour **5.87** tons/year
5. Method of Compliance: **Initial compliance test using EPA Method 10**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on BACT. Permit No. 0990646-001-AC/PSD-FL-354.**	

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: **4.9** lb/hour **3.68** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.05 lb/MMBtu** Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
Hourly: 0.05 lb/MMBtu x 97.7 MMBtu/hr = 4.9 lb/hr
Annual: 4.9 lb/hr x 1,500 hr/yr x 1 ton/2,000 lbs = 3.68 TPY

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: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **4.9** lb/hour **3.68** tons/year
5. Method of Compliance: **Initial compliance test using EPA Method 7E**	
6. Allowable Emissions Comment (Description of Operating Method): **Permit No. 0990646-001-AC/PSD-FL-354. Allowable emissions based on BACT.**	

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: **0.54** lb/hour **0.41** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **2 grains S/100 scf** Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly: 0.095 x 10^6 scf/hr x 2 grains S/100scf x 1 lb/7,000 grains x 64 lb SO_2/32 lb S = 0.54 lb/hr

Annual: 0.54 lb/hr x 1,500 hr/yr x 1 ton/2,000 lbs = 0.41 TPY

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: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 grains S/100 scf**	4. Equivalent Allowable Emissions: **0.54** lb/hour **0.41** tons/year
5. Method of Compliance: **Fuel Sampling**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on BACT. Permit No. 0990646-001-AC/PSD-FL-354**	

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**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.72** lb/hour **0.54** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **7.6 lb/MMscf** Reference: **AP-42, Table 1.4-2**	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:
Hourly: 0.095 MMscf/hr x 7.6 lb/MMscf = 0.72 lb/hr
Annual: 0.72 lb/hr x 1,500 hr/yr x 1 ton/2,000 lbs = 0.54 TPY

11. Potential, Fugitive, and Actual Emissions Comment:
PM10 assumed equal to PM.

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 grains S/100 scf**	4. Equivalent Allowable Emissions: **0.72** lb/hour **0.54** tons/year
5. Method of Compliance: **Fuel Sampling**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on Permit No. 0990646-001-AC/PSD-FL-354.**	

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: **0.52** lb/hour **0.39** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **5.5 lb/MMscf** Reference: **AP-42, Table 1.4-2**	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:
Hourly: 5.5 lb/MMscf x 0.095 MMscf/hr = 0.52 lb/hr
Annual: 0.52 lb/hr x 1,500 hr/yr x 1 ton/2,000 lbs = 0.39 TPY

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: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: **0.52** lb/hour **0.39** tons/year
5. Method of Compliance: **Fuel specification: Natural Gas**	
6. Allowable Emissions Comment (Description of Operating Method): **Permit No. 0990646-001-AC/PSD-FL-354 Allowable emissions based on BACT.**	

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: **VE10**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **10 %** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Based on BACT for PM/PM10.**	

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: **FPL-EU4-I1** ☐ 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: **FPL-EU1-I2** ☐ 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: **FPL-EU4-I6**
   Test Date(s)/Pollutant(s) Tested: **July 30, 2009/NOx, CO, VE**
   ☐ 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

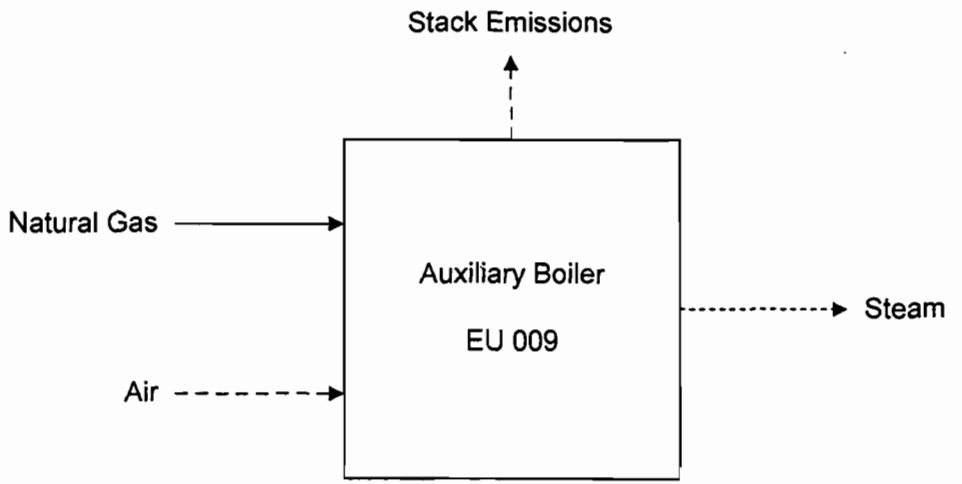
Additional Requirements for Title V Air Operation Permit Applications

1.	Identification of Applicable Requirements: ☒ Attached, Document ID: FPL-EU1-IV1
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

ATTACHMENT FPL-EU4-I1

PROCESS FLOW DIAGRAM



Attachment FPL-EU4-I1
Process Flow Diagram
Auxiliary Boiler
FPL West County Energy Center

Process Flow Legend
Solid/Liquid
Gas
Steam

FPL.

ATTACHMENT FPL-EU4-I6

COMPLIANCE DEMONSTRATION REPORTS/RECORDS

AIR HYGIENE, INC.

Testing Solutions for a Better World

EMISSION COMPLIANCE TEST
FOR THE
BABCOCK AND WILCOX AUXILIARY BOILER,
PERMIT ID NUMBER 009
PREPARED FOR
FLORIDA POWER AND LIGHT
AT THE
WEST COUNTY ENERGY CENTER
LOXAHATCHEE, FLORIDA

JULY 30, 2009

Emission Testing Services

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8900 State Road
Philadelphia, Pennsylvania 19136

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JULY 30, 2009

Prepared and Reviewed by:

Thomas K. Graham, P.E., QSTI, Director of Operations

Paul Little, Director of Customer Service

Jake Fahlenkamp, QSTI, Director of Quality Assurance

TABLE 2.1
SUMMARY OF BABCOCK AND WILCOX, PERMIT ID NUMBER #009
RESULTS

Parameter	Full Load	Permit Limits
Start Time (hh:mm:ss)	14:45:25	–
End Time (hh:mm:ss)	18:01:55	–
Run Duration (min / run)	60	–
Bar. Pressure (in. Hg)	29.97	–
Amb. Temp. (°F)	86	–
Rel. Humidity (%)	69	–
Spec. Humidity (lb water / lb air)	0.018784	–
Aux Boiler Fuel Flow (SCFH)	90,378	–
Stack Flow (RM19) (SCFH)	1,063,085	–
Heat Input (MMBtu/hr)	90.1	–
Steam Flow Rate (lb/hr)	59,679.3	–
Jackshaft Positioner (%)	100.0	–
Feedwater Flow (lb/hr)	70,876.43	–
Firing Rate Demand (%)	100.0	–
Steam Drum Pressure (PSIG)	336.25	–
Steam Drum Temp. (°F)	427.55	–
Steam Flow Pressure (PSIG)	301.76	–
Steam Header Temp. (°F)	600.47	–
CT-A Cooling STM Flow (lb/hr)	0.04	–
CT-B Cooling STM Flow (lb/hr)	134.67	–
CT-C Cooling STM Flow (lb/hr)	112.67	–
Fuel Gas Pressure (PSIG)	26.41	–
NOx (ppmvd)	33.36	–
NOx (ppm@3%O_2)	39.01	–
NOx (lb/MMBtu)	0.047	0.05
CO (ppmvd)	0.29	–
CO (ppm@3%O_2)	0.34	–
CO (lb/MMBtu)	0.000	0.08
Sulfur (gr/100 scf)	<0.032	2
Opacity (%)	0	10
O_2 (%)	5.59	–

The results of all measured pollutant emissions were below the required limits. All testing was performed without any real or apparent errors. All testing was conducted according to the approved testing protocol.

TABLE A.2

BABCOCK AND WILCOX, PERMIT ID NUMBER #009 FULL LOAD DATA SUMMARY

Parameter	Full Load, Run - 1-1	Full Load, Run - 1-2	Full Load, Run - 1-3	Average
Start Time (hh:mm:ss)	14:45:25	15:54:25	17:02:25	14:45:25
End Time (hh:mm:ss)	15:44:55	16:53:55	18:01:55	18:01:55
Run Duration (min / run)	60	60	60	60
Bar. Pressure (in. Hg)	30.21	29.88	29.83	29.97
Amb. Temp. (°F)	86	87	86	86
Aux Boiler Fuel Flow (SCFH)	90,932	90,434	89,769	90,378
Stack Flow (RM19) (SCFH)	1,072,275	1,057,563	1,059,417	1,063,085
Heat Input (MMBtu/hr)	90.6	90.1	89.5	90.1
Steam Flow Rate (lb/hr)	59,713.5	60,017.4	59,307.1	59,679.3
Jackshaft Positioner (%)	100.0	100.0	100.0	99.99
Feedwater Flow (lb/hr)	70,701.9	71,041.2	70,886.1	70,876.43
Firing Rate Demand (%)	100.0	100.0	100.0	99.99
Steam Drum Pressure (PSIG)	336.1	336.4	336.3	336.25
Steam Drum Temp. (°F)	427.3	427.8	427.6	427.55
Steam Flow Pressure (PSIG)	301.9	301.8	301.6	301.76
Steam Header Temp. (°F)	600.3	600.6	600.5	600.47
CT-A Cooling STM Flow (lb/hr)	0.0	0.0	0.0	0.04
CT-B Cooling STM Flow (lb/hr)	141.1	141.1	121.8	134.67
CT-C Cooling STM Flow (lb/hr)	107.1	115.2	115.7	112.67
Fuel Gas Pressure (PSIG)	26.6	26.4	26.2	26.41
NOx (ppmvd)	33.52	33.68	32.87	33.36
NOx (ppm@3%O_2)	39.31	39.16	38.57	39.01
NOx (lb/MMBtu)	0.047	0.047	0.046	0.047
CO (ppmvd)	0.28	0.30	0.29	0.29
CO (ppm@3%O_2)	0.33	0.35	0.34	0.34
Sulfur (gr/100 scf)	<0.032	<0.032	<0.032	<0.032
Opacity (%)	0	0	0	0
O_2 (%)	5.63	5.51	5.65	5.59

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 [5]
Natural Gas Fuel Heaters

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 8.3-MMBtu/hr natural gas fuel heaters

3. Emissions Unit Identification Number: **010**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
A	**March 16, 2006**	**May 2009**	

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

   ☐ Acid Rain Unit

   ☐ CAIR Unit

   ☐ Hg Budget Unit

9. Package Unit:
   Manufacturer: **Total Energy Resources** Model Number: **P0708**

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    Two 8.3 MMBtu/hr natural gas fired process heaters for heating natural gas supply to Combined Cycle Units 1 and 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:

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: **8.3** 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: **Heat input rated limited to 8.3 MMBtu/hr for each natural gas fuel heater at maximum operating conditions.**	

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. 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: **V**	6. Stack Height: **30.3** feet	7. Exit Diameter: **2.5** feet
8. Exit Temperature: **500°F**	9. Actual Volumetric Flow Rate: **4,950** 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: **Exit temperature and stack gas flow rate based on PSD permit application dated April 2005.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Natural Gas Combustion**		
2. Source Classification Code (SCC): **1-01-006-02**	3. SCC Units: **Million Cubic Feet**	
4. Maximum Hourly Rate: **0.008**	5. Maximum Annual Rate: **70.08**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,026**
10. Segment Comment: **Maximum annual rate bassed on 8,760 hr/yr operation. Maximum hourly rate = 8.3 MMBtu/hr ÷ 1,026 MMBtu/MMcf = 0.008 MMcf/hr Maximum hourly and annual rate above for each natural gas fuel heater.**		

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
CO			EL
PM/PM10			EL
NOx			EL
SO2			EL
VOC			EL

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: **0.66** lb/hour **2.9** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.08 lb/MMBtu** Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
Hourly: 0.08 lb/MMBtu x 8.3 MMBtu/hr = 0.66 lb/hr
Annual: 0.66 lb/hr x 8,760 hr/yr x 1 ton/2,000 lbs = 2.9 TPY
Potential emissions for one natural gas heater.

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: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.08 lb/MMBtu**	4. Equivalent Allowable Emissions: **0.66** lb/hour **2.9** tons/year
5. Method of Compliance: **Initial compliance test using EPA Method 10 or manufacturer certification**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on BACT. Permit No. 0990646-001-AC/PSD-FL-354. Emissions are for one natural gas heater.**	

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: **0.79** lb/hour **3.5** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.095 lb/MMBtu** Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
Hourly: 0.095 lb/MMBtu x 8.3 MMBtu/hr = 0.79 lb/hr
Annual: 0.79 lb/hr x 8,760 hr/yr x 1 ton/2,000 lbs = 3.5 TPY
Potential emissions for one natural gas heater.

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: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.095 lb/MMBtu**	4. Equivalent Allowable Emissions: **0.79** lb/hour **3.5** tons/year
5. Method of Compliance: **Initial compliance test using EPA Method 7E or manufacturer certification**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on BACT. Permit No. 0990646-001-AC/PSD-FL-354. Emissions are for one natural gas heater.**	

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: **0.046** lb/hour **0.20** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **2 grains S/100 scf** Reference:	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly: 0.008 x 10^6 scf/hr x 2 grains S/100scf x 1 lb/7,000 grains x 64 lb SO_2/32 lb S = 0.046 lb/hr

Annual: 0.046 lb/hr x 8,760 hr/yr x 1 ton/2000 lbs = 0.20 TPY

Potential emissions for one natural gas heater.

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: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 grains S/100 scf**	4. Equivalent Allowable Emissions: **0.046** lb/hour **0.20** tons/year
5. Method of Compliance: **Fuel Sampling**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on BACT. Permit No. 0990646-001-AC/PSD-FL-354. Natural gas sulfur content limited to 2 gr/100 scf. Emissions are for one natural gas heater.**	

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**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.015** lb/hour **0.067** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **1.9 lb/MMscf** Reference: **AP-42 Table 1.4-2**	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: **Hourly: 0.008 MMscf/hr x 1.9 lb/MMscf = 0.015 lb/hr** **Annual: 0.015 lb/hr x 8,760 hr/yr x 1 ton/2,000 lbs = 0.067 TPY** **Potential emissions for one natural gas heater.**	
11. Potential, Fugitive, and Actual Emissions Comment: **PM10 assumed equal to PM.**	

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 grains S/100 scf**	4. Equivalent Allowable Emissions: **0.015** lb/hour **0.067** tons/year
5. Method of Compliance: **Fuel Sampling**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on BACT. Permit No. 0990646-001-AC/PSD-FL-354. Emissions are for one natural gas heater.**	

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: **0.044** lb/hour **0.19** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **5.5 lb/MMscf** Reference: **AP-42, Table 1.4-2**	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:
Hourly: 0.008 MMscf/yr x 5.5 lb/MMscf = 0.044 lb/hr
Annual: 0.044 lb/hr x 8,760 hr/yr x 1 ton/2000 lbs = 0.19 TPY
Potential emissions for one natural gas heater.

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: **VOC**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 gr S/100 scf**	4. Equivalent Allowable Emissions: **0.044** lb/hour **0.19** tons/year
5. Method of Compliance: **Natural gas sampling**	
6. Allowable Emissions Comment (Description of Operating Method): **Permit No. 0990646-001-AC/PSD-FL-354.** **Allowable emissions based on BACT.** **Emissions are for one natural gas heater.**	

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: **VE10**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **10 %** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Based on BACT for PM/PM10.**	

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: **FPL-EU5-I1** ☐ 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: **FPL-EU1-I2** ☐ 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: **FPL-EU5-I6**
   Test Date(s)/Pollutant(s) Tested: **Manufacturer guaranteed emission rate for NOx, CO, HC**
   ☐ 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

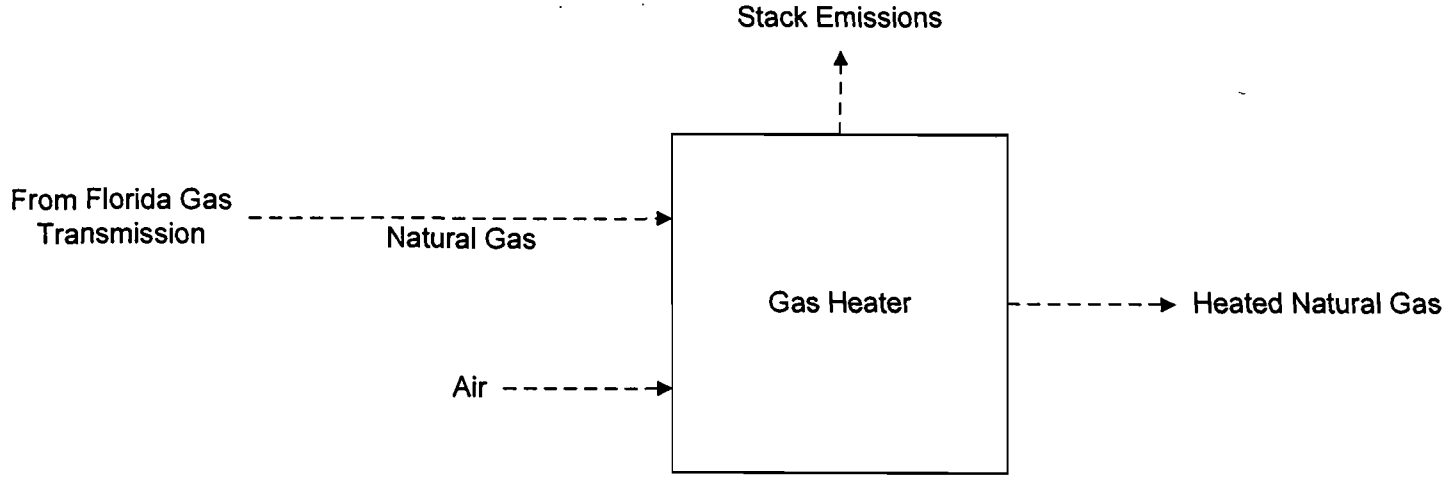
Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☒ Attached, Document ID: **FPL-EU1-IV1**
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

ATTACHMENT FPL-EU5-I1

PROCESS FLOW DIAGRAM



Attachment FPL-EU5-I1
Process Flow Diagram
Natural Gas Fuel Heater
FPL West County Energy Center

Process Flow Legend
Solid/Liquid ——→
Gas - - - →
Steam ·····→

FPL.

ATTACHMENT FPL-EU5-I6

COMPLIANCE DEMONSTRATION REPORTS/RECORDS

Total Energy Resources, Inc.
8939 West 21st, Sand Springs, OK 74063
Phone: 918-447-0844 Fax: 918-447-0877

December 6, 2007

Mr. Michael C. Callegari
Gulfstream Air Quality
Williams Gas Pipeline
P. O. Box 1396
Houston, TX 77251-1396

RE: Indirect Fired Water Bath Heater(TERI # P0708R2) for Florida Power and Light

Mike:

These are the emissions limits that the Water Bath Heater can achieve:

- NO_x 0.94 lbs/hr
- CO 0.79 lbs/hr
- HC 0.43 lbs/hr

Sulfur compounds are a result of concentrations in the fuel and are independent of any combustion device.

If you have any questions please feel free to contact me at my direct phone line 918-246-1611.

Sincerely,

Allen Marshall
Applications Engineer

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.

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:
Three - 2,250-kW diesel fuel-fired emergency generators.

3. Emissions Unit Identification Number: **011**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
A	**March 16, 2006**	**May 2009**	**49**

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

☐ Acid Rain Unit

☐ CAIR Unit

☐ Hg Budget Unit

9. Package Unit:
Manufacturer: **Caterpillar** Model Number: **3516B**

10. Generator Nameplate Rating: **4.5** MW

11. Emissions Unit Comment:
Three Caterpillar 3516B 3,285-hp diesel-fired emergency generators. Generator (Caterpillar Model SR4B-GD) rating 2,250 kW, each.

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: **20.6** 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 **160** hours/year
6. Operating Capacity/Schedule Comment: **Maximum heat input rate for each emergency generator based on fuel flow of 157.5 gallons/hr and fuel LHV of 18,390 Btu/lb at 7.1 lb/gallon. Emergency generators are subject to 40 CFR 60 Subpart IIII, Standards of Performance For Stationary Compression Ignition Internal Combustion Engines and 40 CFR 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE).**	

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: **1**	
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: **V**	6. Stack Height: **14.5** feet	7. Exit Diameter: **1.5** feet
8. Exit Temperature: **916**°F	9. Actual Volumetric Flow Rate: **17,463** 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: **Stack parameters based on design information.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Internal Combustion Engines: Electric Generation; Distilate oil (Diesel); Reciprocating**		
2. Source Classification Code (SCC): **2-01-001-02**	3. SCC Units: **1000 gallons**	
4. Maximum Hourly Rate: **0.16**	5. Maximum Annual Rate: **25.6**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.0015**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **131**
10. Segment Comment: **Maximum hourly rate based on hourly fuel usage of 157.5 gallons/hr. Maximum annual rate based on 160 hr/yr operation. Maximum hourly and annual rates above are for each emergency generator.**		

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
CO			EL
PM/PM10			EL
NOx			EL
SO2			EL
VOC			EL

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: **61.6** lb/hour **4.93** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **8.5 g/hp-hr** Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly: 8.5 g/hp-hr x 3,285 hp x 1 lb/453.6 g = 61.6 lb/hr

Annual: 61.6 lb/hr x 160 hr/yr x 1 ton/2,000 lbs = 4.93 TPY

Potential emissions are for one emergency generator.

11. Potential, Fugitive, and Actual Emissions Comment:

Annual emission rate based on 160 hr/yr non-emergency operation.

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: **8.5 g/hp-hr**	4. Equivalent Allowable Emissions: **61.6** lb/hour **4.93** tons/year
5. Method of Compliance: **Initial compliance test using EPA Method 10 or EPA certification**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT limit based on Tier 1 values cited in 40 CFR 60, Subpart IIII. Equivalent annual emissions are for one emergency generator.**	

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: **50.0** lb/hour **4.0** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **6.9 g/hp-hr** Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly: 6.9 lb/hr-hr x 3,285 hp x 1 lb/453.6 g = 50.0 lb/hr

Annual: 50.0 lb/hr x 160 hr/yr x 1 ton/2,000 lb = 4.0 TPY

Potential emissions are for one emergency generator.

1. Potential, Fugitive, and Actual Emissions Comment:

Annual emission rate based on 160 hr/yr non-emergency operation.

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: **6.9 g/hp-hr**	4. Equivalent Allowable Emissions: **50.0** lb/hour **4.0** tons/year
5. Method of Compliance: **Initial compliance test using EPA Method 7E or EPA certification**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT limit based on Tier 1 values cited in 40 CFR 60, Subpart IIII. Emissions are for one emergency generator.**	

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: **0.017** lb/hour **0.0014** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0015-percent S fuel oil** Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Potential emissions based on max fuel sulfur content of 0.0015 percent and fuel usage of 155.5 gallons/hr per unit.

Hourly: 155.5 gal/hr x 7.1 lb/gal x 0.0015/100 = 0.017 lb/hr

Annual: 0.017 lb/hr x 160 hr/yr x 1 ton/2,000 lb = 0.0014 TPY

Emissions are for one emergency generator.

11. Potential, Fugitive, and Actual Emissions Comment:

Annual emission rate based on 160 hr/yr non-emergency operation.

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: **0.0015-percent S fuel oil**	4. Equivalent Allowable Emissions: **0.017** lb/hour **0.0014** tons/year
5. Method of Compliance: **Use of ultra low sulfur (ULS) diesel fuel.**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT limit based on 0.0015-percent sulfur fuel oil. Emissions are for one emergency generator.**	

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**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **2.9** lb/hour **0.23** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.4 g/hp-hr** Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
Hourly: 0.4 g/hr-hr x 3,285 hp x 1 lb/453.6 g = 2.9 lb/hr

Annual: 2.9 lb/hr x 160 hr/yr x 1 ton/2,000 lbs = 0.23 TPY

Emissions are for one emergency generator.

11. Potential, Fugitive, and Actual Emissions Comment:
Annual emission rate based on 160 hr/yr non-emergency operation.

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: **0.4 g/hp-hr**	4. Equivalent Allowable Emissions: **2.9** lb/hour **0.23** tons/year
5. Method of Compliance: **Use of ultra low sulfur (ULS) diesel fuel, EPA Certification**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT limit based on Tier 1 values cited in 40 CFR 60, Subpart IIII. Emissions are for one emergency generator.**	

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: **7.24** lb/hour **0.58** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **1.0 g/hp-hr** Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Hourly: 1.0 g/hr-hr x 3,285 hp x 1 lb/453.6 g = 7.24 lb/hr

Annual: 7.24 lb/hr x 160 hr/yr x 1 ton/2,000 lbs = 0.58 TPY

Emissions are for one emergency generator.

11. Potential, Fugitive, and Actual Emissions Comment:

VOC emissions based on total hydrocarbons used as a surrogate for VOC.
Annual emission rate based on 160 hr/yr non-emergency operation.

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: **1.0 g/hp-hr**	4. Equivalent Allowable Emissions: **7.24** lb/hour **0.58** tons/year
5. Method of Compliance: **Use of ultra low sulfur (ULS) diesel fuel, EPA Certification**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT limit based on Tier 1 values cited in 40 CFR 60, Subpart IIII. Emissions are for one emergency generator.**	

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: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Rule 62-296.320(4)(b)1, F.A.C. requires 20-percent opacity. Excess emissions provided by Rule 62-210.700(1), F.A.C.**	

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: **FPL-EU6-I1** ☐ 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: **FPL-EU1-I2** ☐ 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: **FPL-EU6-I6**
   Test Date(s)/Pollutant(s) Tested: **Manufacturer guaranteed emission rates for NOx, CO, and HC.**
   ☐ 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

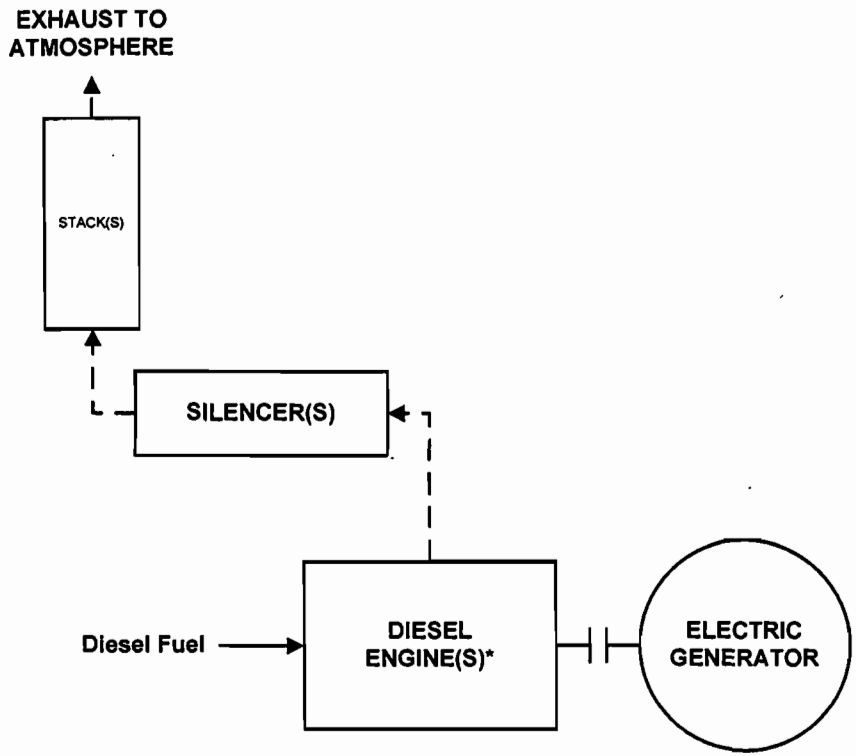
Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☒ Attached, Document ID: **FPL-EU1-IV1**
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

ATTACHMENT FPL-EU6-I1

PROCESS FLOW DIAGRAM



* Three 2,250-kW diesel generators

Attachment FPL-EU6-I1
Process Flow Diagram
Emergency Diesel Generator (2,250 kW)
FPL West County Energy Center

Process Flow Legend
Solid/Liquid
Gas
Steam

FPL.

ATTACHMENT FPL-EU6-I6

COMPLIANCE DEMONSTRATION REPORTS/RECORDS

GEN SET PACKAGE PERFORMANCE DATA [516DE5M]

MARCH 11, 2008

For Help Desk Phone Numbers Click here

Performance Number: DM8423 **Change Level:** 00

Sales Model: 3516BDITA **Combustion:** DI **Aspr:** TA

Engine Power:

2250 W/F EKW 2367 W/O F EKW 3,285 HP **Speed:** 1,800 RPM **After Cooler:** SCAC

Manifold Type: DRY **Governor Type:** ADEM3 **After Cooler Temp(F):** 140

Turbo Quantity: 4 **Engine App:** GP **Turbo Arrangement:** Parallel

Hertz: 60 **Engine Rating:** PGS **Strategy:**

Rating Type: STANDBY **Certification:** EPA STAT >3000HP 2007 - 2010

General Performance Data

GEN W/F EKW	PERCENT LOAD	ENGINE POWER BHP	ENGINE BMEP PSI	FUEL RATE LB/BHP-HR	FUEL RATE GPH	INTAKE MFLD TEMP DEG F	INTAKE MFLD P IN-HG	INTAKE AIR FLOW CFM	EXH MFLD TEMP DEG F	EXH STACK TEMP DEG F	EXH GAS FLOW CFM
2,250.0	100	3286	343	0.336	157.5	189.3	88.5	6,557.9	1,266.4	916.0	17,449.0
2,025.0	90	2972	311	0.332	141.0	182.7	80.8	6,204.8	1,194.8	863.8	15,895.1
1,800.0	80	2660	278	0.331	125.6	176.0	72.4	5,795.1	1,136.5	828.5	14,411.9
1,687.5	75	2505	262	0.331	118.3	172.8	67.9	5,565.6	1,112.2	817.0	13,691.5
1,575.0	70	2349	246	0.331	111.2	169.7	63.0	5,304.3	1,092.7	812.7	12,988.7
1,350.0	60	2040	213	0.334	97.2	163.8	53.2	4,764.0	1,054.4	805.5	11,583.2
1,125.0	50	1731	181	0.338	83.6	158.4	43.3	4,213.0	1,016.2	798.1	10,184.8
900.0	40	1428	149	0.346	70.5	153.9	33.8	3,662.1	973.8	790.5	8,800.4
675.0	30	1120	117	0.357	57.2	149.9	24.2	3,100.6	918.7	781.0	7,391.4
562.5	25	964	101	0.366	50.4	148.3	19.5	2,818.1	886.5	775.6	6,678.0
450.0	20	807	84	0.378	43.6	146.7	14.9	2,542.7	845.1	762.8	5,961.1
225.0	10	487	51	0.422	29.4	144.0	7.7	2,118.9	689.9	660.6	4,552.1

Heat Rejection Data

GEN W/F EKW	PERCENT LOAD	REJ TO JW BTU/MN	REJ TO ATMOS BTU/MN	REJ TO EXHAUST BTU/MN	EXH RCOV TO 350F BTU/MN	FROM OIL CLR BTU/MN	FROM AFT CLR BTU/MN	WORK ENERGY BTU/MN	LHV ENERGY BTU/MN	HHV ENERGY BTU/MN
2,250.0	100	48,396.0	9,440.0	128,242.0	70,234.0	16,890.0	33,838.0	139,331.0	337,238.0	359,247.0
2,025.0	90	44,700.0	8,587.0	113,455.0	59,884.0	15,127.0	28,776.0	126,024.0	301,865.0	321,599.0
1,800.0	80	41,174.0	7,962.0	100,489.0	51,752.0	13,478.0	23,999.0	112,830.0	268,881.0	286,454.0
1,687.5	75	39,411.0	7,734.0	94,688.0	48,396.0	12,682.0	21,724.0	106,233.0	253,242.0	269,791.0
1,575.0	70	37,648.0	7,564.0	89,456.0	45,667.0	11,943.0	19,450.0	99,636.0	238,171.0	253,697.0
1,350.0	60	34,179.0	7,222.0	79,106.0	40,264.0	10,464.0	15,014.0	86,499.0	208,371.0	222,020.0
1,125.0	50	30,710.0	6,881.0	68,926.0	34,975.0	8,985.0	10,862.0	73,362.0	179,083.0	190,742.0
900.0	40	27,184.0	6,540.0	59,031.0	29,800.0	7,564.0	7,222.0	60,566.0	150,705.0	160,544.0
675.0	30	23,374.0	6,199.0	49,022.0	24,625.0	6,142.0	4,095.0	47,486.0	122,156.0	130,118.0
562.5	25	21,383.0	5,971.0	43,904.0	22,009.0	5,403.0	2,730.0	40,889.0	107,825.0	114,877.0

450.0	20	19,279.0	5,744.0	38,672.0	19,222.0	4,663.0	1,535.0	34,179.0	93,323.0	99,409.0
225.0	10	14,445.0	5,061.0	27,013.0	11,829.0	3,128.0	-171.0	20,644.0	62,955.0	67,050.0

RATED SPEED "Not to exceed data"

GEN PWR EKW	PERCENT LOAD	ENGINE POWER BHP	TOTAL NOX (AS NO2) LB/HR	TOTAL CO LB/HR	TOTAL HC LB/HR	PART MATTER LB/HR	OXYGEN IN EXHAUST PERCENT	DRY SMOKE OPACITY PERCENT	BOSCH SMOKE NUMBER
2,250.0	100	3286	65.8800	9.3300	.3700	.5400	9.7000	2.3000	1.2800
1,687.5	75	2505	45.3800	3.1300	.8200	.3100	11.1000	1.5000	1.2800
1,125.0	50	1731	26.8900	2.0500	.9800	.2600	11.8000	2.0000	1.2800
562.5	25	964	13.2800	2.0000	.7500	.2600	12.7000	2.8000	1.2800
225.0	10	487	9.1400	2.6900	.7200	.2400	14.7000	2.9000	1.2800

RATED SPEED "Nominal Data"

GEN PWR EKW	PERCENT LOAD	ENGINE POWER BHP	TOTAL NOX (AS NO2) LB/HR	TOTAL CO LB/HR	TOTAL HC LB/HR	TOTAL CO2 LB/HR	PART MATTER LB/HR	OXYGEN IN EXHAUST PERCENT	DRY SMOKE OPACITY PERCENT	BOSCH SMOKE NUMBER
2,250.0	100	3286	54.9000	5.1800	.2800	3,425.8	.3900	9.7000	2.3000	1.2800
1,687.5	75	2505	37.8200	1.7400	.6200	2,546.0	.2200	11.1000	1.5000	1.2800
1,125.0	50	1731	22.4100	1.1400	.7400	1,769.8	.1800	11.8000	2.0000	1.2800
562.5	25	964	11.0600	1.1100	.5600	1,054.2	.1800	12.7000	2.8000	1.2800
225.0	10	487	7.6100	1.4900	.5400	606.9	.1700	14.7000	2.9000	1.2800

Altitude Capability Data(Corrected Power Altitude Capability)

Ambient Operating Temp. Altitude	50 F	68 F	86 F	104 F	122 F	NORMAL
0 F	3,285 hp	3,285 hp	3,285 hp	3,285 hp	3,285 hp	3,285 hp
984 F	3,285 hp	3,285 hp	3,285 hp	3,285 hp	3,206 hp	3,285 hp
1,640 F	3,285 hp	3,285 hp	3,285 hp	3,229 hp	3,130 hp	3,285 hp
3,281 F	3,285 hp	3,248 hp	3,141 hp	3,040 hp	2,946 hp	3,205 hp
4,921 F	3,163 hp	3,056 hp	2,954 hp	2,860 hp	2,772 hp	3,049 hp
6,562 F	2,974 hp	2,872 hp	2,779 hp	2,689 hp	2,606 hp	2,899 hp
8,202 F	2,795 hp	2,699 hp	2,610 hp	2,526 hp	2,449 hp	2,754 hp
9,843 F	2,623 hp	2,535 hp	2,450 hp	2,372 hp	2,299 hp	2,615 hp
10,499 F	2,557 hp	2,470 hp	2,388 hp	2,312 hp	2,241 hp	2,561 hp

The powers listed above and all the Powers displayed are Corrected Powers

Identification Reference and Notes

Engine Arrangement:	2683679	**Lube Oil Press @ Rated Spd(PSI):**	55.8
Effective Serial No:	PBR00150	**Piston Speed @ Rated Eng SPD (FT/Min):**	2,173.2
Primary Engine Test Spec:	0K8123	**Max Operating Altitude(FT):**	2,460.6
Performance Parm Ref:	TM5739	**PEEC Elect Control Module Ref**	
Performance Data Ref:	DM8423	**PEEC Personality Cont Mod Ref**	
Aux Coolant Pump Perf Ref:	DM1286		
Cooling System Perf Ref:	DM1299	**Turbocharger Model**	GTA5518-1.24
Certification Ref:	EPA STAT 3000HP	**Fuel Injector**	2563663
Certification Year:	2007	**Timing-Static (DEG):**	--
Compression Ratio:	14.0	**Timing-Static Advance (DEG):**	--
Combustion System:	DI	**Timing-Static (MM):**	--
Aftercooler Temperature (F):	140	**Unit Injector Timing (MM):**	64.3
Crankcase Blowby Rate(CFH):	3,284.3	**Torque Rise (percent)**	--
Fuel Rate (Rated RPM) No Load (Gal/HR):	16.2	**Peak Torque Speed RPM**	--
Lube Oil Press @ Low Idle Spd(PSI):	20.0	**Peak Torque (LB/FT):**	--

Reference Number: DM8423

EPA STAT >3000HP 20072010P3

Parameters Reference: TM5739

GEN SET - PACKAGED - DIESEL
TOLERANCES:
AMBIENT AIR CONDITIONS AND FUEL USED WILL AFFECT THESE VALUES. EACH OF THE VALUES MAY VARY IN ACCORDANCE WITH THE FOLLOWING TOLERANCES.

ENGINE POWER	+/-	3%
EXHAUST STACK TEMPERATURE	+/-	8%
GENERATOR POWER	+/-	5%
INLET AIR FLOW	+/-	5%
INTAKE MANIFOLD PRESSURE - GAGE	+/-	10%
EXHAUST FLOW	+/-	6%
SPECIFIC FUEL CONSUMPTION	+/-	3%
FUEL RATE	+/-	5%
HEAT REJECTION	+/-	5%
HEAT REJECTION EXHAUST ONLY	+/-	10%

CONDITIONS:
ENGINE PERFORMANCE IS CORRECTED TO INLET AIR STANDARD CONDITIONS OF 99 KPA (29.31 IN HG) AND 25 DEG C (77 DEG F).

THESE VALUES CORRESPOND TO THE STANDARD ATMOSPHERIC PRESSURE AND TEMPERATURE IN ACCORDANCE WITH SAE J1995. ALSO INCLUDED IS A CORRECTION TO STANDARD FUEL GRAVITY OF 35 DEGREES API HAVING A LOWER HEATING VALUE OF 42,780 KJ/KG (18,390 BTU/LB) WHEN USED AT 29 DEG C (84.2 DEG F) WHERE THE DENSITY IS 838.9 G/L (7.002 LB/GAL).

THE CORRECTED PERFORMANCE VALUES SHOWN FOR CATERPILLAR ENGINES WILL APPROXIMATE THE VALUES OBTAINED WHEN THE OBSERVED PERFORMANCE DATA IS CORRECTED TO SAE J1995, ISO 3046-2 & 8665 & 2288 & 9249 & 1585, EEC 80/1269 AND DIN70020 STANDARD REFERENCE CONDITIONS.

ENGINES ARE EQUIPPED WITH STANDARD ACCESSORIES; LUBE OIL, FUEL PUMP AND JACKET WATER PUMP. THE POWER REQUIRED TO DRIVE AUXILIARIES MUST BE DEDUCTED FROM THE GROSS OUTPUT TO ARRIVE AT THE NET POWER AVAILABLE FOR THE EXTERNAL (FLYWHEEL) LOAD. TYPICAL AUXILIARIES INCLUDE COOLING FANS, AIR COMPRESSORS, AND CHARGING ALTERNATORS.

RATINGS MUST BE REDUCED TO COMPENSATE FOR ALTITUDE AND/OR AMBIENT TEMPERATURE CONDITIONS ACCORDING TO THE APPLICABLE DATA SHOWN ON THE PERFORMANCE DATA SET.

GEN SET - PACKAGED - DIESEL
ALTITUDE:
ALTITUDE CAPABILITY - THE RECOMMENDED REDUCED POWER VALUES FOR SUSTAINED ENGINE OPERATION AT SPECIFIC ALTITUDE LEVELS AND AMBIENT TEMPERATURES.

COLUMN "N" DATA - THE FLYWHEEL POWER OUTPUT AT NORMAL AMBIENT TEMPERATURE.

AMBIENT TEMPERATURE - TO BE MEASURED AT THE AIR CLEANER AIR INLET DURING NORMAL ENGINE OPERATION.
NORMAL TEMPERATURE - THE NORMAL TEMPERATURE AT VARIOUS SPECIFIC ALTITUDE LEVELS IS FOUND ON TM2001.

THE GENERATOR POWER CURVE TABULAR DATA REPRESENTS THE NET ELECTRICAL POWER OUTPUT OF THE GENERATOR.

EMISSIONS DATA

EPA STAT >3000HP 2007 - 2010 ********** P3

This Engine meets EPA New Source Performance Standard Emission Level Requirements (40 CFR Part 60, Subpart IIII) for Stationary Certification over 3000hp from 2007 through 2010 (EPA nonroad Tier 1 equivalent)

Gaseous emissions data measurements are consistent with those described in EPA 40 CFR PART 89 SUBPART D and ISO 8178 for measuring HC, CO, PM, and NOx.

Gaseous emissions values are WEIGHTED CYCLE AVERAGES and are in compliance with the following nonroad regulations:

LOCALITY	AGENCY/LEVEL	MAX LIMITS - g/kW-hr			
U. S. (incl Calif)	EPA/STAT>3000hp	CO:11.4	HC:1.3	NOx:9.2	PM:0.5

EXHAUST STACK DIAMETER	12 IN
WET EXHAUST MASS	29,850.6 LB/HR
WET EXHAUST FLOW (915.80 F STACK TEMP)	17,463.12 CFM
WET EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	6,260.00 STD CFM
DRY EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	5,735.11 STD CFM
FUEL FLOW RATE	156 GAL/HR

GENERATOR SET RATINGS
EMERGENCY STANDBY POWER (ESP)

OUTPUT AVAILABLE WITH VARYING LOAD FOR THE DURATION OF AN EMERGENCY OUTAGE. AVERAGE POWER OUTPUT IS 70% OF THE ESP RATING. TYPICAL OPERATION IS 50 HOURS PER YEAR, WITH MAXIMUM EXPECTED USAGE OF 200 HOURS PER YEAR.

STANDBY POWER RATING

OUTPUT AVAILABLE WITH VARYING LOAD FOR THE DURATION OF AN EMERGENCY OUTAGE. 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 POWER RATING

OUTPUT AVAILABLE WITH VARYING LOAD FOR AN UNLIMITED TIME. AVERAGE POWER OUTPUT IS 70% OF THE PRIME POWER RATING. TYPICAL PEAK DEMAND IS 100% OF PRIME RATED EKW WITH 10% OVERLOAD CAPABILITY FOR EMERGENCY USE FOR A MAXIMUM OF 1 HOUR IN 12. OVERLOAD OPERATION CANNOT EXCEED 25 HOURS PER YEAR.

CONTINUOUS POWER RATING

OUTPUT AVAILABLE WITH NON-VARYING LOAD FOR AN UNLIMITED TIME. AVERAGE POWER OUTPUT IS 70-100% OF THE CONTINUOUS POWER RATING. TYPICAL PEAK DEMAND IS 100% OF CONTINUOUS RATED EKW FOR 100% OF OPERATING HOURS.

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.

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 Nominal 6.3 million gallon distillate fuel oil storage tanks.

3. Emissions Unit Identification Number: **007**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
A	**March 16, 2006**	**May 16, 2009**	**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:
Two 6.3 million gallon distillate oil storage tanks.

EMISSIONS UNIT INFORMATION
Section [7]
Fuel Oil Storage Tanks

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: **24.24 million gallons**	
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	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment: **Maximum annual throughput is for each 6.3 million gallon fuel oil storage tank and based on maximum annual fuel usage per CT/HRSG unit.** **Annual throughput= 2,117 MMBtu/hr ÷ 131 MMBtu/10^3 gallons x 500 hr/yr x 3 CTs** **= 24.24 x 10^6 gallons/yr per fuel oil storage tank**	

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. 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): **Petroleum and Solvent Evaporation: Petroleum Liquids Storage (non-Refinery), Oil and Gas Field Storage and Working Tanks; Fixed Roof Tank; Diesel - working and breathing losses**		
2. Source Classification Code (SCC): **4-04-003-16**	3. SCC Units: **1,000 Gallons of Diesel Fuel Throughput**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: **24,240**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Maximum annual rate above for each fuel oil storage tank. Annual rate based on 500 hr/yr fuel oil firing for three CTs.**		

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
VOC			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:	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
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:	
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 _____ 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:	

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: **FPL-EU1-I1** ☐ 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: **FPL-EU1-IV1**
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

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 [8]
Diesel Fire Pump Engine

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:
   One Emergency Diesel Fire Pump Engine and 500-gallon fuel oil storage tank.

3. Emissions Unit Identification Number: **012**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
A	**March 16, 2006**	**May 2009**	**49**

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

   ☐ Acid Rain Unit

   ☐ CAIR Unit

   ☐ Hg Budget Unit

9. Package Unit:
   Manufacturer: **John Deere** Model Number: **JW6H-UF30**

10. Generator Nameplate Rating: **0.22** MW

11. Emissions Unit Comment:
    One <300 hp emergency diesel fire pump engine and associated 500-gallon fuel oil storage tank.

EMISSIONS UNIT INFORMATION
Section [8]
Diesel Fire Pump Engine

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: **2** 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 **80** hours/year
6. Operating Capacity/Schedule Comment: **Operation of the fire pump engine limited to 80 non-emergency hours per year for maintenance and testing. Maximum heat input based on fuel consumption of 15 gal/hr and fuel LHV of 131,000 Btu/gal.**	

EMISSIONS UNIT INFORMATION
Section [8]
Diesel Fire Pump Engine

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: **1**	
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: **V**	6. Stack Height: **11.3** feet	7. Exit Diameter: **0.5** feet
8. Exit Temperature: **840°F**	9. Actual Volumetric Flow Rate: **1,404** 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: **Stack parameters based on design data.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Internal Combustion: Industrial; Distillate Oil (Diesel) - Reciprocating: Exhaust**		
2. Source Classification Code (SCC): **2-02-001-07**	3. SCC Units: **1,000 Gallons Burned**	
4. Maximum Hourly Rate: **0.015**	5. Maximum Annual Rate: **1.2**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **131**
10. Segment Comment: **Maximum hourly rate based on manufacturer specifications. Maximum annual rate based on 80 hr/yr non-emergency operation.**		

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
CO			EL
NOx			EL
SO2	Fuel Quality		EL
PM/PM10			EL
VOC			EL

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: **1.72** lb/hour **0.07** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **2.6 grams per horsepower hour (g/hp-hr)** Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
Hourly: 2.6 g/hr-hr x 300 hp x 1 lb/453.6 g = 1.72 lb/hr

Annual: 1.72 lb/hr x 80 hr/yr x 1 ton/2,000 lbs = 0.07 TPY

11. Potential, Fugitive, and Actual Emissions Comment:
Annual emission rate based on 80 hr/yr non-emergency operation.

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: **2.6 g/hp-hr**	4. Equivalent Allowable Emissions: **1.72** lb/hour **0.07** tons/year
5. Method of Compliance: **Manufacturer certification of Subpart IIII standards.**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT limit based on 40 CFR 60, Subpart IIII.**	

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: **4.50** lb/hour **0.18** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **6.8 g/hp-hr** Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
Hourly: 6.8 g/hr-hr x 300 hp x 1 lb/453.6 g = 4.50 lb/hr

Annual: 4.50 lb/hr x 80 hr/yr x 1 ton/2,000 lbs = 0.18 TPY

11. Potential, Fugitive, and Actual Emissions Comment:
Annual emission rate based on 80 hr/yr non-emergency operation.

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: **6.8 g/hp-hr**	4. Equivalent Allowable Emissions: **4.4** lb/hour **0.18** tons/year
5. Method of Compliance: **Manufacturer certification of Subpart IIII standards.**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT limit based on 40 CFR 60, Subpart IIII. (NMHC + NO_x) limit is 7.8 g/hp-hr.**	

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: **0.053** lb/hour **0.002** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.05-percent sulfur diesel fuel** Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Potential emissions based on maximum fuel sulfur content of 0.05 percent and fuel usage of 15 gallons/hr.

Hourly: 15.0 gal/hr x 7 lb/gal x 0.05/100 = 0.053 lb/hr

Annual: 0.053 lb/hr x 80 hr/yr x 1 ton/2,000 lb = 0.002 TPY

11. Potential, Fugitive, and Actual Emissions Comment:

Annual emission rate based on 80 hr/yr non-emergency operation.

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: **0.05-percent S fuel oil**	4. Equivalent Allowable Emissions: **0.053** lb/hour **0.002** tons/year
5. Method of Compliance: **Fuel Sampling**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT limit. Permit No. 0990646-001-AC/PSD-FL-354.**	

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**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.26** lb/hour **0.01** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.40 g/hp-hr** Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
Hourly: 0.40 g/hp-hr x 300 hp x 1 lb/453.6 g = 0.26 lb/hr

Annual: 0.26 lb/hr x 80 hr/yr x 1 ton/2,000 lbs = 0.01 TPY

11. Potential, Fugitive, and Actual Emissions Comment:
Annual emission rate based on 80 hr/yr non-emergency operation.

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/hp-hr**	4. Equivalent Allowable Emissions: **0.26** lb/hour **0.01** tons/year
5. Method of Compliance: **Manufacturer certification of Subpart IIII standards.**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT limit based on 40 CFR 60, Subpart III.**	

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: **0.66** lb/hour **0.026** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **1.0 g/hp-hr** Reference: **Permit No. 0990646-001-AC/PSD-FL-354**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
Hourly: 1.0 g/hr-hr x 300 hp x 1 lb/453.6 g = 0.66 lb/hr

Annual: 0.66 lb/hr x 80 hr/yr x 1 ton/2,000 lbs = 0.026 TPY

11. Potential, Fugitive, and Actual Emissions Comment:
Annual emission rate based on 80 hr/yr non-emergency operation.

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: **1.0 g/hp-hr**	4. Equivalent Allowable Emissions: **0.66** lb/hour **0.026** tons/year
5. Method of Compliance: **Manufacturer certification of Subpart IIII standards.**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT limit based on 40 CFR 60, Subpart IIII. (NMHC + NO_x) limit is 7.8 g/hp-hr. NMHC used as surrogate for VOC.**	

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: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Rule 62-296.320(4)(b)1, F.A.C. requires 20-percent opacity. Excess emissions provided by Rule 62-210.700(1), F.A.C.**	

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: **FPL-EU8-I1** ☐ 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: **FPL-EU1-I2** ☐ 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: **FPL-EU8-I6**
   Test Date(s)/Pollutant(s) Tested: **Manufacturer certification of Subpart III standards.**
   ☐ 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

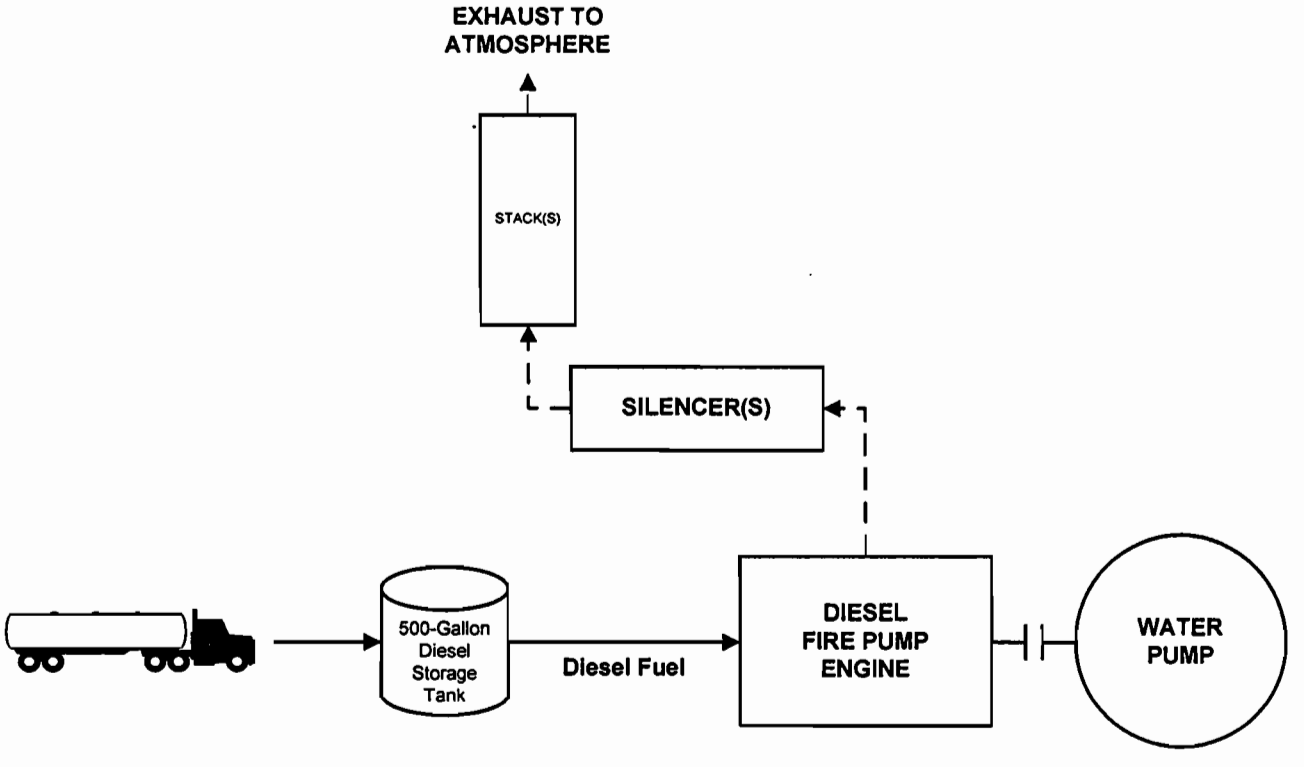
Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☒ Attached, Document ID: **FPL-EU1-IV1**
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

ATTACHMENT FPL-EU8-I1

PROCESS FLOW DIAGRAM



Attachment FPL-EU8-I1
Process Flow Diagram
Diesel Fire Pump Engine (295 hp)
FPL West County Energy Center

Process Flow Legend
Solid/Liquid ——→
Gas — — →
Steam - - - - →

FPL.

ATTACHMENT FPL-EU8-I6

COMPLIANCE DEMONSTRATION REPORTS/RECORDS

WEST COUNTY POWER PARTNERS, LLC

11401 Lamar Avenue
Overland Park, Kansas 66211
Tel: (913) 458-2000
Fax: (913) 458-2934

527 Logwood
San Antonio, TX 78221
Ph: 210-475-8000
Fax: 210-475-8060

Florida Power & Light Company
West County Energy Center – Unit 1&2
Permit No. – PSD-FL-354
DEP File No. – 0990646-001-AC

WCPP Project 144553
WCPP Files 14.0200/32.0585
WCPP-2008-___
December 29, 2008

E-mail, Express Mail

Ms. Trina Vielhauer
Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation, Bureau Chief
2600 Blair Stone Road, MS 5500
Tallahassee, FL 32399-2400

Subject: Notification of Emergency Diesel Fire Pump Emissions Certification

Dear Ms. Vielhauer:

On behalf of Florida Power & Light Company (FPL), and its Designated Representative Sheila Wilkinson, the West County Power Partners, LLC (WCPP), EPC Contractor for construction of the new combined cycle generating units at the FPL West County Energy Center – Unit 1&2, is hereby submitting notification of the Emergency Diesel Fire Pump Emissions Certification. The Emergency Diesel Fire Pump has a site rating of 500bhp and is not subject to regulation under 40 CFR Part 63, Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines).

The diesel motor for the Emergency Fire Pump is a John Deere, Model 6081AF001 and conforms to CARB and EPA Tier 1 Certifications.

If you have any questions about this project or this submittal, please contact John Tidwell or Patrick O'Dell at (561) 784-8048.

Very truly yours,

WEST COUNTY POWER PARTNERS, LLC

John Tidwell
Project Director

cc: Tim Gray, FDEP Southeast District
Mike Halpin, FDEP Siting Coordination Office
Chet Lloyd, WCPP, San Antonio
Terry Apple, WCPP, KC
Janet Kirwan, FPL, Juno Beach

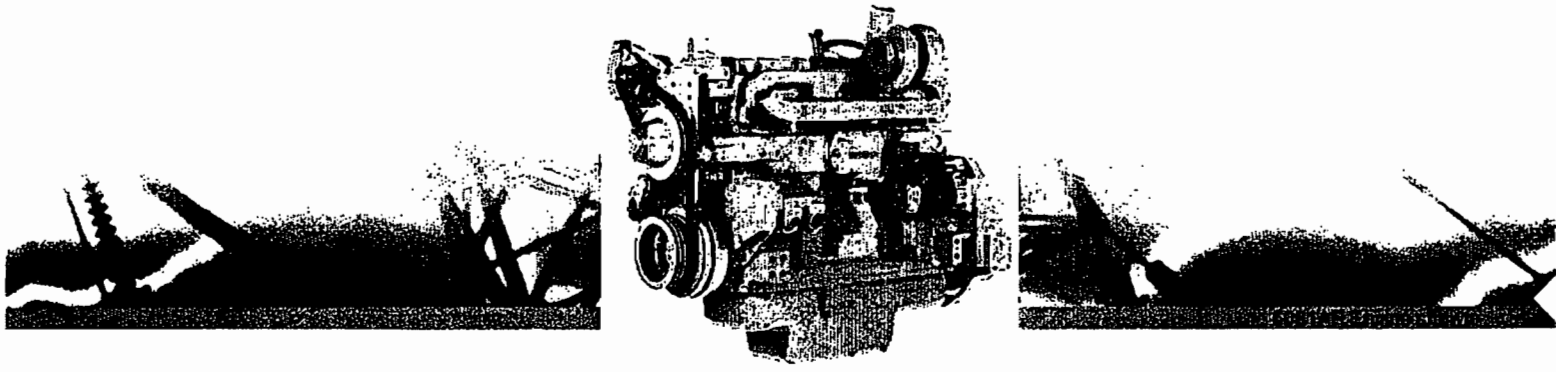
David Fawcett, FPL, WCEC
Document Control, WCPP Site

JOHN DEERE

PowerTech™

6081A Diesel Engine

for Generator Set Applications



General Data

Model	6081AF001
Number of cylinders	6
Displacement– L (cu in)	8.1 (494)
Bore and Stroke– mm (in)	116 x 129 (4.57 x 5.08)
Compression Ratio	16.5:1
Engine Type	In-line, 4-Cycle
Aspiration	Aftercooled
Length– mm (in)	1210 (47.6)
Width– mm (in)	698 (27.5)
Height– mm (in)	1138 (44.8)
Weight, dry– kg (lb)	796 (1755)

Ratings

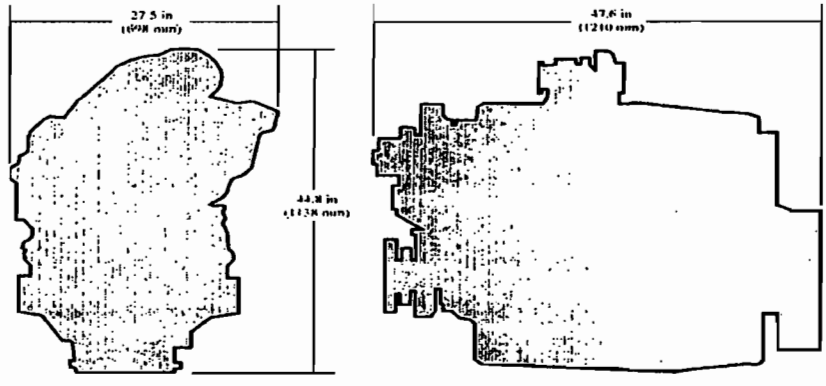
Prime power at 60 Hz (1800)	220 kW (295 hp)
Standby power at 60 Hz (1800)	259 kW (347 hp)

Prime power is the nominal power an engine is capable of delivering with a variable load for an unlimited number of hours per year. This rating conforms to ISO 3046 and SAI J1995.
Standby power is the nominal engine power available at varying load factors for up to 500 hours per year. This rating conforms to ISO 3046 and SAE J1995. The calculated generator set rating range for standby applications is based on minimum engine power (nominal -5%) to provide 100% meet-or-exceed performance for assembled standby generator sets.

Certifications

- CARB
- EPA Tier 1

Dimensions

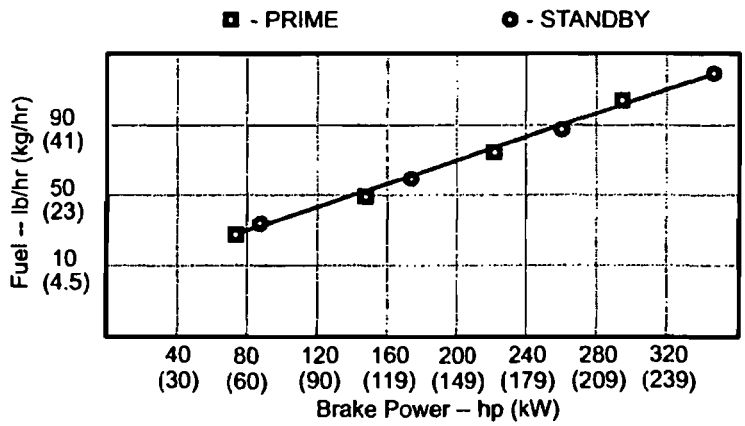


Photographs may show non-standard equipment.

PowerTech™ 6081A Diesel Engine

for Generator Set Applications

Performance curve



Performance data

Hz (rpm)	Generator efficiency %	Fan power		Power factor	Calculated generator set output			
					Prime		Standby	
		kW	hp		kWe	kVa	kWe	kVa
60 (1800)	90-94	13.0	17.4	0.8	186-194	233-243	221-231	277-289

Features and Benefits

Replaceable, Directed Top-Liner Cooling

- Reduces upper liner temperature by as much as 100 degrees Fahrenheit or 54 degrees Celsius
- Durable and reliable power cylinder components
- Hardened and precision machined for long life
- Rebuild to original specifications

Rugged Cast Iron Engine Block

- Deep skirted design provides added strength and reduced noise

Easy to Apply, Easy to Install

- Front and rear engine mounting pads on the side of the block facilitates installation
- Either side service for filters and service points facilitates packaging
- All connection points in common locations make it easy to install or package
- Adjustable fan drive with multiple fan ratios with automatic belt tensioner

Compact Size

- Narrow design and low profile arrangement contribute to compact packaging
- High mount or low mount turbocharger position to meet packaging requirements

World-class performance

- Excellent fuel economy and low oil consumption

Fuel System Controls

- In-line fuel injection pump with resulting in excellent fuel economy and excellent performance
- Self diagnostics and protection
- 3-5% Droop Governing
- 12V or 24V Electric Shutoff

Emissions

- CARB & EPA Certified

JOHN DEERE

John Deere Power Systems
3801 W. Ridgeway Ave.
PO Box 5100
Waterloo, IA 50704-5100
Phone: 800.553.6446
Fax: 319.292.5075

John Deere Power Systems
Usine de Saran
La Foulonnerie - B.P. 11.13
45401 Fleury les Aubrais Cedex
France
Phone: 33.2.38.82.61.19
Fax: 33.2.38.82.60.00

All values at rated speed and power with standard options unless otherwise noted.
Specifications and design subject to change without notice.

JOHN DEERE

EMISSION CONTROL INFORMATION
DEERE & COMPANY

•In the U.S., this engine may be used only in stationary fire pump applications in accordance with requirements of 40 CFR Part 60 and is excluded from requirements of 40 CFR Parts 89 and 1039. Installing or using this engine in any other application may be a violation of U.S. federal law subject to civil penalty. This engine may also be used for applications that are not subject to applicable EPA or EU emissions regulations, and for export to countries that do not have emissions regulations.

R524846

ISO9001 Registered

For Engine Service and Parts -- www.JohnDeere.com/dealer

JW6H-UF30 (JDFP-06WA)
INSTALLATION & OPERATION DATA

Basic Engine Description

Engine Manufacturer	John Deere Co.
Ignition Type	Compression (Diesel)
Number of Cylinders	6
Bore and Stroke - in.(mm)	4.56 (116) x 5.06 (129)
Displacement - $in.^3$ (L)	496 (8.1)
Compression Ratio	16.5:1
Valves per cylinder - Intake	1
Exhaust	1
Combustion System	Direct Injection
Engine Type	In-Line, 4 Stroke Cycle
Aspiration	Turbocharged
Firing Order (CW Rotation)	1-5-3-6-2-4
Charge Air Cooling Type	Jacket Water Cooled
Rotation (Viewed from Front) - Clockwise	Standard
Counter-Clockwise	Not Available
Engine Crankcase Vent System	Open
Installation Drawing	D-495
Weight - lb (kg)	2012 (910)

Cooling System

	1470	1760	2100	2350
Engine H_2O Heat -Btu/sec.(kW)	104 (110)	112 (118)	117 (123)	113 (119)
Engine Radiated Heat - Btu/sec.(kW)	24 (25)	28 (30)	29 (31)	29 (31)
Heat Exchanger Minimium Flow				
60°F (15°C) Raw H_2O - gal/min. (L/min.)	11 (42)	14 (53)	16 (61)	21 (79)
95°F (35°C) Raw H_2O - gal/min. (L/min.)	18 (68)	22 (83)	25 (95)	31 (117)
Heat Exchanger Maximum Cooling H_2O				
Inlet Pressure - bar ($lb./in.^2$) (kPa)	4 (60) (400)			
Flow - gal./min (L/min.)	80 (302)			
Thermostat, Start to Open - °F (°C)	180 (82)			
Fully Opened - °F (°C)	202 (94)			
Engine Coolant Capacity - qt. (L)	22 (21)			
Coolant Pressure Cap - $lb./in.^2$(kPa)	10 (69)			
Maximum Engine H_20 Temperature - °F (°C)	200 (93)			
Minimum Engine H_20 Temperature - °F (°C)	160 (71)			

Electric System - DC

System Voltage (Nominal)	12 (Standard)	24 (Optinoal)
Battery Capacity for Ambients Above 32°F (0°C)		
Voltage (Nominal)	12	24
Qty. per Battery Bank	1	1
SAE size per J537	8D-900	8D-900
CCA @ 0°F (-18°C)	900	900
Reserve Capacity - Minutes	430	430
Battery Cable Circuit*, Max Resistance - ohm	0.0017	0.0017
Battery Cable Minimum Size		
0 -120 in. Circuit* Length	00	00
121 - 160 in. Circuit* Length	000	000
161 - 200 in. Circuit* Length	0000	0000
Charging Alternator Output - Amp	40	40
Starter Cranking Amps - @ 60°F (15°C)	495	326

**Positive and Negative Cables Combined Length*

NOTE: This engine is Intendend For Indoor Installation Or In A Weatherproof Enclosure.

(Continued)

JW6H-UF30 (JDFP-06WA)
INSTALLATION & OPERATION DATA (Continued)

Exhaust System	1470	1760	2100	2350
Exhaust Flow - ft.^{3}/min. (m^3/min.)	1107 (31)	1404 (40)	1644 (47)	1908 (54)
Exhaust Temperature - °F (°C)	990 (518)	840 (435)	750 (385)	737 (392)
Maximum Allowable Back Pressure - in. H_20 (kPa)	19 (4.7)	26 (6.6)	28 (7.1)	30 (7.5)
Minimum Exhaust Pipe Dia. - in. (mm)**	5.0 (127)	5.0 (127)	5.0 (127)	5.0 (127)

Fuel System				
Fuel Consumption - gal./hr. (L/hr.)	13.0 (49.2)	14.0 (53.0)	15.0 (56.8)	16.0 (60.6)
Fuel Return - gal./hr. (L/hr.)	63.0 (238.5)	62.0 (234.7)	61.0 (230.9)	60.0 (227.1)
Total Supply Fuel Flow - gal./hr. (L/hr.)	76.0 (287.7)	76.0 (287.7)	76.0 (287.7)	76.0 (287.7)
Fuel Pressure - lb./in.^{2} (kPa)	25-35 (172-241)			
Minimum Line Size - Supply - (in.)	.50 Schedule 40 Steel Pipe			
Pipe Outer Diameter in. (mm)	.848 (0.33)			
Minimum Line Size - Return - (in.)	.375 Schedule 40 Steel Pipe			
Pipe Outer Diameter in. (mm)	.675 (0.26)			
Maximum Allowable Fuel Pump Suction				
With Clean Filter - in. H_20 (mH_20)	31 (0.8)			
Maximum Allowable Fuel Head above Fuel pump, Supply or Retrun - ft.(m)	9 (2.7)			
Fuel Filter Micron Size	5			

Heater System	
Jacket Water Heater	Standard
Wattage (Nominal)	2500
Voltage - AC, 1P	230 (+5%, -10%)
Optional Voltage - AC, 1P	115 (+5%, -10%)
Lube Oil Heater Wattage	
(Required Option When Ambient is Below 40°F (4°C)	150

Induction Air System				
Air Cleaner Type	Indoors Service Only - Washable			
Air Intake Restriction Maximum Limit				
Dirty Air Cleaner - in. H_20 (kPa)	14 (3.5)			
Clean Air Cleaner - in. H_20 (kPa)	7 (1.7)			
Engine Air Flow - ft.^{3}/min. (m^3/min.)	410 (12)	580 (16)	730 (21)	856 (24)
Maximum Allowable Temperature (Air To Engine Inlet) - °F (°C)***	130 (54)			

Lubrication System	
Oil Pressure - normal - lb./in.^{2} (kPa)	30-55 (207-379)
In Pan Oil Temperature - °F (°C)	190-220 (88-104)
Oil Pan Capacity - High - qt. (L)	32 (30)
Total Oil Capacity with Filter - qt. (L)	34 (32)

Performance				
BMEP - lb./in.^{2} (kPa)	239 (1648)	240 (1655)	209 (1441)	187 (1289)
Piston Speed - ft./min. (m/min.)	1240 (378)	1484 (452)	1771 (540)	1982 (604)
Mechanical Noise - dB(A) @ 1M		C13917		
Power Curve		CDDA - W064 - 01		

*** Based On Nominal System. Flow Analysis Must Be Done To Assure Adherance To System Limitations. (Minimum Exhaust pipe Diameter is based on 15 feet of pipe, one elbow, and a silencer pressure drop no greter than one half the max. allowable back pressure.)*

**** Review For Power Deration If Air Entering Engine Exceeds °77F (25°C)*