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DIVISION OF AIR
RESOURCE MANAGEMENT

PERMIT APPLICATION

APPLICATION FOR REVISION OF TITLE V AIR OPERATION PERMIT

Florida Power & Light Company
West County Energy Center

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

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

Distribution: 4 copies – Florida Department of Environmental Protection
2 copies – Florida Power & Light Company
1 copy – Golder Associates Inc.

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Golder Associates

APPLICATION FOR AIR PERMIT

LONG FORM

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

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: 11-7-11	3. PSD Number (if applicable):
2. Project Number(s): 0990646-006-AC PSD 354C and 0990646-007-AV	4. Siting Number (if applicable):

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:
   Peter G. Holzapfel, Plant General Manager

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

   ☒ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.

   ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

   ☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.

   ☐ The designated representative at an Acid Rain source or CAIR source.

3. Application Responsible Official Mailing Address...
   Organization/Firm: **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: **pete.holzapfel@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

11/3/2011
Date

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 revision of Title V Permit No. 0990646-004-AV for FPL West County Energy Center to incorporate Air Construction (AC) Permit Nos. 0990646-002-AC and 0990646-005-AC.

AC Permit 0990646-002-AC authorized construction of 1,250-MW Combined Cycle (CC) Unit 3 comprising three nominal 250-MW Mitsubishi Heavy Industries (MHI) 501G gas turbines (EU IDs 013, 014, 015). Additional ancillary equipment for Unit 3 includes one 26-cell mechanical draft cooling tower, two nominal 8.3-MMBtu/hr natural gas-fired process heaters, and associated equipment. AC Permit 0990646-005-AC revised excess emissions provisions for existing CC Units 1 and 2 and authorized excess emissions of NO_x and CO resulting from startup, shutdown, or malfunction to be excluded from the CEMS data in any 24-hour period.

Please note that the maximum heat input rate for each natural gas process heater is less than 8.3 MMBtu/hr and therefore, 40 CFR 60 Subpart Dc is not applicable to these units.

The two nominal 2,250-kW emergency generators authorized in AC Permit No. 0990646-002-AC were not installed. Therefore, they may be removed from the revised permit Nos. 0990646-002-AC and 0990646-004-AV.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
013	Unit 3A – one nominal 250-MW CTG with supplementary-fired HRSG	AF2A	N/A
014	Unit 3B – one nominal 250-MW CTG with supplementary-fired HRSG	AF2A	N/A
015	Unit 3C – one nominal 250-MW CTG with supplementary-fired HRSG	AF2A	N/A
016	One 26-cell mechanical draft cooling tower	AF2C	N/A
017	Two nominal 8.3-MMBtu/hr natural gas fired process heaters	AF2B	N/A

Application Processing Fee

Check one: ☐ Attached - Amount: $_____ ☒ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

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

1. Owner/Authorized Representative Name :

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

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 11/4/11 Date

(seal)

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

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **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 three nominal 1,250-MW power blocks, each with three combustion turbine (CT)/heat recovery steam generator (HRSG) trains (Units 1, 2, and 3).**			

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:	

Gas Turbines and Duct Burners are subject to NSPS 40 CFR 60 Subpart KKKK.
Gas Turbines also subjected to NESHAP 40 CFR 63 Subpart YYYY.

Note: NSPS Subpart Dc is not applicable to the natural gas process heaters, which have maximum heat input rate of 8.3 MMBtu/hr (less than 10 MMBtu/hr).

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: **FPL-FI-CC2**

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:_____ ☒ 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:_____
   ☐ 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: **October 2009**
   ☐ Not Applicable (not an Acid Rain source)

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

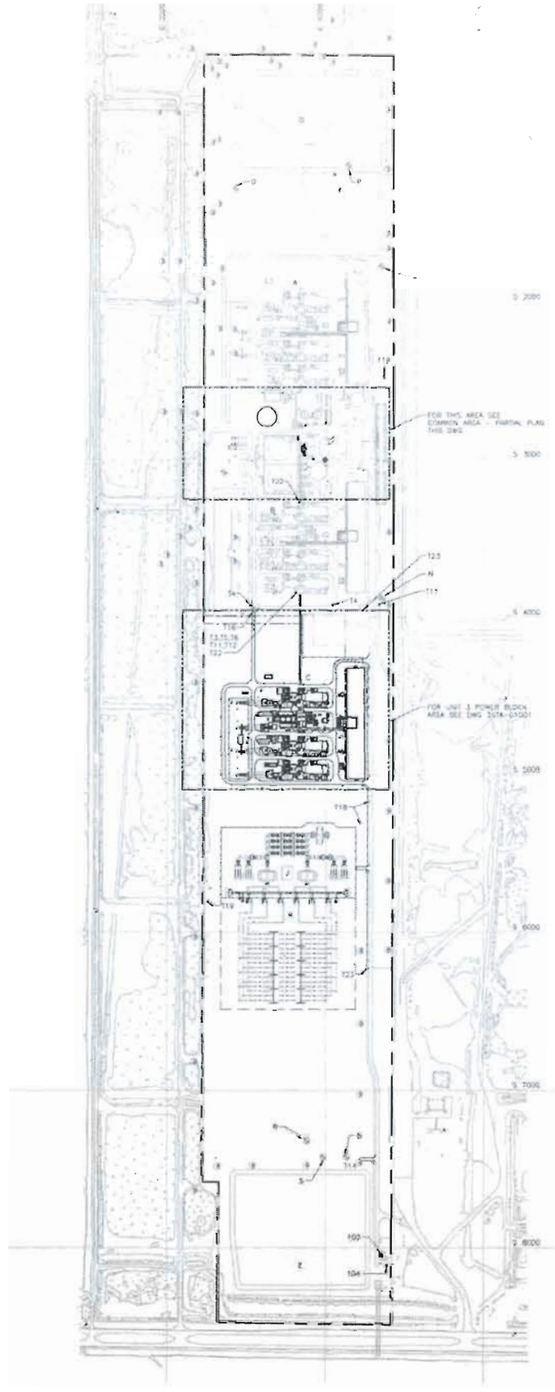
   New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable

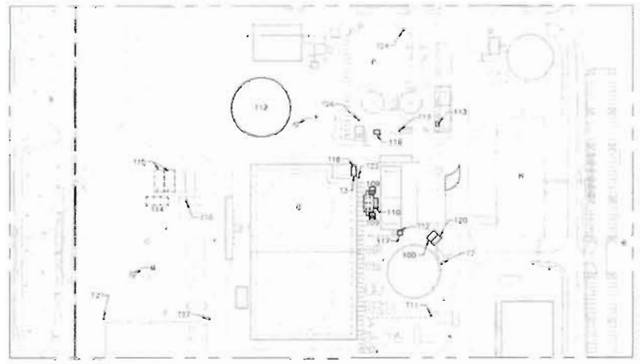
2. CAIR Part (DEP Form No. 62-210.900(1)(b)):
   ☐ Attached, Document ID:_____ ☒ Previously Submitted, Date:--_____
   ☐ Not Applicable (not a CAIR source)

Additional Requirements Comment

ATTACHMENT FPL-FI-C1

FACILITY PLOT PLAN





COMMON AREA - PARTIAL PLAN

SCALE: 1"=100'

FACILITIES LEGEND

ID	FACILITY	FOUNDATION	TIE-DOWN LOCATION NORTH	TIE-DOWN LOCATION EAST	TIE-DOWN LOCATION
100	DEMINERALIZED WATER TRANSFER PUMP	CBSU-55720	--	--	SITA-G1204
104	SURFACE WATER INTAKE MCC ENCLOSURE		--	--	LATER
105	RAW WATER INTAKE AREA XFMR	CBSU-55784	--	--	LATER
109	COMMON AREA 480V SUS XFMR	CBSU-55766	--	--	SITA-G1203
110	COMMON AREA MCC ENCLOSURE	CBSU-55765	--	--	SITA-G1203
112	RECLAIM STORAGE TANK	BY OTHERS	2728.00	5627.00	EL Tank
113	CIRC WATER ACID SKID	CBSU-55713	--	--	SITA-G1202
114	DIESEL GENERATOR SWITCHGEAR ENCLOSURE (FUTURE)	CBSU-55065	--	--	--
115	DIESEL GENERATOR (FUTURE)	CBSU-55065	--	--	SITA-G1202
116	CIRC WATER MAKEUP PUMPS		--	--	SITA-G1203
117	AQUEOUS AMMONIA FORWARDING PUMP SKID	CBSU-55775	--	--	SITA-G1206
118	FUEL OIL TRANSFER PUMP	CBSU-55675	--	--	LATER
119	RECLAIM WATER METER RUN		--	--	SITA-G1204
120	NOX INJECTION PUMP SKID	CBSU-55720	--	--	
A	UNIT 1 POWER BLOCK AREA		--	--	
B	UNIT 2 POWER BLOCK AREA		--	--	
C	UNIT 3 POWER BLOCK AREA		--	--	
D	NORTH STORMWATER POND		--	--	
E	SOUTH STORMWATER POND		--	--	
F	WATER TREATMENT AREA		--	--	
G	FUEL OIL AREA		--	--	
H	ADMIN./CONTROL/WAREHOUSE BUILDING		--	--	
J	230 KV SUGAR SUBSTATION (BY FPL)		--	--	
K	FUTURE 500 KV SUBSTATION		--	--	
L	FLORIDAN AQUIFER WELL FAW-1		--	--	
M	FLORIDAN AQUIFER WELL FAW-2		--	--	
N	FLORIDAN AQUIFER WELL FAW-3		--	--	
O	FLORIDAN AQUIFER WELL FAW-4		--	--	
P	FLORIDAN AQUIFER MONITORING WELL FAMW-1		--	--	
Q	DEEP INJECTION WELL IW-1		--	--	
R	DEEP INJECTION WELL IW-2		--	--	
S	DUAL ZONE MONITORING WELL DZMW-1		--	--	
T	POTABLE WATER WELL		--	--	

PROJECT SURVEY CONTROL

NEW CONTROL MONUMENT LOCATIONS

MONUMENT NO	PLANT COORDINATES NORTH/SOUTH	PLANT COORDINATES EAST/WEST	MONUMENT NO	STATE PLANE COORDINATES NORTHING	STATE PLANE COORDINATES EASTING	ELEVATION
CP-1	S 4509.00	E 6000.00	CP-1	859,418.7324	860,306.4118	--
CP-2	S 4815.00	E 6000.00	CP-2	859,111.7639	860,304.0228	--
CP-3	S 4986.00	E 6000.00	CP-3	858,941.7783	860,351.8754	--

CONTROL POINTS CP-1 THRU CP-3 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 3332.97	E 4687.61	88.65	860,615.4290	859,063.0292	13.65
2	S 177.85	E 4668.59	84.87	863,768.7003	859,069.1500	12.27
3	S 1286.92	E 6083.68	92.72	862,636.6024	860,488.2340	22.22
4	S 8478.94	E 4497.86	98.88	858,470.7082	858,759.6025	15.38
5	S 9538.27	E 7320.78	91.09	865,372.6835	861,501.3097	15.58
BM-1	S 1211.75	E 6280.76	--	862,711.6253	860,686.3421	--
BM-2	S 1785.25	E 5688.00	--	862,148.3259	859,895.9636	--
BM-3	S 2587.25	E 6203.50	--	861,356.8036	860,489.4191	--
BM-5	S 3061.25	E 5480.00	--	860,863.6373	859,385.3098	--
BM-6	S 3102.75	E 6318.75	--	860,822.1906	860,494.2737	--
BM-7	S 3842.75	E 5538.00	--	859,940.6817	859,894.5083	--
BM-8	S 8132.25	E 6258.50	--	855,791.4372	860,613.0155	--
Z-1	S 2000.00	E 6417.50	99.336	861,321.4863	860,861.7940	22.836
Z-2	S 3000.00	E 6417.50	99.656	860,321.6006	860,787.4780	24.158
Z-3	S 4000.00	E 6417.50	99.720	859,921.7033	860,765.1619	23.42
Z-4	S 5000.00	E 6417.50	99.803	858,921.8006	860,758.8458	24.303

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 861,927.4763 , E 860,394.3368 EQUALING PLANT GRID COORDINATE S 2,000.00 , E 6,000.00. THE PLANT GRID SYSTEM IS ROTATED 2°49'13" CLOCKWISE FROM TRUE NORTH. PLANT ELEVATION 100.0' EQUALS 24.50' NAVD88. CONTROL MONUMENTS LABELED AS BENCHMARKS (BM) WILL BE PERMANENT CONTROL POINT MONUMENTS PLACED DURING CONSTRUCTION OF UNITS 1 & 2. SEE TYPICAL DETAIL ON THIS DRAWING. EXISTING CONTROL POINTS MORE PROVIDED BY AERO-METRIC, INC.

TERMINAL POINTS

T1 FUEL GAS	T11 HYDROGEN	T19 CONSTRUCTION POWER
T2 230KV CCU DEAD-END TOWER	T12 AQUEOUS AMMONIA	T20 CONSTRUCTION POWER RACEWAY
T3 FUEL OIL (MULTIPLE)	T13 COOLING TOWER MAKEUP WATER	T21 DIESEL GENERATOR DUCT BANK INTERFACE
T4 FIRE PROTECTION	T14 STORM WATER	T22 COMMON AREA RACEWAY INTERFACE
T5 AUX STEAM	T15 230 KV COLLECTOR YARD CONTROL/PROTECTION WIRING INTERFACE	T23 SECURITY FENCE
T6 COMPRESSED AIR	T16 DIESEL GENERATOR POWER/CONTROL INTERFACE	T24 SOUTH STORMWATER RECYCLE (OPTION)
T7 DEMIN WATER (MULTIPLE)	T17 ADMINISTRATION BUILDING DUCT BANK INTERFACE	T25 RECLAIM WATER (SEE DRAWING LATER)
T8 SERVICE WATER (MULTIPLE)	T18 ACCESS ROAD	T26 RECLAIM WATER COOLING TOWER MAKE-UP WATER (SEE DRAWING LATER)
T9 POTABLE WATER		T27 MISC. MATERIAL ACCUMULATION FACILITY POWER/CONTROL INTERFACE

GENERAL LEGEND

ASPHALT SURFACING — AGGREGATE — CONCRETE SURFACING

GULFSTREAM METERING & REGULATING STATION 70S EASEMENT

FPL TRANSMISSION POLES

WELL

NOTES

1. THIS DRAWING IS THE BASIS FOR THE SITE ARRANGEMENT AND IS SUBJECT TO REVISIONS AS A RESULT OF DETAILED DESIGN AND DUE TO VARIATIONS IN SUPPLIERS OF MAJOR EQUIPMENT.
2. 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 861,927.4763 , E 860,394.3368 EQUALING PLANT GRID COORDINATE S 2,000.00 , E 6,000.00. THE PLANT GRID SYSTEM IS ROTATED 2°49'13" CLOCKWISE FROM STATE PLANE NORTH. PLANT ELEVATION 100.0' EQUALS 24.50' NAVD88.

APPROVED FOR CONSTRUCTION

REVISED	ACAD FILE (DWG Path)
1	
2	
3	
4	
5	
6	
7	
8	

NO	DATE	REVISIONS AND RECORD OF ISSUE	CONSTRUCTION	DESIGN	ENGINEER
0	02/27/2009	APPROVED FOR CONSTRUCTION			

1"=100'

1"=300'

CURRY LEE KRATOCHVIL
FLORIDA P.E. LICENSE NO. 39635
BLACK & VEATCH CORPORATION
11401 LAMAR AVENUE
OVERLAND PARK, KANSAS 66211
CERTIFICATE OF AUTHORIZATION NO. EB000813

THESE CONSTRUCTION PLANS WERE DOCUMENTED AND 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: CURRY LEE KRATOCHVIL
DATE: 02/27/2009 REG NO. 39635

WEST COUNTY Power Partners, LLC

FLORIDA POWER & LIGHT
WEST COUNTY ENERGY CENTER - UNIT 3

SITE - ARRANGEMENT
OVERALL SITE PLOT PLAN

DESIGNED	TER	CDC
DRAWN	PW	02/27/2009

PROJECT	DRAWING NUMBER	REV
161354	SITA-G1000	0

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-CC2

DESCRIPTION OF PROPOSED CONSTRUCTION, MODIFICATION,
OR PLANTWIDE APPLICABILITY LIMIT

ATTACHMENT FPL-FI-CC2

APPLICATION TO CONCURRENTLY REVISE AIR CONSTRUCTION PERMIT NO. 0990646-002-AC

Florida Power & Light Company (FPL) is requesting the Florida Department of Environmental Protection (FDEP) to concurrently revise permit No. 0990646-002-AC/PSD-FL-396 for Combined Cycle Unit 3 along with revising Title V permit No. 0990646-004-AV to modify Specific Condition #17, Excess Emissions Allowed. FPL requested and was authorized a similar modification to permit No. 0990646-001-AC/ PSD-FL-354 to revise the allowed excess emissions provision for Combined Cycle Units 1 and 2. The authorization was granted in permit No. 0990646-005-AC/PSD-FL-354B.

Similar to the revised Specific Condition No. 18 of Permit No. 0990646-005-AC, FPL is requesting that Specific Condition No. 17 of permit No. 0990646-002-AC be revised as following:

Specific Condition No. 17. **Excess Emissions Allowed:** As specified in this condition, excess emissions resulting from startup, shutdown, fuel switches, and documented malfunctions are allowed provided that operators employ best operational practices to minimize the amount and duration of emissions during such incidents. For each gas turbine/HRSG system, excess emissions of NO_x and CO resulting from startup, shutdown, or malfunction shall be excluded from CEMS data in any 24-hour period ("any 24-hour period" means a calendar day, midnight to midnight) for the following conditions (these conditions are considered separate events and each event may occur independently within any 24-hour period):

a. Steam Turbine Cold Startup: For cold startup of the steam turbine, excluded 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.

   [Note: During a cold startup of the steam turbine, 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]

b. Gas Turbine/HRSG System Cold Startup: For cold startup of a gas turbine/HRSG system, excluded 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 one-hour period.

c. Gas Turbine/HRSG system Warm Startup: For warm startup of a gas turbine/HRSG system, excluded emissions shall not exceed two hours in any 24-hour period."Warm startup of a gas turbine/HRSG system" is defined as a startup after the pressure in the high-pressure (HP) steam drum is above 450 psig.

d. Shutdown Combined Cycle Operation: For shutdown of the combined cycle operation, excluded emissions from any gas turbine/HRSG system will not exceed 3 hours in any 24-hour period.

e. Gas Turbine/HRSG System Shutdown: For shutdown of the gas turbine/HRSG operation, excluded emissions from any gas turbine/HRSG system shall not exceed two hours in any 24-hour period.

f. Fuel Switching: For each fuel switch, excluded emissions shall not exceed 2 hours in any 24-hour period and no more than four hours in any 24-hour period for any gas turbine/HRSG system.

g. Documented Malfunction: For the gas turbine/HRSG system, excess emissions of NO_x and CO resulting from documented malfunctions shall not exceed two hours in any 24-hour period. A "documented malfunction" means malfunction that is documented within one working day of detection by contacting the Compliance Authority by Telephone, facsimile, transmittal or electronic mail.

Several other revisions were authorized in permit No. 0990646-005-AC. FPL requests that the same revisions are concurrently made to permit No. 0990646-002-AC along with revising Title V permit No. 0990646-004-AV. These revisions have been identified below:

Specific Condition No. 14. Alternate Visible Emissions Standard: – FPL requests that the words "fuel switches" be added after "Visible emissions due to startup, shutdowns,".

Specific Condition No. 19. DLN Tuning/FSNL testing: – FPL requests that the words "and during manufacturer required Full Speed No Load (FSNL) trip tests" be added in the first sentence after "CEMS data collected during initial or other major DLN tuning sessions". FPL also requests that "14 days" in the last sentence be replaced with "one working (business) day".

Specific Condition No. 25.a. CO Monitors: – FPL requests that the words "or 40 CFR Part 75" be added in the second sentence after "Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F".

Specific Condition No. 32.b. SIP Quarterly Permit Limits Excess Emissions Report: – FPL requests that the condition be revised to read as following:

> Within 30 days following the end of each calendar-quarter, the permittee shall submit a report to the Compliance Authority summarizing periods of CO and NO_x emissions in excess of the BACT permit standards, and the amount of authorized data excluded following the format in Figure XSE attached to this permit. Periods of startup, shutdown, malfunction, fuel switching and tuning shall be monitored, and recorded at all times. In addition, the report shall summarize the CEMS systems monitor availability for the previous quarter.

ATTACHMENT FPL-FI-CV2

IDENTIFICATION OF APPLICABLE REQUIREMENTS

ATTACHMENT FPL-FI-CV2
IDENTIFICATION OF APPLICABLE REQUIREMENTS
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.
40 CFR 98, Subpart A: Mandatory Reporting of Greenhouse Gases.
40 CFR 98, Subpart C: General Stationary Combustion Sources.
40 CFR 98, Subpart D: Electricity Generation.

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 AND PLAN

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

11/3/2011
Date

III. EMISSIONS UNIT INFORMATION

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

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

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

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

EMISSIONS UNIT INFORMATION
Section [1]
Combined Cycle Units 3A, 3B, and 3C

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 identical Mitsubishi Frame G (Model 501 G) combustion turbine (CT)/heat recovery steam generators (HRSGs). Units designated as 3A, 3B, and 3C.

3. Emissions Unit Identification Number: **013, 014, and 015**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
A		**3A: Dec. 26, 2010** **3B: Dec. 1, 2010** **3C: Dec. 16, 2010**	**49**

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

   ☒ Acid Rain Unit

   ☒ CAIR Unit

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

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

11. Emissions Unit Comment:
    Combined Cycle Unit 3 consists of three nominal 250-MW gas turbine electrical generating sets with automated control, inlet air filtration, and evaporative cooling system, three supplementary-fired HRSGs, and one nominal 428 MMBtu/hr (LHV) gas-fired duct burner within each of the three HSRGs. The HRSGs supply steam to a nominal 500-MW steam-electric generator.

EMISSIONS UNIT INFORMATION
Section [1]
Combined Cycle Units 3A, 3B, and 3C

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 for Oil firing**
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 for gas firing**
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	**7** days/week
52 weeks/year	**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 2,117 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 428 MMBtu/hr based on LHV of natural gas.

Emission estimates, heat input rates, fuel usage, and exhaust parameters based on manufacturer's 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 3A, 3B, and 3C**	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: **17** East (km): **562.19** North (km): **2953.04**	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) **26/41/42.4** Longitude (DD/MM/SS) **80/22/29.1**	

15. Emission Point Comment:
Exit temperature and flow rate are for each CT/HRSG and based on ultra low sulfur diesel 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.

Source: Permit No. 0990646-002-AC.

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 hr/yr = 21,905 MMft^3/yr** **Fuel heat content based on LHV.**		

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 hr/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

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 **132** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **2 gr S/100 SCF of gas** **0.0015-percent sulfur fuel oil** Reference: **Permit No. 0990646-002-AC/PSD-FL-396**	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 for one CT/HRSG at base load = 36 lb/hr.
Annual Emissions = 44.0 TPY (Table 2-3 of PSD permit application dated December 2007)
Hourly emissions of three CT/HRSGs = 36 lb/hr x 3 = 108 lb/hr.
Annual Emissions for three CT/HRSGs = 44 x 3 = 132 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 3,697,920 MMBtu for three CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG) and 5,380 hr/yr for NG-firing.

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: **32.4** lb/hour 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 = 10.8 lb/hr.** **Hourly emissions of three CT/HRSGs with DB = 10.8 x 3 = 32.4 lb/hr.**	

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: **108** lb/hour 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.** **Hourly emissions of one CT/HRSG = 35.9 lb/hr** **Hourly emissions of three CT/HRSG = 35.9 x 3 = 108 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: **PM10**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **108** lb/hour **132** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **2 gr S/100 SCF of gas** **0.0015-percent sulfur fuel oil** Reference: **Permit No. 0990646-002-AC/PSD-FL-396**	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 for one CT/HRSG at base load = 36 lb/hr.
Annual Emissions = 44.0 TPY (Table 2-3 of PSD permit application dated December 2007)
Hourly emissions of three CT/HRSGs = 36 lb/hr x 3 = 108 lb/hr.
Annual Emissions for three CT/HRSGs = 44 x 3 = 132 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 3,697,920 MMBtu for three CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG) and 5,380 hr/yr for NG-firing.

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: **32.4** lb/hour 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 = 10.8 lb/hr.** **Hourly emissions of three CT/HRSGs with DB = 10.8 x 3 = 32.4 lb/hr.**	

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: **108** lb/hour 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.** **Hourly emissions of one CT/HRSG = 35.9 lb/hr** **Hourly emissions of three CT/HRSG = 35.9 x 3 = 108 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: **SO2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **50.7** lb/hour **199** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **2 gr S/100 SCF of gas** **0.0015-percent sulfur fuel oil** Reference: **Permit Application for 0990646-002-AC/PSD-FL-396**	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.
Annual Emissions of one CT/HRSG = 66.3 TPY (Table 2-3 of PSD permit application dated December 2007).
Annual Emissions for three CT/HRSGs = 66.3 x 3 = 199 TPY

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Duct-firing limited to 3,697,920 MMBtu for three CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).
Distillate oil firing limited to 500 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 **199** 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 = 16.9 lb/hr. Hourly emissions of three CT/HRSGs = 16.9 lb/hr x 3 = 50.7 lb/hr.**	

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: **10.5** lb/hour **199** 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 = 3.5 lb/hr. Hourly emissions of three CT/HRSGs = 3.5 lb/hr x 3 = 10.5 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 **328** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **2 ppmvd @ 15% O2 (NG-firing with DB)** Reference: **Permit No. 0990646-002-AC/PSD-FL-396**	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 = 82.4 lb/hr.
Hourly emissions of three CT/HRSG = 82.4 x 3 = 247.2 lb/hr.

Annual Emissions = (82.4 lb/hr x 500 hr/yr + 24.2 lb/hr x 2,880 hr/yr + 20 lb/hr x 5,380 hr/yr) x ton/2,000 lb = 109.2 TPY (Permit No. 0990646-002-AC/FL-PSD-396)
Annual Emissions for three CT/HRSGs = 109.2 x 3 = 328 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 3,697,920 MMBtu for three 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 **61.8** 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.** **Equivalent hourly emissions of one CT = 82.4 lb/hr** **Equivalent hourly emissions of three CTs = 82.4 x 3 = 247.2 lb/hr** **Equivalent Annual Emissions= 247.2 lb/hr x 500 hr/yr x 1 ton/2,000 lb = 61.8 TPY**	

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 **104.5** 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.** **Equivalent hourly emissions of one CT = 24.2 lb/hr** **Equivalent hourly emissions of three CTs = 24.2 x 3 = 72.6 lb/hr** **Equivalent Annual Emissions= 72.6 lb/hr x 2,880 hr/yr x 1 ton/2,000 lb = 104.5 TPY**	

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** lb/hour **262.8** 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.** **Equivalent hourly emissions of one CT = 20 lb/hr** **Equivalent hourly emissions of three CTs = 20 x 3 = 60 lb/hr** **Equivalent Annual Emissions= 60 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 262.8 TPY**	

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 **445.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **7.6 ppmvd @ 15% O2 (NG-firing with DB)** Reference: **Permit No. 0990646-002-AC/PSD-FL-396**	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 = 52.5 lb/hr.
Hourly emissions of three CT/HRSG = 52.5 x 3 = 157.5 lb/hr.

Annual Emissions = (42 lb/hr x 500 hr/yr + 52.5 lb/hr x 2,880 hr/yr + 23.2 lb/hr x 5,380 hr/yr) x ton/2,000 lb = 148.5 TPY (See Permit No. 0990646-002-AC/PSD-FL-396)
Annual Emissions for three CT/HRSGs = 148.5 x 3 = 445.5 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 3,697,920 MMBtu for three 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 **31.5** 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. Annual stack test limit applies only at 90-100 percent load. Hourly emissions for one CT/HRSG = 42 lb/hr. Equivalent hourly emissions for three CT/HRSG = 42 lb/hr x 3 = 126 lb/hr. Equivalent Annual Emissions= 126 lb/hr x 500 hr/yr x 1 ton/2,000 lb = 31.5 TPY**	

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 **226.8** tons/year
5. Method of Compliance: **CEMS 24-hour block average, 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. Equivalent hourly emissions of one CT = 52.5 lb/hr Equivalent hourly emissions of three CTs = 52.5 x 3 = 157.5 lb/hr Equivalent Annual Emissions= 157.5 lb/hr x 2,880 hr/yr x 1 ton/2,000 lb = 226.8 TPY**	

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 **304.8** tons/year
5. Method of Compliance: **CEMS 24-hour block average, 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 90-100 percent load. Equivalent hourly emissions based on 59°F inlet condition. Equivalent hourly emissions of one CT = 23.2 lb/hr Equivalent hourly emissions of three CTs = 23.2 x 3 = 69.6 lb/hr Equivalent Annual Emissions= 69.6 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 304.8 TPY**	

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 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 **71.1** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990646-002-AC/PSD-FL-396**	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.

Annual Emissions = (19.6 lb/hr x 500 hr/yr + 5.4 lb/hr x 2,880 hr/yr + 4.1 lb/hr x 5,380 hr/yr) x ton/2,000 lb = 23.7 TPY (Permit No. 0990646-002-AC/PSD-FI-396)
Annual Emissions for three CT/HRSGs = 23.7 x 3 = 71.1 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 3,697,320 MMBtu for three 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 **14.7** tons/year
5. Method of Compliance: **Initial 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. 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 and 100% load. Equivalent hourly emissions of one CT/HRSG = 19.6 lb/hr Equivalent hourly emissions of three CT/HRSGs = 19.6 x 3 = 58.8 lb/hr Equivalent Annual Emissions= 58.8 lb/hr x 500 hr/yr x 1 ton/2,000 lb = 14.7 TPY**	

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 **23.3** tons/year
5. Method of Compliance: **Initial stack test using EPA Methods 25A or 18**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing with duct burners. Compliance with the CO CEMS based limits at lower loads represents compliance with the VOC limit. Equivalent hourly emissions for one CT/HRSG = 5.4 lb/hr. Equivalent hourly emissions for three CT/HRSG = 5.4 lb/hr x 3 = 16.2 lb/hr. Equivalent Annual Emissions= 16.2 lb/hr x 2,880 hr/yr x (1 ton/2,000 lb) = 23.3 TPY**	

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 **53.9** tons/year
5. Method of Compliance: **Initial stack test using EPA Methods 25A or 18**	
6. Allowable Emissions Comment (Description of Operating Method): **BACT for natural gas firing CT only. Compliance with the CO CEMS based limits at lower loads represents compliance with the VOC limit. Equivalent hourly emissions for one CT/HRSG = 4.1 lb/hr. Equivalent hourly emissions for three CT/HRSGs = 4.1 lb/hr x 3 = 12.3 lb/hr. Equivalent Annual Emissions= 12.3 lb/hr x 8,760 hr/yr x (1 ton/2,000 lb) = 53.9 TPY**	

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: **11.1** lb/hour **38.8** tons/year	4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **2 gr S/100 SCF of gas** **0.0015-percent of sulfur fuel oil** Reference: **Permit No. 0990646-002-AC/PSD-FL-396**	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:

Hourly emissions based on natural gas firing with DB at 59°F inlet conditions.
Hourly emissions of one CT/HRSG = 3.7 lb/hr.
Hourly emissions of three CT/HRSGs = 3.7 lb/hr x 3 = 11.1 lb/hr.
Annual Emissions of one CT/HRSG = 12.9 TPY (Table 2-3 of PSD permit application dated December 2007)
Annual Emissions for three CT/HRSGs = 12.9 x 3 = 38.8 TPY

11. Potential, Fugitive, and Actual Emissions Comment:

Potential hourly emissions vary with turbine inlet conditions.
Duct-firing limited to 3,697,920 MMBtu for three CT/HRSGs (equivalent to 2,880 hr/yr per CT/HRSG).
Distillate oil firing limited to 500 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: **11.1** lb/hour **38.8** 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 = 3.7 lb/hr. Hourly emissions of three CT/HRSGs = 3.7 lb/hr x 3 = 11.1 lb/hr.**	

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 of sulfur fuel oil**	4. Equivalent Allowable Emissions: **2.1** lb/hour **38.8** 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 = 0.7 lb/hr. Hourly emissions of three CT/HRSGs = 0.7 lb/hr x 3 = 2.1 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: **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. 0990646-002-AC/PSD-FL-396**	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. Primary fuel (Natural gas)**	
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): **NOx**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **TECO** Model Number: **42i - HL**	Serial Number: **934838567**
5. Installation Date:	6. Performance Specification Test Date: **3/19/2011**
7. Continuous Monitor Comment: **Continuous monitoring of NOx emissions. Unit 3A 40 CFR 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: **48i**	Serial Number: **CM09400112**
5. Installation Date:	6. Performance Specification Test Date: **3/19/2011**
7. Continuous Monitor Comment: **Continuous monitoring of CO emissions. Unit 3A 40 CFR 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: **01440D1VO2/4246**
5. Installation Date:	6. Performance Specification Test Date: **3/19/2011**
7. Continuous Monitor Comment: **Monitoring of O_2 for dilution with NOx and CO monitors. Unit 3A 40 CFR 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 - HL**	Serial Number: **934838563**
5. Installation Date:	6. Performance Specification Test Date: **3/19/2011**
7. Continuous Monitor Comment: **Continuous monitoring of NOx emissions. Unit 3B 40 CFR 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: **48i**	Serial Number: **CM09400113**
5. Installation Date:	6. Performance Specification Test Date: **3/19/2011**
7. Continuous Monitor Comment: **Continuous monitoring of CO emissions. Unit 3B 40 CFR 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: **01440D1VO2/4248**
5. Installation Date:	6. Performance Specification Test Date: **3/19/2011**
7. Continuous Monitor Comment: **Monitoring of O_2 for dilution with NOx and CO monitors. Unit 3B 40 CFR 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 - HL**	Serial Number: **934939234**
5. Installation Date:	6. Performance Specification Test Date: **3/14/2011**
7. Continuous Monitor Comment: **Continuous monitoring of NOx emissions. Unit 3C 40 CFR 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: **48i**	Serial Number: **CM09400114**
5. Installation Date:	6. Performance Specification Test Date: **3/14/2011**
7. Continuous Monitor Comment: **Continuous monitoring of CO emissions. Unit 3C 40 CFR 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: **01440D1VO2/4249**
5. Installation Date:	6. Performance Specification Test Date: **3/14/2011**
7. Continuous Monitor Comment: **Monitoring of O_2 for dilution with NOx and CO monitors. Unit 3C. 40 CFR 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: _____ ☒ Previously Submitted, Date **November 2009**

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: **NOX, CO, VOC, NH3, VE**
   3A: 4/26/11 (oil), 3/16/11 (gas); 3B: 4/9/11 (oil), 3/19/11 (gas);
   3C: 4/7/11 (oil), 3/12/11 (gas)
   ☐ 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

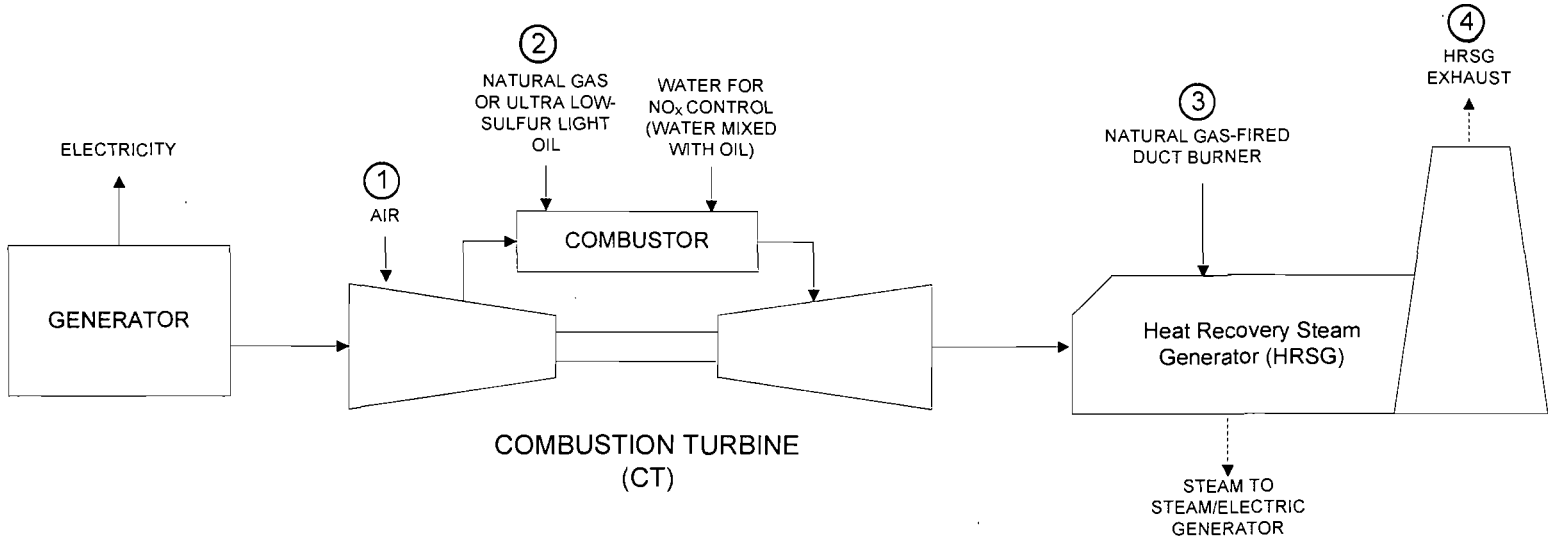
1. Identification of Applicable Requirements: ☒ Attached, Document ID: **FPL-EU1-IV1**
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation: ☒ Attached, Document ID: **FPL-EU1-IV3** ☐ Not Applicable
4. Alternative Modes of Operation (Emissions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

Additional Requirements Comment

Combined cycle units 3A, 3B, and 3C are exempt from the CAM requirements for NO_x control using SCR since continuous compliance is required to be demonstrated by a CEMS.
Rule:40 CFR 64.29b)(vi).

ATTACHMENT FPL-EU1-I1

PROCESS FLOW DIAGRAM



	Parameters	Units	Fuel	Data G
1	Inlet Air	lb/hr	Gas	4,842,000
		lb/hr	Oil	4,850,000
2	CT Heat Input	MMBtu/hr (HHV)	Gas	2,333
		MMBtu/hr (HHV)	Oil	2,117
3	DB Heat Input	MMBtu/hr (HHV)	Gas (Only)	428
4	HRSG Velocity	ft/sec w/o DB	Gas	58.32
		ft/sec w/o DB	Oil	67.23
4	HRSG Temperature	°F	Gas	195
		°F	Oil	293
4	HRSG Stack Height	feet	Gas/Oil	149
4	HRSH Stack Diameter	feet	Gas/Oil	22

Attachment FPL-EU1-I1. Process Flow Diagram for Each CT/HRSG Train
Baseload Operation, Turbine Inlet Temperature of 59°F
FPL West County Energy Center Unit 3, Palm Beach County, Florida

Source: MPS, 2006; Golder, 2007.

Process Flow Legend
Solid/Liquid
Gas
Steam

FPL

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ATTACHMENT FPL-EU1-I3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT FPL-EU1-I3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

West County Unit 3 utilizes 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.

Unit 3 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 resulting from startup, shutdown, fuel switches, and documented malfunctions are allowed provided that operators employ best operational practices to minimize the amount and duration of emissions during such incidents.

For each gas turbine/HRSG system, excess emissions of NOX and CO resulting from startup, shutdown, or malfunction shall be excluded from CEMS data in any 24-hour period ("any 24-hour period" means a calendar day, midnight to midnight) for the following conditions (these conditions are considered separate events and each event may occur independently within any 24-hour period):

- *Steam Turbine Cold Startup:* For cold startup of the steam turbine, excluded 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.

  [Note: During a cold startup of the steam turbine, 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.]

- *Gas Turbine/HRSG System Cold Startup:* For cold startup of a gas turbine/HRSG system, excluded 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 one-hour period.

- *Gas Turbine/HRSG system Warm Startup:* For warm startup of a gas turbine/HRSG system, excluded emissions shall not exceed two hours in any 24-hour period."Warm startup of a gas turbine/HRSG system" is defined as a startup after the pressure in the high-pressure (HP) steam drum is above 450 psig.

- *Shutdown Combined Cycle Operation:* For shutdown of the combined cycle operation, excluded emissions from any gas turbine/HRSG system will not exceed 3 hours in any 24-hour period.

- *Gas Turbine/HRSG System Shutdown:* For shutdown of the gas turbine/HRSG operation, excluded emissions from any gas turbine/HRSG system shall not exceed two hours in any 24-hour period.

- *Fuel Switching:* For each fuel switch, excluded emissions shall not exceed 2 hours in any 24-hour period and no more than four hours in any 24-hour period for any gas turbine/ HRSG system.
- Documented Malfunction: For the gas turbine/HRSG system, excess emissions of NOx and CO resulting from documented malfunctions shall not exceed two hours in any 24-hour period. A "documented malfunction" means malfunction that is documented within one working day of detection by contacting the Company Authority by Telephone, facsimile, transmittal or electronic mail.

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

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Mr. Randall R. LaBauve, Vice President
Environmental Services Department
Florida Power and Light Company (FP&L)
700 Universe Boulevard
Juno Beach, Florida 33408

Air Permit No. PSD-FL-396
Project No. 0990646-002-AC
FP&L West County Energy Center
One (1,250 MW) Combined Cycle Unit
Palm Beach County

Enclosed is the final air construction permit, which authorizes construction/installation of a third nominal 1,250 MW combined cycle unit and auxiliary equipment. The proposed work will be conducted at the FP&L West County Energy Center that is presently under construction in Palm Beach County at 20505 State Road 80, Loxahatchee, in unincorporated Palm Beach County, Florida. The project is subject to the preconstruction requirements for the Prevention of Significant Deterioration (PSD) of Air Quality pursuant to Rule 62-212.400 of the Florida Administrative Code (F.A.C.). As noted in the attached Final Determination, only minor changes and clarifications were made to the permit as drafted. This permit is issued pursuant to Chapter 403, Florida Statutes (F.S.).

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

Executed in Tallahassee, Florida.

Trina Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final Permit and Final Determination) was sent by electronic mail with received receipt requested or by certified mail to the persons listed below.

Randall R. LaBauve, FP&L: 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
Kathleen Forney, U.S. EPA Region 4, Atlanta, GA: forney.kathleen@epa.gov
Dee Morse, National Park Service, Denver CO: dee_morse@nps.gov
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Kelly Martinson, Department of Community Affairs: kelly.martinson@dca.state.fl.us
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Patricia D. Curry: GremlinLtd@aol.com
Nicolle Tolleson: Nolleson@gmail.com
Lynne Purvis, Earth First: lynnejpurvis@gmail.com
William Louda: blouda@fau.edu
Sharon Waite: By certified mail

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), F.S., with the designated agency clerk, receipt of which is hereby acknowledged.

Victoria Gibson (Clerk) 7/30/08 (Date)

FINAL DETERMINATION

Air Construction (PSD) Permit
Florida Power and Light West County Energy Center
DEP File No. 0990646-002-AC (PSD-FL-396)

PERMITTEE

Florida Power and Light Company (FP&L)
700 Universe Boulevard
Juno Beach, Florida 33408

PERMITTING AUTHORITY

Florida Department of Environmental Protection (Department)
Division of Air Resource Management
Bureau of Air Regulation, Special Projects Section
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

PROJECT

DEP File No. 0990646-002-AC
Permit No. PSD-FL-396
FP&L West County Energy Center (WCEC)
One 1,250 Megawatts (MW) Combined Cycle Unit
Palm Beach County

The project is to authorize the construction/installation an additional nominal 1,250 MW combined cycle unit (Unit 3) and auxiliary equipment at the FP&L WCEC where two such units (Units 1 and 2) are presently under construction at 20505 State Road 80, Loxahatchee, in unincorporated Palm Beach County.

Unit 3 will be comprised of: three 250 MW Mitsubishi 501G combustion turbine-electrical generators (CTG); three duct-fired heat recovery steam generators (HRSG) with exhaust stacks; a draft mechanical cooling tower; and a 500 MW steam turbine-electrical generator. Unit 3 will be fueled by natural gas and limited use of backup ultralow sulfur fuel oil. Each HRSG has a stack at least 149 feet tall with a nominal diameter of 22 feet. The project also includes auxiliary equipment consisting of two natural gas fired fuel heaters, two emergency diesel generators, and a mechanical cooling tower.

Air pollution control will be accomplished by selective catalytic reduction (SCR) for the control of nitrogen oxides (NO_X) and efficient combustion of inherently low polluting fuels to control emissions of particulate matter (PM/PM_{10}), sulfur oxides (SO_2 and sulfuric acid mist), carbon monoxide (CO) and volatile organic compounds (VOC).

NOTICE AND PUBLICATION

The Department distributed a Notice of Intent to Issue Air Permit package on April 25, 2008. The Public Notice of Intent to Issue PSD Permit was published on April 30, 2008 in The Palm Beach Post. The Notice included: the project location and a project summary; a brief description of the Department's determination of Best Available Control Technology (BACT); emission estimates; and the conclusions regarding the impacts upon ambient air quality. The Notice also

included the instructions on: submittal of written comments; how to request a public meeting; how to petition for an administrative hearing; and how to view the public files at the Department offices in Tallahassee and West Palm Beach.

Additionally the Notice provided the Department's webpage that includes the public notice package as well as the application, supplementary information and key correspondence. The described information is available at:

www.dep.state.fl.us/Air/permitting/construction/westcounty.htm

No requests for an administrative hearing were received. Several written comments (discussed below) regarding the Department's draft action were received from FP&L. No significant comments were received from the U.S. Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service (USFWS) or the National Park Service (NPS). No written comments were received from the public during the 30-day comment period except for a request for a public meeting submitted by the Palm Beach County Environmental Coalition (PBCEC).

The Department promptly scheduled a public meeting at the Village of Royal Palm Beach Community Center for June 27, 2008 from 6 to 8 p.m. Meeting Notices were published in the Florida Administrative Weekly on June 13 and in The Town Crier on June20. An electronic meeting notice was also sent on June 18 to certain citizens, groups, municipalities and agencies.

The public meeting was conducted as scheduled and included Department presentations and public comment opportunity. In addition, an informal open house preceded the official meeting to afford additional opportunity for one-on-one questions and answers. The Department's representatives and the moderator clarified that the purpose of the meeting was to take comments regarding the draft air permit and matters related to air pollution and not matters related to other media or zoning decisions. The comments were recorded on audio tape by the Department. Details regarding the public comment are given further below.

This Final Determination: recapitulates and responds to the comments with special emphasis on those related to the PSD Permit; describes the changes since the Public Notice of Intent to Issue Air Permit was distributed on April 25, 2008; and documents the Department's final action on the application.

COMMENTS

I. COMMENTS RECEIVED AT THE PUBLIC MEETING

The public meeting was held as noticed on June 27, 2008. Following is a list of participants:

Florida Department of Environmental Protection

Kevin Claridge, Assistant Director for the Southeast District and Chairperson for the meeting
Alvaro A. Linero, P.E., Program Administrator
Deborah Nelson, Meteorologist

Speakers from the Public

Patricia Curry, The Acreage
Lynne Purvis, Earth First!, Lake Worth
Alexandria Larson, Loxahatchee
Panagioti Tsolkas, Palm Beach County Environmental Coalition (PBCEC), Lake Worth

Nicolle Tolleson, Sierra Club, PBCEC, Lake Worth
Sharon Waite, Loxahatchee
Dr. William Louda, Florida Atlantic University professor, Loxahatchee Groves councilman
David Simms, PBCEC, Lake Worth

Following are the key issues and concerns raised by the speakers or through written comments received at the meeting. The Department's responses are included with special emphasis on those directly linked to the permitting process, the draft permit, air pollution emissions, and air pollutant impacts on other media.

A. Opposition to the Project and Requests for a Public Meeting

The eight speakers identified above were opposed to the project. During the meeting several requested a hearing before an administrative law judge. As stated at the meeting by Mr. Linero, the time to request an administrative hearing has passed. The process and deadline for requesting an administrative hearing was in the same public notice that led to the request from one of the speakers for the public meeting.

B. Acid Rain Related Emissions

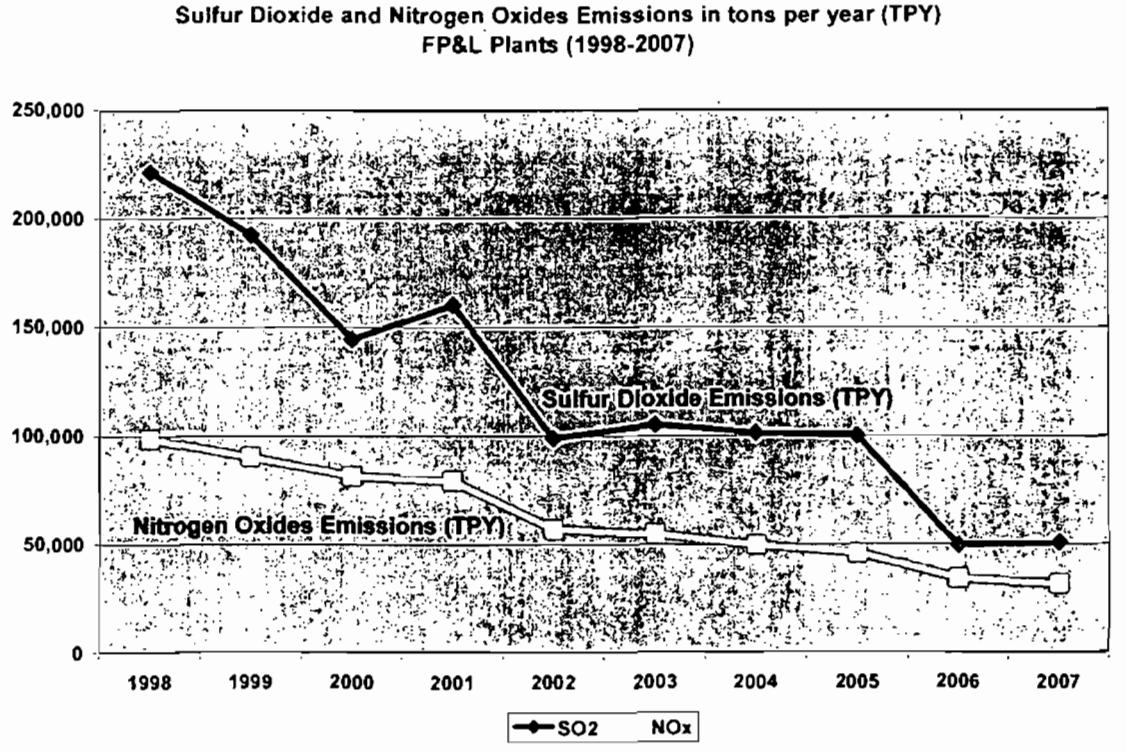
Several speakers expressed concern regarding the level of acid rain-related emissions from the entire WCEC development, including Units 1, 2 and 3. Acid rain related emissions include NO_X, SO_2, and sulfuric acid mist (SAM). Projected emissions from the full 3,750 MW WCEC are 1,072 tons per year (TPY) of NO_X, 598 TPY of SO_2 and 121 TPY of SAM.

The Technical Evaluation and Preliminary Determination (TEPD) document was distributed with the draft permit and provides the details of the draft BACT determination for Unit 3. It is essentially the same as the BACT for Units 1 and 2. As stated at the meeting, included in the technical evaluation and public notice, the BACT includes: Very low NO_X, less than 2.0 parts per million (ppmvd);

- Ammonia (NH_3) injection and selective catalytic reduction (SCR);
- CO less than 4.1 ppmvd by clean fuels and high temperature;
- Low PM and VOC by clean fuels and high temperature; and
- SO_2 (and SAM) controlled by natural gas and ultralow sulfur backup diesel.

The BACT insures that emission concentrations and mass emissions based on a unit of electrical energy produced will be very low. Several speakers indicated renewable sources such as solar, wind and wave energy would emit less of the pollutants listed. The Department acknowledges that certain renewable-fueled power options have near-zero emissions profiles, but notes that this project meets the Department's air permitting requirements and, specifically, constitutes BACT.

Since the meeting and to help put the emissions from WCEC into perspective, the Department graphed the SO_2 and NO_X emission trends during the period 1998-2007 from FP&L fossil-fueled plants located in the Florida peninsula. The data source is the EPA Clean Markets Acid Rain database. The results are summarized in the following chart.



During the period 1998-2007 there was a *decrease* from 221,400 to 50,900 TPY (77%) in SO_2 emissions from the FP&L fossil fleet in peninsular Florida. Similarly there was a *decrease* from 98,500 to 31,800 TPY (68%) in NO_X emissions. The decreases from FP&L plants located in or between Miami-Dade and Martin Counties were on the order of 60,000 and 20,000 TPY for SO_2 and NO_X respectively.

By comparison, the entire WCEC development will emit roughly 600 and 1,100 TPY of SO_2 and NO_X respectively. Emissions from the WCEC will be two or three orders of magnitude less than the reductions realized from existing FP&L operations over the past 10 years.

C. Ambient Monitoring and Degradation of Air Quality

Some speakers questioned the reliance by the Department of certain monitors within the county as background, whether they are still in use, and whether they will continue to be used. All speakers were concerned about the possible degradation of air quality due to the construction of the WCEC.

The TEPD document previously cited includes detailed analyses of the existing ambient air quality, the adequacy of the air monitoring network, a BACT determination, projected emissions from the WCEC, and their effects on ambient air quality. The TEPD is available at:

www.dep.state.fl.us/Air/permitting/construction/westcounty/TECH396.pdf .

The Department modeled emissions from the entire WCEC to insure that there will not be a significant deterioration of air quality. This conclusion is thoroughly documented in the TEPD document issued with the draft permit and made available at the meeting.

The U.S. Fish and Wildlife Service (USFWS) manages the nearby Loxahatchee Refuge. Department staff contacted a biologist at the Loxahatchee Refuge who referred the caller to the USFWS South Florida Ecological Services office in Vero Beach. Department staff contacted USFWS experts to ascertain whether they had any concerns about the effects of the WCEC upon the ecosystem and endangered species. No concerns were expressed regarding air pollution.

The USFWS also has air quality experts in their offices in Denver, Colorado who were alerted about the project by the National Park Service even though the nearby refuge is a Class II area rather than a Class I area. No comments were received from their air quality experts. This was explained by the Department at the meeting.

One of the speakers at the meeting read a number of comments from a draft letter about the WCEC that was prepared by Florida Fish and Wildlife Conservation Commission (FWC). He subsequently provided the draft letter dated October 17, 2005 to the Department.

The chief concern read by the speaker from the letter he had in-hand states: "We are concerned that this plant (WCEC 1 and 2) combined with the build out third unit, other existing power plants and two power plants in St. Lucie County, cumulatively will have adverse effects to fish and wildlife and their habitats". He also read passages related to air impacts such as methyl mercury and acidification of streams.

The Department's Siting Office was contacted and they advised that no October 17, 2005 letter from the FWC regarding the WCEC had been received. The Siting Office provided a final letter dated October 4, 2005 about the Treasure Coast Energy Center (TCEC) that was similar to the draft WCEC letter.

The comments submitted for the TCEC (since constructed) and those drafted for the earlier WCEC Unit 1 and 2 project merit response.

As noted previously, there have been significant reductions on the order of 40% during the period 2005-2007. The foregoing discussion of emissions trends provides a better understanding of the improvements in the emissions profile during the past decade.

In conclusion air pollution emissions from the WCEC will not reverse the favorable trends of reduced impacts due to the decade-long regional and local power plant emissions reductions.

F. Renewable Energy

Most speakers expressed the preference that FP&L should rely more on renewable energy in lieu of building the WCEC or least Unit 3 of the WCEC. Among the options cited were solar energy, wind energy, wave energy and biomass projects. They generally expressed concern regarding reliance on fossil fuels including natural gas and whether the Governor's orders to reduce CO_2 emissions by 2017 to the level of 2000 can be met.

The speakers were generally aware of FP&L's petition of need before the Public Service Commission (PSC). Several attended and testified before the PSC at a hearing earlier the same week. Some have filed to intervene in the proceedings. Following is the link to a submittal to the PSC by the interveners:

www.psc.state.fl.us/library/filings/08/05609-08/05609-08.pdf

A copy of the filing was provided at the public meeting by the interveners.

The PSC is the proper forum for consideration of the renewable fuel alternatives in conjunction with need determination. The PSC is actively developing its Renewable Portfolio Standard (RPS) that is designed to reduce dependency on fossil fuels for power production while at the same time fostering achievement of the CO_2 emissions reductions.

The status, including the input from the power companies such as FP&L is available at the following link:

www.floridapsc.com/utilities/electricgas/RenewableEnergy/index.aspx

The renewable energy alternatives are encouraged by the Department but are not factors at this time in the evaluation of the PSD permit for the WCEC Unit 3.

G. Modernization of Cape Canaveral and FP&L Riviera Plants

Several speakers expressed concern regarding the manner by which FP&L tied the modernization of two older residual oil-fueled power plants to the approval by the PSC of the WCEC Unit 3. The need for the three projects has been submitted as a package.

From an air pollution point of view, the modernization of the Cape Canaveral and Riviera Plants would further reduce emissions and deposition and transport of acid rain and nutrient-related air pollutants into the Loxahatchee Refuge and into the Everglades system.

Several speakers want the modernizations (cleanups) of the Cape Canaveral and Riviera plants to be required independently of the construction of WCEC Unit 3.

The need determination by the PSC is the proper forum for this issue as discussed above. The matter of "need" and timing of such applications is not a consideration in the final decision on the PSD permit for the WCEC Unit 3.

H. Other Issues and Concerns

The following issues and concerns were stated and are outside of the purview of this PSD permitting decision:

- Proceedings of the Treasure Coast Regional Planning Council (TCRPC) and consistency or inconsistency with its goals;
- Natural gas supply and pipeline safety;
- Separate challenges described by more than one speaker with respect to water, pipeline and National Environmental Policy Act (NEPA) issues;
- Cradle-to-grave evaluation of CO_2 emissions from natural gas including liquefied natural gas (LNG) ports and storage;
- Discontinuance of some past small programs by FP&L and the proposal of only a small percentage of new programs;
- Dropping PSC reserve margin requirements to avoid need for Unit 3;
- Sufficiency or insufficiency of FP&L solar projects;
- Projected surficial aquifer drawdown when groundwater is needed by the WCEC; and

- Marsh and solar project alternatives and cooling and sequestration of CO_2 using cool ocean water.

II. FP&L COMMUNICATION

FP&L submitted written comments attached to a letter dated May 22, 2008. Their letter is available at:
www.dep.state.fl.us/Air/permitting/construction/westcounty/FPLCommentsonDraft.pdf

FP&L made several suggestions regarding the issued Technical Evaluation and Preliminary Determination document that accompanied the public notice package that was distributed on April 25. Those comments are noted, but the document will not be revised as it was a final document that described the rationale underlying the Department's draft action.

FP&L also requested that some changes to the draft permit be made when issuing the final action. These are as follows:

- Clarify in the final permit and in Appendix KKKK that the 15 parts per million nitrogen oxides (NO_X) emission limit application to the combustion turbines per the New Source Performance Standards is applicable on a 30-day rolling basis and not on a 4-hour basis;
- Allow excess emissions for a limited period of time when switching fuels from gas-to-oil in the same manner as allowed when switching fuels from oil-to-gas;
- Specify Method 25A to determine concentrations of volatile organic compounds during compliance testing; and
- Indicate model year 2007 to 2010 instead of model year 2007 for the two emergency generators.

Response to FP&L Comments

The Department agrees that the NOx averaging time is on a 30-day basis according to 40 Code of Federal Regulations Part 60, Subpart KKKK- Standards of Performance for Stationary Combustion Turbines that Commence Construction after February 18, 2005. The 4-hour basis applies to combustion turbines operating in simple cycle, whereas a 30-day basis applies to combustion turbines operating in combined cycle.

The Department notes that the much stricter numerical NO_X BACT standard and 24-hour averaging basis set by the Department for the project will also insure compliance with compliance with the Subpart KKKK limits.

The Department will correct the error in the NOx averaging time in Section III.A., Condition 12 of the permit and in Section IV, Appendix BD.

The Department will not change the Section III.A., Condition 17 of the permit to allow excess emissions when switching from gas-to-oil. The requirement in the draft permit is the same as the one included in the permits for Unit 1 and 2. Section III.A, Condition 26.b includes the following provision that already minimizes the possibility of an exceedance due to gas-to-oil switches: *"An hour in which any oil is fired is attributed towards compliance with the permit standards for oil firing."*

The Department will specify Method 25A in Section III.A., Condition 20 as requested and consistent with the previously issued permit for Units 1 and 2.

The Department will specify the model year range for the emergency generators as 2007 to 2010 (instead of 2007) as requested.

III. EPA COMMUNICATION

By electronic correspondence dated May 30, 2008 EPA staff advised that upon review of the additional information, the preliminary determination, and draft PSD permit they did not have any significant comments that were left unresolved.

IV. NPS AND USFWS COMMUNICATIONS

Prior to receipt of the application, NPS provided guidance regarding the ambient air modeling required to assess effects at national parks in South Florida. On January 16, 2008 (during the application completeness review period) NPS submitted the following comment:

"Supplemental modeling files show that FPL conducted an air quality increment analysis with emissions from all three units which showed no significant impact on Class I increments at Everglades National Park. However, FPL conducted an AQRV analysis which only included emission from Unit 3. We ask that FPL conduct an air quality related values (AQRV) modeling analysis and include emissions from Units 1, 2, and 3 in order for us to properly assess impacts at Everglades National Park, Big Cypress National Preserve and Biscayne National Park. We also ask that the AQRV modeling analysis follow the WCEC modeling protocol we reviewed in November 2007."

By electronic correspondence dated March 21, 2008 NPS advised:

"We reviewed the March 2008 FP&L response to Florida Bureau of Air Regulations regarding questions and comments on the WCEC Unit 3 PSD application. In our January 16, 2008, message to Florida Bureau of Air Regulations we asked that Florida Power & Light conduct an AQRV modeling analysis for emissions from Units 1, 2, and 3 in order for us to properly assess impacts at Everglades National Park. Based on the information provided in the March 2008 Florida Power & Light response to Florida Bureau of Air Regulations, we are not concerned about the level of impacts on resources at Everglades National Park. I will alert the USFWS Air Quality Branch about potential air quality concerns at Loxahatchee National Wildlife Refuge since the WCEC site is located adjacent to the refuge."

No further comments were received during the 30-day comment period from NPS and no comments were received from the USFWS regarding the application or public notice package.

V. CONCLUSION

The final action of the Department is to issue the permit with the revisions, corrections, and clarifications as described above.

Memorandum

Florida Department of Environmental Protection

TO: Joseph Kahn, Division of Air Resource Management

THROUGH: Trina Vielhauer, Bureau of Air Regulation

FROM: A. A. Linero, Special Projects Section

DATE: July 31, 2008

SUBJECT: Final Air Permit No. PSD-FL-396
Project No. 0990646-002-AC
Florida Power and Light (FP&L) West Coast Energy Center
Combined Cycle Unit 3

The Final Permit for this project is attached for your approval and signature. The project is subject to PSD preconstruction review and authorizes the construction of a third nominal 1,250 MW natural gas-fueled combined cycle unit (Unit 3) and ancillary equipment. The new equipment will be installed at the FP&L West County Energy Center presently under construction at 20505 State Road 80, Loxahatchee, Palm Beach County.

The attached Final Determination identifies issuance of the draft permit, summarizes the publication process, and provides the Department's response to comments on the Draft Permit and to comments received at a public meeting held on June 27th in Royal Palm Beach.

I recommend your approval of the attached Final Permit for this project.

Attachments

Florida Department of Environmental Protection

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

PERMITTEE:

Florida Power and Light Company (FP&L)
700 Universe Boulevard
Juno Beach, Florida 33408

Authorized Representative:
Randall R. LaBauve, Vice President

FP&L West County Energy Center
DEP File No. 0990646-002-AC
Permit No. PSD-FL-396
SIC No. 4911
Expires: December 31, 2013

PROJECT AND LOCATION

This permit authorizes the construction of the third nominal 1,250 megawatt combined cycle unit (Unit 3) and ancillary equipment at the Florida Power and Light Company (FP&L) West County Energy Center.

The proposed project will be located at 20505 State Road 80, Loxahatchee, Florida 33470. The UTM coordinates are Zone 17; 562.19 kilometers East; 2953.04 kilometers North.

STATEMENT OF BASIS

This air 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. 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.

CONTENTS

Joseph Kahn, Director
Division of Air Resource Management

7/30/08
(Date)

FACILITY DESCRIPTION

The FP&L West County Energy Center (WCEC) was previously approved for construction as a nominal 2,500 megawatt (MW) greenfield power plant. The previously approved construction underway is for two nominal 1,250 MW gas-fired combined cycle units (Units 1 and 2) that will use ultralow sulfur diesel (ULSD) fuel oil (FO) as backup fuel.

Units 1 and 2 will each consist of: three nominal 250 megawatt (MW) Model 501G combustion turbine-electrical generators (CTG) with evaporative inlet cooling systems; three supplementary-fired heat recovery steam generators (HRSG) with selective catalytic reduction (SCR) reactors; one nominal 428 mmBtu/hour (lower heating value - LHV) gas-fired duct burner (DB) located within each of the three HRSG; three 149 feet exhaust stacks; one 26 cell mechanical draft cooling tower; and a common nominal 500 MW steam-electrical generator (STG).

Previously approved ancillary equipment under construction and installation includes: four emergency generators; two natural gas fired fuel heaters; one emergency diesel fired pump; two diesel fuel storage tanks; two auxiliary steam boilers; and other associated support equipment.

This permit authorizes construction of another 1,250 MW gas-fired combined cycle unit (Unit 3) identical to the description given above for Units 1 and 2. Additional ancillary equipment for Unit 3 will include two emergency generators, two natural gas fired fuel heaters and associated equipment. Unit 3 will use some of the infrastructure and ancillary equipment already under construction including the diesel storage tanks and auxiliary boilers.

{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
013	Unit 3A – one nominal 250 MW CTG with supplementary-fired HRSG
014	Unit 3B – one nominal 250 MW CTG with supplementary-fired HRSG
015	Unit 3C – one nominal 250 MW CTG with supplementary-fired HRSG
016	One 26 cell mechanical draft cooling tower
017	Two nominal 10 MMBtu/hr natural gas-fired process heaters
018	Two nominal 2,250 KW (~ 21 MMBtu/hr) emergency generators

REGULATORY CLASSIFICATION

The facility will be a major Prevention of Significant Deterioration (PSD) stationary source in accordance with Rule 62-212.400, Florida Administrative Code (F.A.C.). Unit 3 is subject to the PSD rules including a determination of best available control technology (BACT).

The facility will be a Title V or "Major Source" of air pollution in accordance with Chapter 213, F.A.C. because the potential emissions of at least one regulated pollutant exceed 100 tons per year (TPY) or because it is a Major Source of hazardous air pollutants (HAP). Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter ($PM/PM_{10}/PM_{2.5}$), sulfur dioxide (SO_2), volatile organic compounds (VOC) and sulfuric acid mist (SAM).

The facility under construction is subject to several subparts under 40 Code of Federal Regulations (CFR), Part 60 – Standards of Performance for New Stationary Sources (NSPS). Unit 3 is subject to 40 CFR 60, Subpart KKKK – NSPS for Stationary Combustion Turbines that Commence Construction after February 18, 2005.

This rule also applies to duct burners (DB) that are incorporated into combined cycle projects. Two additional emergency generators are subject to 40 CFR 60, Subpart IIII – NSPS for Stationary Compression Ignition Internal Combustion Engines. Two additional process heaters are subject to 40 CFR 60, Subpart Dc – NSPS Requirements for Small Industrial Commercial-Institutional Steam Generating Units.

The facility under construction is a major source of hazardous air pollutants (HAP) and is subject to several subparts under 40 CFR Part 63 - National Emission Standards for Hazardous Air Pollutants (NESHAP). Unit 3 is potentially subject to 40 CFR 63, Subpart YYYY – NESHAP for Stationary Combustion Turbines. The applicability of this rule has been stayed for lean premix and diffusion flame gas-fired CTG such as planned for this project.

The facility will operate units subject to the Title IV Acid Rain provisions of the Clean Air Act (CAA).

The facility will be subject to the Clean Air Interstate Rule (CAIR) in accordance with the Final Department Rules issued pursuant to CAIR as implemented by the Department in Rule 62-296.470, F.A.C.

The facility under construction was certified under the Florida Power Plant Siting Act, 403.501-518, F.S. and Chapter 62-17, F.A.C. The Unit 3 project is also subject to certification.

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 GC: General Conditions.

Appendix Dc: NSPS Subpart Dc Requirements for Small Industrial Commercial-Institutional Steam Generating Units.

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 and supplemental information received on December 6 and December 21, 2007;
- Department's request for additional information (RAI) January 4, 2008;
- Response to RAI received March 14, 2008; and
- *Draft permit package issued on April 25, 2008.*

SECTION II. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct, operate or modify an emissions unit shall be submitted to the Permitting Authority, which is the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP or the Department) at 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. Copies of all such documents shall also be submitted to the Compliance Authority. Telephone: (850)488-0114. Fax: (850)921-9533.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Southeast District Office. The mailing address and phone number of the Southeast District Office are: Department of Environmental Protection, Southeast District Office, 400 North Congress Avenue, Suite 200, West Palm Beach, Florida 33401. Telephone: (561)681-6632. Fax: (561)681-6790.

3. Appendices: The following Appendices are attached as part of this permit: Appendices A, BD, Dc, GC (General Conditions), IIII, KKKK, SC, XS, YYYY and ZZZZ.

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

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

6. Modifications: No emissions unit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. 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 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.]

8. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Bureau of Air Regulation with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

SECTION III - EMISSIONS UNITS SPECIFIC CONDITIONS

A. COMBINED CYCLE UNIT 3 – COMBUSTION TURBINE GENERATORS (EU 013, 014, and 015)

This section of the permit addresses the following emissions units.

Combined Cycle Unit 3 and associated equipment

Description: Combined Cycle Unit 3 will be comprised of emissions units (EU) 013, 014, and 015. Each EU will consist of: a Model M501G CTG with automated control, inlet air filtration system and evaporative cooling, a gas-fired HRSG with DB, a HRSG stack, and associated support equipment. The project also includes one STG that will serve the combined cycle unit.

Fuels: Each CTG fires natural gas as the primary fuel and ULSD fuel oil as a restricted alternate fuel.

Generating Capacity: Each of the three CTG has a nominal generating capacity of 250 MW. The STG has a nominal generating capacity of 500 MW. The total nominal generating capacity of the "3 on 1" combined cycle unit is approximately 1,250 MW. The total nominal generating capacity of the facility is 3,750 MW.

Controls: The efficient combustion of natural gas and restricted firing of ULSD 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 NO_X emissions. A 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 DB:

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 CTG 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 CTG and DB.

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. Combustion Turbines-Electrical Generators (CTG): The permittee is authorized to install, tune, operate, and maintain three Model 501G CTG each with a nominal generating capacity of 250 MW. Each CTG shall include an automated control system and have dual-fuel capability. Ancillary equipment includes an inlet air filtration system and an evaporative inlet air-cooling system. The CTG will utilize DLN combustors. [Application and Design]

5. Heat Recovery Steam generators (HRSG): The permittee is authorized to install, operate, and maintain three new HRSG with separate exhaust stacks. Each HRSG shall be designed to recover exhaust heat energy from one of the three CTG (3A to 3C) and deliver steam to the steam turbine-electrical generator (STG). Each HRSG may be equipped with a gas-fired duct burner (DB) having a nominal heat input rate of 428 MMBtu per hour (LHV).

6. CTG/Supplementary-fired HRSG Emission Controls

a. *Dry Low NO_X (DLN) Combustion*: The permittee shall operate and maintain the DLN system to control NO_X emissions from each CTG when firing natural gas. Prior to the initial emissions performance tests required for each CTG, the DLN combustors and automated 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 turbine shall be maintained and tuned in accordance with the manufacturer's recommendations.

b. *Wet Injection (WI)*: The permittee shall install, operate, and maintain a WI system (water or steam) to reduce NO_X emissions from each CTG when firing ULSD fuel oil. Prior to the initial emissions performance tests required for each CTG, the WI 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 turbine 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 CTG 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 an oxidation catalyst system to control CO emissions from each CTG/supplementary-fired HRSG. 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 and Rule 62-212.400(BACT), F.A.C.]

PERFORMANCE RESTRICTIONS

7. Permitted Capacity – Combustion Turbine-Electric Generators (CTG): The nominal heat input rate to each CTG 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, LHV of each fuel, and 100% load). Heat input rates will vary depending upon CTG 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 (DB): The total nominal heat input rate to the DB for each HRSG is 428 MMBtu per hour based on the 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 CTG shall fire natural gas as the primary fuel, which shall contain no more than 2.0 grains of sulfur per 100 standard cubic feet (gr S/100 SCF) of natural gas. As a restricted alternate fuel, the CTG may fire ULSD fuel oil containing no more than 0.0015% sulfur by weight. Each CTG 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 CTG may operate throughout the year (8760 hours per year). Restrictions on individual methods of operation are specified below.
[Rules 62-210.200(Definitions - PTE) and 62-212.400 (BACT), F.A.C.]

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

    a. *Combined Cycle Operation*: Each CTG/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 Burner (DB) Firing*: When firing natural gas in a CTG, the respective HRSG may fire natural gas in the DB to raise additional steam for use in the STG or in the operation of CTG components. The total combined heat input rate to the DB (all three HRSG) shall not exceed 3,697,920 MMBtu (LHV) during any consecutive 12 months.

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

A. COMBINED CYCLE UNIT 3 – COMBUSTION TURBINE GENERATORS (EU 013, 014, and 015)

EMISSIONS STANDARDS

12. Emissions Standards: Emissions from each CTG/DB shall not exceed the following BACT standards. Compliance with the BACT limits also insures compliance with the emission limitations in Subpart KKKK.

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	CTG	8.0	42.0	8.0, 24-hr
	Gas	CTG & DB	7.6	52.5	6, 12-month
		CTG Normal Mode	4.1	23.2	
NO_X [b]	Oil	CTG	8.0	82.4	8.0, 24-hr [h]
	Gas	CTG & DB	2.0	24.2	2.0, 24-hr [h]
		CTG Normal Mode	2.0	20.0	
PM/PM_{10} [c]	Oil/Gas	All Modes	2 gr S/100SCF of gas, 0.0015% sulfur FO		
			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 FO		
VOC [e]	Oil	CTG	6.0	19.6	NA
	Gas	CTG & DB	1.5	5.4	
		CTG Normal Mode	1.2	4.1	
NH_3 [f]	Oil/Gas	CTG, 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, FO, and basic DB mode. The stacks test limits apply only at high load (90-100% of the CTG capacity).

b. Continuous compliance with the 24-hr 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 nitrogen dioxide (NO_2).

c. The sulfur fuel specifications combined with the efficient combustion design and operation of each CTG represents (BACT) for $PM/PM_{10}/PM_{2.5}$ 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 CTG 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 CTG capacity). Compliance with the CO CEMS based limits at lower loads shall be deemed as compliance with the VOC limit.

f. Compliance with the NH_3 slip standard shall be demonstrated by conducting tests in accordance with EPA Method CTM-027 or EPA Method 320.

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. Compliance with the 24-hour block NO_X BACT limits will insure compliance with the less stringent Subpart KKKK limits of 15 and 42 ppmvd for gas and fuel oil respectively on a 30 day rolling average.

[Rule 62-212.400(BACT), F.A.C.; 40 CFR 60, Subpart KKKK]

A. COMBINED CYCLE UNIT 3 – COMBUSTION TURBINE GENERATORS (EU 013, 014, and 015)

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.}

13. Operating Procedures: The 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 CTG, DB, HRSG, 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.]

14. 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.]

15. 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.]

16. 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.]

17. 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 CTG/HRSG system, excess emissions of NO_X and CO 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. *STG/HRSG System Cold Startup*: For cold startup of the STG/HRSG, excess NO_X and CO emissions from any CTG/HRSG system shall not exceed eight (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.

    {Permitting Note: During a cold startup of the STG system, each CTG/HRSG system is sequentially brought on line at low load to gradually increase the temperature of the STG 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 NO_X and CO emissions from any CTG/HRSG system shall not exceed three (3) hours in any 24-hour period.

A. COMBINED CYCLE UNIT 3 – COMBUSTION TURBINE GENERATORS (EU 013, 014, and 015)

c. *CTG/HRSG System Cold Startup*: For cold startup of a CTG/HRSG system, excess NO_X and CO emissions shall not exceed four (4) hours in any 24-hour period. "Cold startup of a CTG/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 NO_X and CO emissions shall not exceed two (2) hours in any 24-hour period.

18. Ammonia Injection: Ammonia injection shall begin as soon as operation of the CTG/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 CTG.
[Design; Rules 62-212.400(BACT) and 62-210.700, F.A.C.]

19. 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

20. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
CTM-027 or 320	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.} Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy
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. The ascarite trap may be omitted or the interference trap of section 10.1 may be used in lieu of the silica gel and ascarite traps.}
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

No other methods may be used for compliance testing unless prior written approval is received from the administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C.
[Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

21. Initial Compliance Determinations: Initial compliance 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 the unit. Each CTG shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_X, VOC, visible emissions, and ammonia slip. 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]

22. 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.]

23. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), each CTG 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.]

24. Compliance for SAM, SO_2 and $PM/PM_{10}/PM_{2.5}$: In stack compliance testing is not required for SAM, SO_2 and $PM/PM_{10}/PM_{2.5}$. Compliance with the limits and control requirements for SAM, SO_2 and $PM/PM_{10}/PM_{2.5}$ is based on the recordkeeping required in Specific Condition 30, visible emissions testing and CO continuous monitoring. [Rule 62-212.400 (BACT), F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

25. Continuous Emissions Monitoring System(s) (CEMS): The permittee shall install, calibrate, maintain, and operate CEMS to measure and record the emissions of CO and NO_X from the combined cycle CTG 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. COMBINED CYCLE UNIT 3 – COMBUSTION TURBINE GENERATORS (EU 013, 014, and 015)

a. *CO Monitors:* The CO monitors shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A within 60 calendar days of achieving permitted capacity as defined in Rule 62-297.310(2), F.A.C., but no later than 180 calendar days after initial startup. 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. CEMS 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 International Organization of Standardization (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. *12-month Rolling Averages:* Compliance with the long-term emission limit for CO shall be based on a 12-month rolling average. Each 12-month rolling average shall be the arithmetic average of all valid hourly averages collected during the current calendar month and the previous 11 calendar months.

e. *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 19 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.

f. *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.]

A. COMBINED CYCLE UNIT 3 – COMBUSTION TURBINE GENERATORS (EU 013, 014, and 015)

RECORDS AND REPORTS

28. Monitoring of Capacity: The permittee shall monitor and record the operating rate of each CTG and HRSG DB system on a daily average basis, considering the number of hours of operation during each day (including the times of startup, shutdown, malfunction and fuel switching). Such monitoring shall be made using a monitoring component of the CEMS 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 CTG 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:* 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. *ULSD Fuel Oil:* 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 NO_X 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 CTG 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.; 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. COOLING TOWER (EU 016)

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

ID	Emission Unit Description
016	One 26-cell mechanical draft cooling tower

EQUIPMENT

1. Cooling Tower: The permittee is authorized to install one new 26-cell mechanical draft cooling tower with the following nominal design characteristics: a circulating water flow rate of 304,000 gpm; design hot/cold water temperatures of 92 °F/76 °F; a design air flow rate of 1,350,000 actual cubic feet per minute (acfm) per cell; a liquid-to-air flow ratio of 1.13; and drift eliminators. The permittee shall submit the final design details within 60 days of selecting the vendor. [Application and 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.}.

C. PROCESS HEATERS (EU 017)

This section of the permit addresses the following emissions units.

ID	Emission Unit Description
017	Two gas-fueled 10 MMBtu/hr process heaters

NSPS APPLICABILITY

1. NSPS Subpart Dc Applicability: Each process heater 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 STANDARDS

2. 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

3. 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 the 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

4. Equipment: The permittee is authorized to install, operate, and maintain two 10 MMBtu/hr process heaters for the purpose of heating the natural gas supply to the CTs.
   [Applicant Request and Rule 62-210.200(PTE), F.A.C.]

PERFORMANCE REQUIREMENTS

5. Hours of Operation: The gas-fueled process heaters are allowed to operate continuously (8760 hours per year). [Applicant Request and Rule 62-210.200(PTE), F.A.C.]

NOTIFICATION, REPORTING AND RECORDS

6. Notification: Initial notification is required for the two small gas-fueled 10 MMBtu/hr process heaters. [40 CFR 60.7]

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

D. EMERGENCY GENERATORS (018)

This section of the permit addresses the following emissions unit.

ID	Emission Unit Description
018	Two nominal 2,250 kilowatts (kw) Liquid Fueled Emergency Generators – Reciprocating Internal Combustion Engines (model year 2007-2010)

NESHAPS APPLICABILITY

1. NESHAPS Subpart ZZZZ Applicability: These emergency generators are Liquid Fueled Reciprocating Internal Combustion Engines (RICE) and shall comply with applicable provisions of 40 CFR 63, Subpart ZZZZ.

   [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 shall comply with applicable provisions of 40 CFR 60, Subpart IIII.

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

EQUIPMENT SPECIFICATIONS

3. Equipment: The permittee is authorized to install, operate, and maintain two 2,250 kw emergency generators. [Applicant Request and 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 ultralow sulfur diesel fuel oil (0.0015% sulfur). [Applicant Request and 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% ULSD FO	0.4 gm/bhp-hr

   Note 1. Hydrocarbons are surrogate for VOC.

   {The BACT limits are equal to the values corresponding to the Table 1 values cited in 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 the 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 ULSD 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]

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.}

NOTIFICATION, REPORTING AND RECORDS

8. Notifications: Permittee shall submit initial notification as required by 40 CFR 60.7, 40 CFR 63.9, and 40 CFR 63.6590 (b) (i) for the two 2,250 kW RICE units.

9. 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.].

SECTION IV. APPENDICES

CONTENTS

PERMIT NO. 0990646-005-AC/PSD-FL-354B

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

PERMITTEE

Florida Power and Light Company (FPL)
West County Energy Center

Authorized Representative:
Ms. J. Carine Bullock, Plant General Manager

Final Permit No. 0990646-005-AC/PSD-FL-354B
Air Construction Permit Revision -
Revisions to Excess Emissions Provisions

West County Energy Center
Palm Beach County, Florida

PROJECT

This is the final air construction permit, which revises Permit No. 0990646-001-AC/PSD-FL-354 for the combined cycle combustion turbines, Unit 1 and Unit 2. The revised permit conditions are related to excess emissions provisions. The existing plant is a power plant categorized under Standard Industrial Classification No. 4911. This existing plant is located in Palm Beach County at 20505 State Road 80 in Loxahatchee, Florida. The UTM Coordinates are: Zone 17, 562.19 km East and 2953.04 km North; Latitude: 26° 41' 54.98" North and Longitude: 80° 22' 29.54" West.

This final permit is organized into the following sections: Section 1 (General Information) and Section 2 (Permit Revisions). As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality. A copy of this permit modification shall be filed with the referenced permit and shall become part of the permit.

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

Executed in Tallahassee, Florida

For the Division of Air Resource Management

Jeffery J. Koerner — 7-12-11
(Signature) (Date)

Jeffery F. Koerner
(Printed Name of Above Designee)

MPH/tlv/jkh/sms

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit Revision) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on 7/12/11 to the persons listed below.

Ms. J. Carine Bullock, FPL: carine.bullock@fpl.com
Mr. John Hampp, FPL: john.hampp@fpl.com
Mr. David Fawcett, FPL: david.fawcett@fpl.com
Mr. Kennard F. Kosky, P.E., Golder Associates, Inc.: ken_kosky@golder.com
Mr. James Stormer, PBCHD: james_stormer@doh.state.fl.us
Ms. Cindy Mulkey, DEP Siting Office: cindy.mulkey@dep.state.fl.us
Ms. Heather Abrams, U.S. EPA Region 4: abrams.heather@epa.gov
Ms. Katy R. Forney, U.S. EPA Region 4: forney.kathleen@epa.epa.gov
Ms. Ana Oquendo-Vazquez, U.S. EPA Region 4: oquendo.ana@epa.gov
Ms. Barbara Friday, DEP BAR: barbara.friday@dep.state.fl.us (for posting with U.S. EPA, Region 4)
Ms. Lynn Scearce, DEP BAR: lynn.scearce@dep.state.fl.us (for reading file)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

Barbara J. Friday 7/12/11
Clerk Date

FACILITY DESCRIPTION

This existing facility is a nominal 2,500 megawatt (MW) green field power plant. The initial phase of the facility was the construction of two nominal 1,250 MW gas-fired combined cycle units that use ultra low sulfur (ULS) fuel oil as backup fuel. The two combined cycle units are designated as Unit 1 and Unit 2. Also at the facility are miscellaneous unregulated/insignificant emissions units and/or activities.

FACILITY REGULATORY CLASSIFICATION

- This facility is a major source of hazardous air pollutants (HAP).
- This facility operates units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400 (PSD), F.A.C.

PROPOSED PROJECT

As part of the project for the initial Title V air operation permit (Project No. 0990646-004-AV), the applicant requested a concurrent air construction permit revision to change several underlying construction permit conditions related to excess emissions provisions.

The following permit conditions are revised as indicated. ~~Strikethrough~~ is used to denote the deletion of text. Double-underlines are used to denote the addition of text. All changes are emphasized with yellow highlight in the electronic document.

Permit Being Modified: Permit No. 0990646-001-AC/PSD-FL-354
Affected Emissions Units: Combined Cycle Combustion Turbines (CTs) and Heat Recovery Steam Generators (HRSGs) (E.U. ID Nos. 001 - 006)

The affected Specific Condition Nos. III.A.15., 18., 20., 25. and 32. from Permit No. 0990646-001-AC /PSD-FL-354 are hereby changed as follows (the remainder of the permit remains unchanged as a result of this permitting action):

15. Alternate Visible Emissions Standard: Visible emissions due to startups, shutdowns, fuel switches 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.]

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:~~ For each gas turbine/HRSG System excess emissions of NOx and CO resulting from startup, shutdown, or malfunction shall be excluded from CEMS data in any 24-hour period ("any 24-hour period" means a calendar day, midnight to midnight) for the following conditions (These conditions are considered separate events and each event may occur independently within any 24-hour period): ~~A "documented malfunction" means a malfunction that is documented within one working day of detection by contacting the Compliance Authority by telephone, facsimile transmittal, or electronic mail.~~

    a. *Steam Turbine Cold Startup*: For cold startup of the steam turbine, ~~excess~~ excluded emissions from any gas turbine/HRSG system shall not exceed eight hours in any 24-hour period. A cold "startup of the steam turbine" 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, 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. *Gas Turbine/HRSG System Cold Startup*: For cold startup of a gas turbine/HRSG system, ~~excess~~ excluded 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.

    c. *Gas Turbine/HRSG System Warm Startup*: For warm startup of a gas turbine/HRSG system, excluded emissions shall not exceed two hours in any 24-hour period. "Warm startup of a gas turbine/HRSG system" is defined as a startup after the pressure in the high-pressure (HP) steam drum is above 450 psig.

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

    e. *Gas Turbine/HRSG System Shutdown*: For shutdown of the gas turbine/HRSG operation, excluded emissions from any gas turbine/HRSG system shall not exceed two hours in any 24-hour period.

    f. *Fuel Switching*: For fuel switching, ~~excess~~ excluded emissions shall not exceed 2 hours in any 24-hour period for each fuel switch and no more than four hours in any 24-hour period for any gas turbine/HRSG system.

    g. *Documented Malfunction*: For the gas turbine/HSRG system, excess emissions of NOx and CO resulting

from documented malfunctions shall not exceed two hours in any 24-hour period. A "documented malfunction" means a malfunction that is documented within one working day of detection by contacting the Compliance Authority by telephone, facsimile transmittal, or electronic mail.

20. DLN Tuning / FSNL Testing: CEMS data collected during initial or other major DLN tuning sessions and during manufacturer required Full Speed No Load (FSNL) trip tests 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~~one working (business) day 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.]

25. CEM Systems: ...
    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 or 40 CFR Part 75, 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.
    ...

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, and the amounts of authorized data excluded following the ~~NSPS~~ format in ~~40 CFR 60.7(c), Subpart A~~ Figure XSE attached to this permit. Periods of startup, shutdown ~~and~~, malfunction, fuel switching and tuning shall be monitored~~;~~ and recorded at all times ~~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 NOx 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]

FIGURE XSE

QUARTERLY EXCESS EMISSIONS AND MONITORING REPORT FOR SIP-ONLY STANDARDS

Company: _____ Plant Name: _____

Address: _____

Emissions Unit ID No. ____ Description: _____

Pollutant (check one): ___ CO ___ NOx Emission Limitation: _____

Reporting period: ___ Q1 (Jan. - March) ___ Q2 (April - June) ___ Q3 (July - Sept.) ___ Q4 (Oct. - Dec.)
Year: _____

Monitor Manufacturer: _____

Model No.: _____

Date of Latest CEMS Certification or Audit: _____

Total emissions unit operating time in reporting period[1]: _____ hours

Excluded Emission Data Summary[1]	CEMS Performance Summary[1, 5]
1. Duration of excluded emissions due to:	1. CEMS downtime due to:
a. ST Cold Startup[2] ____	a. Monitor equipment malfunctions ____
b. GT/HRSG Cold Startup[2] ____	b. Non-Monitor equipment malfunctions ____
c. GT/HRSG Warm Startup[2] ____	c. Quality assurance calibration ____
d. Shutdown ____	d. Other known causes ____
e. Fuel Switching ____	e. Unknown causes ____
f. Documented Malfunction ____	2. Total CEMS Downtime ____
g. Tuning ____	3. Total CEMS Downtime x (100%) / [Total source operating time] ____%[4]
h. Total Authorized Data Excluded ____	
2. Total duration of excluded emissions x (100%) / [Total source operating time] ____%	
3. Number of Compliance Averages > Limit[3] ____	

[1] For the reporting period, record all times in hours.

[2] "ST" means steam turbine. "GT/HRSG" means gas turbine/heat recovery steam generator.

[3] If an exceedance occurs after excluding data as authorized by permit, identify the number of non-compliant averages for the quarter. In addition, provide the hour-by-hour data for each non-compliant average and describe the circumstances causing the exceedance and the corrective actions taken.

[4] If the total CEMS downtime is 5% or greater of the total operating time, the permittee shall also submit a report identifying the problems with maintaining a monitor availability of at least 95% and the corrective actions planned for the next quarter.

[5] On a separate page, describe any changes in the CEMS, process equipment or control equipment since the last quarterly report.

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

Name: _____

Title: _____

Signature: _____ *Date*: _____

ATTACHMENT FPL-EU1-IV3

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT FPL-EU1-IV3

ALTERNATIVE METHODS OF OPERATION
COMBINED CYCLE UNIT 3

West County Energy Center (WCEC) combined cycle combustion turbine (CT)/heat recovery steam generator (HRSG) Unit 3 (3A, 3B & 3C) 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 CT is limited to 2,333 million British thermal units per hour (MMBtu/hr) 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 (LHV) 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 3,697,720 MMBtu/yr for all three CT/HRSGs combined.

Heat input rates will vary depending upon gas turbine characteristics, ambient conditions, alternative methods of operation, and evaporative cooling.

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 [2]
Cooling Tower

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 26-cell Mechanical Draft Cooling Tower

3. Emissions Unit Identification Number: **016**

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

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

☐ Acid Rain Unit

☐ CAIR Unit

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
One 26-cell mechanical draft cooling tower serving Unit 3.

EMISSIONS UNIT INFORMATION
Section [2]
Cooling Tower

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

1. Control Equipment/Method Description: **Mist Eliminators-High Efficiency**
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: **304,000 gallons/min**		
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: **Based on Permit 0990646-002-AC/PSD-FL-396.**		

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: **97**°F	9. Actual Volumetric Flow Rate: **1,358,000** 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 ____ 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:		

Segment Description and Rate: Segment ____ of ____

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

EMISSIONS UNIT INFORMATION
Section [2]
Cooling Tower

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	152		WP
PM10	152		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: **26.6** lb/hour **<100** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0005% Drift Rate** Reference: **Permit No 0990646-002-AC/PSD-FL-396**	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 hourly emission rate based on PSD permit application dated December 2007.

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: **0.0005% Drift Rate** Reference: **Permit No 0990646-002-AC/PSD-FL-396**	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 hourly emission rate based on PSD permit application dated December 2007.

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:	

EMISSIONS UNIT INFORMATION
Section [2]
Cooling Tower

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-EU2-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-EU2-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: **12/20/2010**
   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

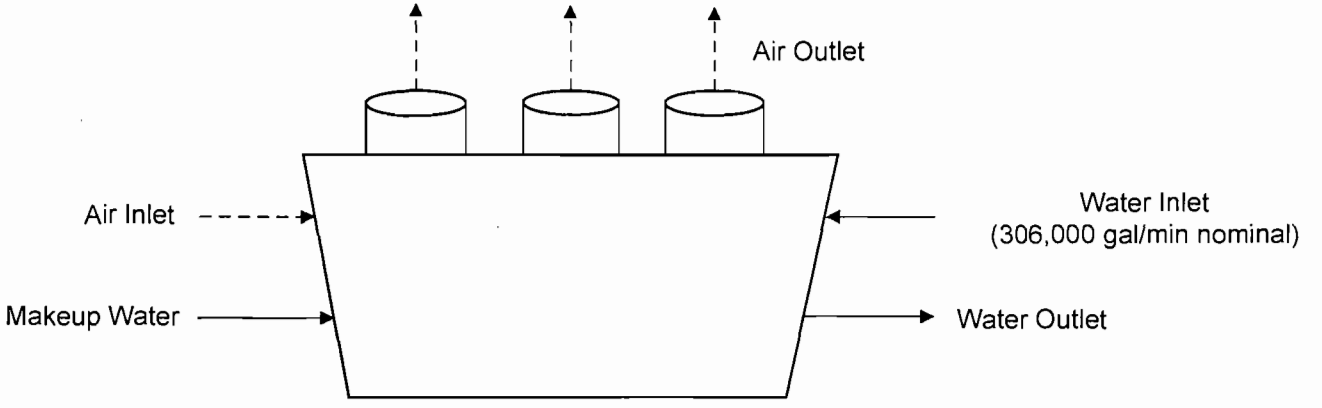
Additional Requirements for Title V Air Operation Permit Applications

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-EU2-I1

PROCESS FLOW DIAGRAM



Attachment FPL-EU2-I1
Process Flow Diagram
26-Cell Wet Circulating Water Cooling Tower
FPL West County Energy Center

Process Flow Legend
Solid/Liquid ——→
Gas — — →
Steam - - - - →

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ATTACHMENT FPL-EU2-I3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT FPL-EU2-I3
DETAILED 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
Support 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 [3]
Natural Gas Process 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-fired fuel heaters

3. Emissions Unit Identification Number: **017**

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

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

   ☐ Acid Rain Unit

   ☐ CAIR Unit

9. Package Unit:
   Manufacturer: Model Number:

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 Unit 3. Only one is required for Unit 3 operation while the other one is permitted as a spare for WCEC.

EMISSIONS UNIT INFORMATION
Section [3]
Natural Gas Process Heaters

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	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment: **Heat input rated limited to 8.3 MMBtu/hr HHV 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** feet	7. Exit Diameter: **1** feet
8. Exit Temperature: **500**°F	9. Actual Volumetric Flow Rate: **4,109** 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 PSD permit application dated December 2007. Stack volumetric flow rate adjusted for 8.3 MMBtu/hr heat input. Flow Rate = 4,950 x 8.3/10 = 4,109 acfm**		

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: **1026**
10. Segment Comment: **Maximum annual rate based on 8,760 hr/yr operation. Maximum hourly rate = 8.3 MMBtu/hr HHV ÷ 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	Fuel Quality		EL
NOx			EL
SO2	Fuel Quality		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. 0990646-002-AC/PSD-FL-396**	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 lb = 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: **Manufacturer Certification or initial compliance testing using EPA Method 10**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on BACT. Permit No. 0990646-002-AC/PSD-FL-396. 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. 0990646-002-AC/PSD-FL-396**	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 lb = 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: **Manufacturer certification or initial compliance testing using EPA Method 7E**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on BACT. Permit No. 0990646-002-AC/PSD-FL-396. 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 **0.2** 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. 0990646-002-AC/PSD-FL-396**	7. Emissions Method Code: **2**
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/100 scf 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/2,000 lb = 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 and 10% opacity**	4. Equivalent Allowable Emissions: **0.046** lb/hour **0.2** tons/year
5. Method of Compliance: **Fuel Vendor Information**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on BACT. Permit application for 0990646-002-AC/PSD-FL-396. 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 lb = 0.067 TPY
Potential emissions for one natural gas heater.

11. Potential, Fugitive, and Actual Emissions Comment:
PM_{10} 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: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 gr S/100 scf and 10% opacity**	4. Equivalent Allowable Emissions: **0.015** lb/hour **0.067** tons/year
5. Method of Compliance: **Fuel sampling (natural gas specification)**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions based on BACT. Permit No. 0990646-002-AC/PSD-FL-396. 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/2,000 lb = 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: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2 gr S/100 scf and 10% opacity**	4. Equivalent Allowable Emissions: **0.044** lb/hour **0.19** tons/year
5. Method of Compliance: **Fuel Sampling (natural gas specification)**	
6. Allowable Emissions Comment (Description of Operating Method): **Permit No. 0990646-002-AC/PSD-FL-396. 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: **100** % Maximum Period of Excess Opacity Allowed: **60** 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:	

EMISSIONS UNIT INFORMATION
Section [3]
Natural Gas Process Heaters

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 **12/11/2007**

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: **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: **Manufacturer specifications submitted on 09/24/2010**
   ☐ 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

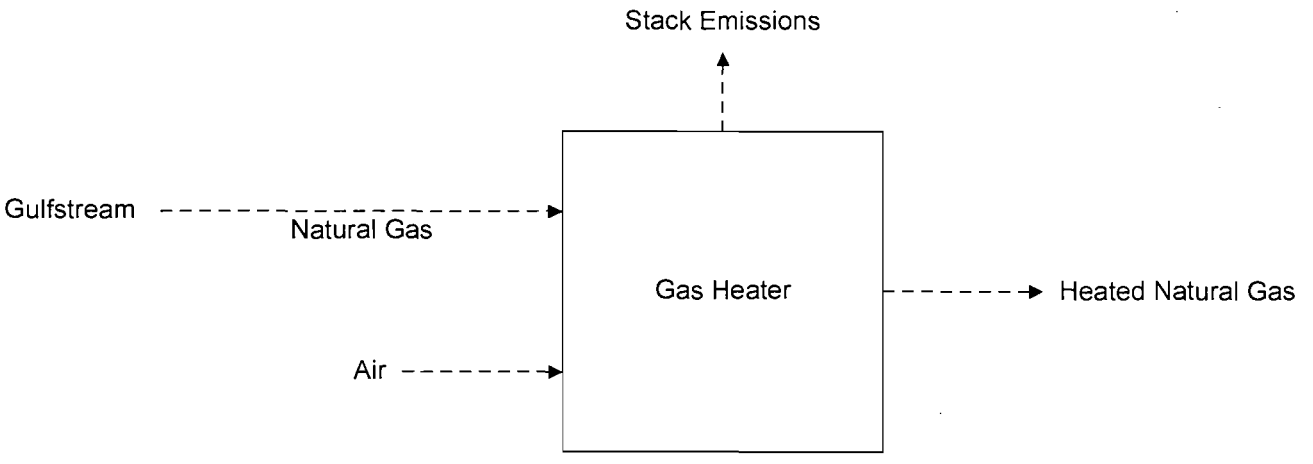
Additional Requirements for Title V Air Operation Permit Applications

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
Natural Gas Fuel Heater
FPL West County Energy Center

Process Flow Legend
Solid/Liquid
Gas
Steam

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