

Teresa

Module AB230

APPLICATION FOR AIR CONSTRUCTION PERMIT

Florida Power & Light Company
Fort Myers Power Plant

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DEC 02 2013

DIVISION OF AIR
RESOURCE MANAGEMENT

Permit Application

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

Project #

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

G710002-020-AC

ORIGINAL

Distribution: 4 copies – FDEP
2 copies – FPL
1 copy – Golder Associates Inc.

December 2013

133-87568

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**APPLICATION FOR AIR PERMIT
LONG FORM**



Department of Environmental Protection

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

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DIVISION OF AIR RESOURCE MANAGEMENT

I. APPLICATION INFORMATION

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

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

Air Operation Permit – Use this form to apply for:

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

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: Florida Power & Light Company (FPL)	
2. Site Name: Fort Myers Power Plant	
3. Facility Identification Number: 0710002	
4. Facility Location... Street Address or Other Locator: 10650 State Road 80	
City: Fort Myers	County: Lee Zip Code: 33905
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Application Contact Name: Kevin Washington, Project Manager	
2. Application Contact Mailing Address... Organization/Firm: Florida Power & Light Company – FPL Environmental Services Street Address: 700 Universe Blvd.	
City: Juno Beach	State: FL Zip Code: 33408
3. Application Contact Telephone Numbers... Telephone: (561) 691-2877 ext. Fax: (561) 691-7049	
4. Application Contact E-mail Address:	

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 12-5-13	3. PSD Number (if applicable):
2. Project Number(s): 0710002000-AC	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

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

Air Construction Permit

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

Air Operation Permit

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

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

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

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

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

Application Comment

Minor source air construction permit application to improve the performance of existing General Electric (GE) Model PG7241(7FA.03) CTs associated with Units 2A, 2B, 2C, 2D, 2E and 2F at the Fort Myers Power Plant with GE 7FA.04 components.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
018	Unit 2A - 250 MW Combined-Cycle Combustion Turbine (CT) with Non-fired HRSG	AC1B	N/A
019	Unit 2B - 250 MW Combined-Cycle Unit (CT) with Non-fired HRSG	AC1B	N/A
020	Unit 2C - 250 MW Combined-Cycle Unit (CT) with Non-fired HRSG	AC1B	N/A
021	Unit 2D - 250 MW Combined-Cycle Unit (CT) with Non-fired HRSG	AC1B	N/A
022	Unit 2E - 250 MW Combined-Cycle Unit (CT) with Non-fired HRSG	AC1B	N/A
023	Unit 2F - 250 MW Combined-Cycle Unit (CT) with Non-fired HRSG	AC1B	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 : Timothy Panoff, Plant General Manager
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Florida Power & Light Company Street Address: 10650 State Road 80 City: Fort Myers State: FL Zip Code: 33905
3. Owner/Authorized Representative Telephone Numbers... Telephone: (239) 693-4252 ext. Fax: (239) 693-4333
4. Owner/Authorized Representative E-mail Address: timothy.panoff@fpl.com
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.</i>  Signature  Date

APPLICATION INFORMATION

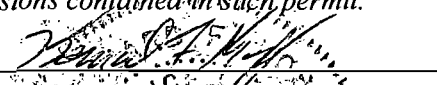
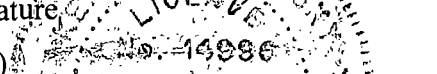
Application Responsible Official Certification

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

1. Application Responsible Official Name:
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source or CAIR source.
3. Application Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
4. Application Responsible Official Telephone Numbers... Telephone: ext. Fax:
5. Application Responsible Official E-mail Address:
6. Application Responsible Official Certification: <p>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.</p> <p>_____ Signature</p> <p>_____ Date</p>

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Kennard F. Kosky Registration Number: 14996
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates Inc.** Street Address: 6026 NW 1st Place City: Gainesville State: FL Zip Code: 32607
3. Professional Engineer Telephone Numbers... Telephone: (352) 336-5600 ext. 21156 Fax: (352) 336-6603
4. Professional Engineer E-mail Address: Ken_Kosky@golder.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/> , if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/> , if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/> , if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/> , if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i> Signature:  Date: <u>December 2, 2013</u> (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) 422.3 North (km) 2952.9		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 26° 41' 49" Longitude (DD/MM/SS) 81° 46' 55"	
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 :			

Facility Contact

1. Facility Contact Name: Brenda Bays, PGD Environmental Specialist
2. Facility Contact Mailing Address... Organization/Firm: Florida Power & Light Company Street Address: P.O. Box 430 City: Fort Myers State: FL Zip Code: 33902-0430
3. Facility Contact Telephone Numbers: Telephone: (239)-693-4390 ext. Fax: ()
4. Facility Contact E-mail Address: brenda_bays@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. <input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2. <input type="checkbox"/> Synthetic Non-Title V Source	
3. <input checked="" type="checkbox"/> Title V Source	
4. <input checked="" type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. <input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. <input checked="" type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7. <input type="checkbox"/> Synthetic Minor Source of HAPs	
8. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. <input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. <input type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. <input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM/PM10	A	N
CO	A	N
VOC	A	N
SO2	A	N
NOx	A	N
HAPS	B	N
Pb	B	N
SAM	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

<p>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)</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: May 2012</p>
<p>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)</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: May 2012</p>
<p>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)</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: May 2012</p>

Additional Requirements for Air Construction Permit Applications

<p>1. Area Map Showing Facility Location:</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (existing permitted facility)</p>
<p>2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL):</p> <p><input checked="" type="checkbox"/> Attached, Document ID: Part II</p>
<p>3. Rule Applicability Analysis:</p> <p><input checked="" type="checkbox"/> Attached, Document ID: Part II</p>
<p>4. List of Exempt Emissions Units:</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (no exempt units at facility)</p>
<p>5. Fugitive Emissions Identification:</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>
<p>6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.):</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>
<p>7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.):</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>
<p>8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.):</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>
<p>9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.):</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>
<p>10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications -- NA

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-- NA

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

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

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

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

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

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

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

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

1. Acid Rain Program Forms:

Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):

Attached, Document ID: _____ Previously Submitted, Date: **May 2012** _____

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: **May 2008** _____

Not Applicable (not a CAIR source)

Additional Requirements Comment

EMISSIONS UNIT INFORMATION

Section [1]

Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

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]

Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

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:
Units 2A – 2F: Six identical combined-cycle combustion turbines with unfired heat recovery steam generators
3. Emissions Unit Identification Number:
EU 018 (Unit 2A), EU 019 (Unit 2B), EU 020 (Unit 2C), EU 021 (Unit 2D), EU 022 (Unit 2E), EU 023 (Unit 2F)
- | | | | |
|--|--------------------------------|--------------------------|---|
| 4. Emissions Unit Status Code:
A | 5. Commence Construction Date: | 6. Initial Startup Date: | 7. Emissions Unit Major Group SIC Code: 49 |
|--|--------------------------------|--------------------------|---|
8. Federal Program Applicability: (Check all that apply)
 Acid Rain Unit CAIR Unit
9. Package Unit:
Manufacturer: **General Electric** Model Number: **MS7241, 7FA.04**
10. Generator Nameplate Rating:
11. Emissions Unit Comment:
6-on-1 combined cycle system consisting of six nominal 170 MW GE 7FA.04 combustion turbine-electrical generator sets with unfired HRSG that produces sufficient steam to generate additional 80 MW.
Initial startup dates: 26-Oct-00 (Unit 2A), 22-Nov-00 (Unit 2B), 22-Dec-00 (Unit 2C), 31-Dec-02 (Unit 2D), 31-Dec-02 (Unit 2E) and 31-Dec-02 (Units 2F).

EMISSIONS UNIT INFORMATION

Section [1]

Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

Emissions Unit Control Equipment/Method: Control 1 of 1

1. Control Equipment/Method Description:

Low NOx Burners - Dry low-NOx combustors

2. Control Device or Method Code: **205**

Emissions Unit Control Equipment/Method: Control _ of _

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _ of _

1. Control Equipment/Method Description:

2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION

Section [1]

Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

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: Nominal power output for the combined-cycle unit – 1,500 MW				
3. Maximum Heat Input Rate: 10,560 MMBtu/hr (LHV)				
4. Maximum Incineration Rate: pounds/hr tons/day				
5. Requested Maximum Operating Schedule: <table><tr><td>24 hours/day</td><td>7 days/week</td></tr><tr><td>52 weeks/year</td><td>8,760 hours/year</td></tr></table>	24 hours/day	7 days/week	52 weeks/year	8,760 hours/year
24 hours/day	7 days/week			
52 weeks/year	8,760 hours/year			
6. Operating Capacity/Schedule Comment: Maximum heat input and power outputs based on compressor inlet conditions of 59 °F ambient temperature, 60% relative humidity, 100% load, and 14.7 psia. Maximum heat input rate for each turbine: 1,760 MMBtu/hr/ (LHV) Maximum heat input rate for each turbine in peak mode operation: 1,838 MMBtu/hr (HHV)				

EMISSIONS UNIT INFORMATION

Section [1]

Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

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: 2A-2F HRSG STACK		2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 125 feet	7. Exit Diameter: 19 feet	
8. Exit Temperature: 220°F	9. Actual Volumetric Flow Rate: 1,119,162 acfm	10. Water Vapor: 7.6 %	
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 Title V permit renewal application dated May 2012.			

EMISSIONS UNIT INFORMATION

Section [1]

Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Internal Combustion Engines; Electric Generation; Natural Gas Turbine		
2. Source Classification Code (SCC): 2-01-002-01	3. SCC Units: Million cubic feet burned	
4. Maximum Hourly Rate: 11.11	5. Maximum Annual Rate: 97,374	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 950 (LHV)
10. Segment Comment: <p>Hourly rate = 1,760 MMBtu/hr / 950 MMBtu/ MMft³ x 6 turbines = 11.11 MMft³/hr Annual rate = 11.11 x 10⁶ ft³/hr x 8,760 hrs/yr = 97,374 MMft³/yr</p>		

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 [1]

Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
NOx	205		EL
CO			EL
PM/PM ₁₀			WP
VOC			EL
SO ₂			WP

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE 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: NO_x		2. Total Percent Efficiency of Control:	
3. Potential Emissions lb/hour tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code:	
8.a. Baseline Actual Emissions (if required): 926.15 tons/year		8.b. Baseline 24-month Period: From: 1/1/2008 To: 12/31/2009	
9.a. Projected Actual Emissions (if required): 957.32 tons/year		9.b. Projected Monitoring Period: <input checked="checked" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table 7 of Part II.			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

Page [1] of [6]
Nitrogen Oxide – NO_x

**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: 9 ppmvd @ 15% O₂	4. Equivalent Allowable Emissions: 65 lb/hour tons/year
5. Method of Compliance: CEMS (30-day rolling average)	
6. Allowable Emissions Comment (Description of Operating Method): Based on ISO conditions and Permit Nos. 0710002-004-AC and 0710002-018-AV. Equivalent emissions rates are for each turbine.	

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: 15 ppmvd @ 15% O₂	4. Equivalent Allowable Emissions: 102 lb/hour tons/year
5. Method of Compliance: CEMS (24-hr Block Average)	
6. Allowable Emissions Comment (Description of Operating Method): Based on peaking mode of operation at ISO conditions. Equivalent emissions rates are for each turbine. Based on Permit Nos. 0710002-014-AC and 0710002-018-AV.	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 75/110 ppmvd @ 15% O₂	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: Initial compliance test only	
6. Allowable Emissions Comment (Description of Operating Method): Limit based on for a total of 90 day period/turbine at the end of construction. Based on 40 CFR 60 Subpart GG [60.32(a)(1)] and Permit No. 0710002-018-AV.	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

Page [2] of [6]
Carbon Monoxide – CO

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE 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 lb/hour tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8.a. Baseline Actual Emissions (if required): 39.52 tons/year	8.b. Baseline 24-month Period: From: 1/1/2011 To: 12/31/2012
9.a. Projected Actual Emissions (if required): 45.43 tons/year	9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years
10. Calculation of Emissions: See Table 7 of Part II.	
11. Potential, Fugitive, and Actual Emissions Comment:	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

Page [2] of [6]
Carbon Monoxide – CO

**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: 12.0 ppmvd @ 15% O₂	4. Equivalent Allowable Emissions: 43 lb/hour tons/year
5. Method of Compliance: Stack test (3-hr average) using EPA Method 10	
6. Allowable Emissions Comment (Description of Operating Method): Based on ISO conditions and Permit Nos. 0710002-004-AC and 0710002-018-AV. Equivalent emissions rates are for each turbine.	

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: 9 ppmvd @ 15% O₂	4. Equivalent Allowable Emissions: 29 lb/hour tons/year
5. Method of Compliance: None	
6. Allowable Emissions Comment (Description of Operating Method): Based on peaking mode of operation at ISO conditions. Equivalent emissions rates are for each turbine. Based on Permit Nos. 0710002-014-AC and 0710002-018-AV	

Allowable Emissions Allowable Emissions of

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

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

Page [3] of [6]
VOC

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE 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 lb/hour		tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code:	
8.a. Baseline Actual Emissions (if required): 0.0683 tons/year		8.b. Baseline 24-month Period: From: 1/1/2008 To: 12/31/2009	
9.a. Projected Actual Emissions (if required): 0.0693 tons/year		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table 7 of Part II.			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

Page [3] of [6]
VOC

**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: 1.4 ppmvd @ 15% O₂	4. Equivalent Allowable Emissions: 2.9 lb/hour tons/year
5. Method of Compliance: Initial compliance test required	
6. Allowable Emissions Comment (Description of Operating Method): CO limit to be used as a surrogate to demonstrate annual compliance. Based on ISO conditions and Permit Nos. 0710002-004-AC and 0710002-018-AV. Equivalent emissions rates are for each turbine.	

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: 1.4 ppmvd @ 15% O₂	4. Equivalent Allowable Emissions: 3 lb/hour tons/year
5. Method of Compliance: None	
6. Allowable Emissions Comment (Description of Operating Method): Based on peaking mode of operation at ISO conditions. Equivalent emissions rates are for each turbine. Hours of operation limited to 400 hr/yr. Based on Permit Nos. 0710002-014-AC and 0710002-018-AV	

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): v,	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
 POTENTIAL/ESTIMATED FUGITIVE 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 lb/hour		tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code:	
8.a. Baseline Actual Emissions (if required): 216.21 tons/year		8.b. Baseline 24-month Period: From: 1/1/2008 To: 12/31/2009	
9.a. Projected Actual Emissions (if required): 216.21 tons/year		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table 7 of Part II.			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

Page [4] of [6]
PM/PM10

**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: ≤ 10% Opacity	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Opacity used as surrogate standard to demonstrate annual compliance. Based on normal and peaking mode of operation at ISO conditions and Permit Nos. 0710002-014-AC and 0710002-018-AV.	

Allowable Emissions Allowable Emissions _ of _

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

Allowable Emissions Allowable Emissions _ of _

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

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

Page [5] of [6]
Sulfur Dioxide – SO₂

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE 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 lb/hour	tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year		
6. Emission Factor: Reference:		7. Emissions Method Code:
8.a. Baseline Actual Emissions (if required): 19.45 tons/year	8.b. Baseline 24-month Period: From: 1/1/2008 To: 12/31/2009	
9.a. Projected Actual Emissions (if required): 19.86 tons/year	9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table 7 of Part II.		
11. Potential, Fugitive, and Actual Emissions Comment:		

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

Page [5] of [6]
Sulfur Dioxide – SO2

**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: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.8 percent S	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: Use of Natural gas assures compliance with NSPS limit.	
6. Allowable Emissions Comment (Description of Operating Method): Based on 40 CFR 60.333.	

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: Natural gas	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: Use of pipeline natural gas	
6. Allowable Emissions Comment (Description of Operating Method): Permit Nos. 0710002-004-AC and 0710002-018-AV	

Allowable Emissions Allowable Emissions _ of _

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

EMISSIONS UNIT INFORMATION

Section [1]

Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

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: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Based on Permit Nos. 0710002-004-AC and 0710002-018-AV.	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: VE99	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100% Maximum Period of Excess Opacity Allowed: 60 min/hour	
4. Method of Compliance: None	
5. Visible Emissions Comment: Per 62-210.700(1), excess emissions during startup, shutdown, or malfunction limited to 2 hours per 24 hour period.	

EMISSIONS UNIT INFORMATION

Section [1]

Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

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 2

1. Parameter Code: O2 - Oxygen	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: SERVOMEX Model Number: 1440C Serial Number: 2A:01420C/1302, 2B: 01420C/1304, 2C: 01420C/1402, 2D: 01420C/1403 2E: 01420C/1466 2F: 01420C/1444	
5. Installation Date: 2A:01-Sep-00 2B:01-Nov-00 2C:01-Dec-00 2D: 12-Apr-01 2E:03-Apr-01 2F:01-Mar-01	6. Performance Specification Test Date: 2A:11-Oct-00 2B:08-Nov-00 2C:12-Dec-00 2D: 12-Apr-01 2E:03-Apr-01 2F:31-May-01
7. Continuous Monitor Comment: CEM required pursuant to 40 CFR 75.	

Continuous Monitoring System: Continuous Monitor 2 of 2

1. Parameter Code: EM - EMISSION	2. Pollutant(s): NOx
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: TEI Model Number: 42CHL Serial Number: 2A:66125-351/ 2B:66427-352/ 2C:66490-352 2D:66131-351/ 2E:65868-650/ 2F:69215-362	
5. Installation Date: 2A: 01-Oct-00/ 2B: 01-Nov-00/ 2C: 01-Dec-00/ 2D: 01-Jan-01/ 2E:01-Feb-01/ 2F:01-Mar-01	6. Performance Specification Test Date: 2A: 11-Oct-00/ 2B: 08-Nov-00/ 2C: 12-Dec-00/ 2D: 12-Apr-01/ 2E: 03-Apr-01/ 2F: 31-May-01
7. Continuous Monitor Comment: CEM required pursuant to 40 CFR 75.	

EMISSIONS UNIT INFORMATION

Section [1]

Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date May, 2012
2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date May, 2012
3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date May, 2012
4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [1]

Units 2A, 2B, 2C, 2D, 2E and 2F Combustion Turbines

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

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

Additional Requirements for Title V Air Operation Permit Applications – N/A

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

Additional Requirements Comment

PART II

PART II

APPLICATION FOR MINOR SOURCE AIR CONSTRUCTION PERMIT FOR IMPROVING FORT MYERS UNITS 2A, 2B, 2C, 2D, 2E AND 2F (EU IDS 018, 019, 020, 021, 022 AND 023)

EXECUTIVE SUMMARY

Florida Power & Light Company (FPL) is seeking authorization from the Florida Department of Environmental Protection (FDEP) to improve the performance of the General Electric (GE) Model MS7241 gas turbines (7FA.03) associated with Units 2A through 2F (EU IDs 018, 019, 020, 021, 022, and 023) at the FPL Fort Myers Power Plant. The purpose of the project is to improve the performance of the GE Model MS7241 turbines with 7FA.04 components. The components being replaced are typically those requiring routine replacement due to normal operation. However, replacing the 7FA.03 components with 7FA.04 components results in higher efficiency and provides approximately a 5 percent increase in output power per turbine with an approximate two percent decrease in heat rate (heat input/output power) per turbine (1-percent for combined-cycle operation).

The 7FA.04 components have a projected design heat input capacity approximately two percent higher than the 7FA.03. As a result, there will be an expected increase in the design fuel flow for the units compared to same turbine inlet temperature based on manufacturer information. In addition, hourly emissions of air pollutants regulated under FDEP and federal Prevention of Significant Deterioration (PSD) program that are directly related to fuel, such as sulfur dioxide (SO₂), sulfuric acid mist (SAM), and particulate matter (PM), including PM with aerodynamic diameter equal to or less than 10 or 2.5 microns (PM₁₀/PM_{2.5}), will also potentially increase. Based on GE data for the 7FA.04 components, there will be no increase in hourly mass emissions of carbon monoxide (CO) or volatile organic compounds (VOCs), and a small increase in the hourly mass emission rate of nitrogen oxides (NO_x); however, the increased rate will be below the currently permitted mass emission rate, and the heat input is expected to be within the current operating range. Based on the current actual-to-projected actual annual emissions test, the turbine improvement project will not result in a net increase of any regulated pollutant, nor of greenhouse gases (GHGs) regulated under the Tailoring Rule, above the PSD significant emission rates (see PSD Applicability).

INTRODUCTION

The Fort Myers Power Plant is located at 10650 State Road 80, in Lee County, Florida. The facility is currently operating under Title V Permit No. 0710002-018-AV.

Golder Associates Inc. (Golder) was contracted to prepare and submit the necessary air permit application seeking authorization for the turbine energy improvements and assist with any FDEP questions and additional information requests. This air permit application consists of the appropriate

application form [Part I; DEP Form 62-210.900(1)], a technical description of the project, rule applicability for the project, and emissions calculations demonstrating that the proposed project will not result in a significant net emissions increase.

Fort Myers Unit 2's six gas turbines are permitted to fire only natural gas. The current design heat input rates for the turbines are 1,535 million British thermal units per hour (MMBtu/hr) [75 degrees Fahrenheit (°F) ambient temperature, AC permit application submitted September 1998]. There will be no change in the type of permitted fuels as a result of the project. The design heat input rate for natural gas-firing will increase by 29 MMBtu/hr (2 percent) based on GE data on 7FA.04 turbines at 75°F ambient temperature. Data from the National Climatic Data Center (NCDC) indicates the 30-year (1983 to 2012) average temperature for Fort Myers is 74°F (median 75°F).

The current permitted emissions limits for the Unit 2 gas turbines are listed in Condition Nos. B.9 through B.16 of Title V Permit No. 0710002-018-AV. The improved 7FA.04 model turbines will guarantee the same concentration-based emissions limits for NO_x, CO, and VOC. There will also be no increase in hourly mass emission rates for CO and VOC. Based on GE performance data for the 7FA.03 and 7FA.04, the potential hourly mass emission rate of NO_x will theoretically increase from 55.3 to 56.5 pound per hour (lb/hr) (at 75°F). However, the increased rates are less than the current permitted emissions rate of 65 lb/hr.

There are currently no mass based emissions limits for SO₂, SAM, or PM/PM₁₀/PM_{2.5}. Since emissions of these pollutants are directly proportional to fuel flow and the proposed project will increase the design fuel flow capacity of the turbines, the potential hourly mass emission rates of these pollutants will also increase. Due to the 7FA.04 component installation, potential emissions of all pollutants will decrease on a per megawatt-hour (MW-hr) basis for all regulated pollutants including NO_x.

There are currently no post-combustion control technologies for emissions of CO, VOC, SO₂, SAM, or PM/PM₁₀/PM_{2.5}. Emissions of NO_x are controlled by Dry Low-NO_x (DLN) combustion technology. The proposed energy improvements will rely on the same existing control technologies.

PROJECT DESCRIPTION

Fort Myers Unit 2 consists of six gas turbine electrical generator sets, which include GE Model MS7241 turbines/generators, heat recovery steam generators, and a steam electric generator. The proposed project will replace component parts normally associated with maintenance outages for the GE MS7241, 7FA.03 turbine with 7FA.04 components, which offer greater output and greater efficiency without sacrificing reliability, availability, or operational flexibility. The 7FA.04 components will increase the output power by approximately 5 percent (base load at 75°F). As a result of the greater output, mass emission rates of all criteria pollutants will decrease on a per MW-hr basis.

The project will include installation of new hot gas path components, new combustion liners and flow sleeves, and new control software to increase firing temperature. The advanced gas path of 7FA.04 uses less air for cooling the parts. As a result, more air is available for combustion and power generation. The turbines will remain equipped with the DLN 2.6 combustion system, which is GE's latest evolution of Dry Low-NO_x combustion technology.

RULE APPLICABILITY

PSD/New Source Review (NSR)

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

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

The Fort Myers Power Plant is an existing major facility under PSD rules. For an existing major facility for which a project is proposed, the project is subject to PSD review if the net increase in emissions due to the project is greater than the PSD significant emission rates for any applicable pollutant. A "modification" is defined in FDEP Rule 62-210.200(205), F.A.C., as "any physical change in, change in the method of operation of, or addition to a facility which would result in an increase in the actual emissions of any pollutant subject to regulation under the [Clean Air] Act, including any not previously emitted, from any emission unit or facility". Because there is a physical change and the hourly mass emission rates may potentially increase, the project is a potential modification as defined in Rules 62-210.200 and 62-212.400 (PSD), F.A.C.

Under EPA guidance, the first step in determining PSD applicability is whether a potential increase in emissions from a particular change alone are significant. To demonstrate that the proposed project is not a major modification under the Department's PSD rules, an emissions comparison between baseline actual emissions and projected actual emissions was conducted pursuant to FDEP Rule 62-212.400(2)(1), F.A.C., for Fort Myers Power Plant Unit 2 (Units 2A, 2B, 2C, 2D, 2E and 2F). The baseline, or current, actual emissions are the emissions over a consecutive 24-month period within the

5 years immediately preceding the date that a complete application is submitted. The use of different consecutive 24-month periods for each pollutant is allowed. Projected actual emissions are maximum annual rate, in tons per year, at which the existing emission unit is projected to emit a PSD pollutant in any of the 5 years following the date the unit resumes regular operation.

Table 1 presents the actual annual heat inputs reported in the Annual Operating Reports (AORs) for the period 2008 through 2012. This table also presents the total actual heat input for Units 2A through 2F, as well as the actual operating hours for each unit.

Table 2 summarizes the annual emissions reported in the AORs for each calendar year in the period 2008 through 2012. The carbon dioxide (CO₂) emission rates in Table 2 were obtained from EPA's Acid Rain database.

Since emissions of nitrous oxide (N₂O) and methane (CH₄) were not reported in the AORs, they were calculated based on the actual annual heat input and emission factors from Title 40, Part 98 of the Code of Federal Regulations (40 CFR 98), Subpart C. These emissions are summarized in Table 3, which also shows the CO₂ equivalent (CO₂e) rates for these pollutants.

Table 4 presents the average emissions for each consecutive 2-year period based on the calendar year emissions in Tables 2 and 3. The annual average emissions for each consecutive 2-year period are consistent with the definition of baseline actual emissions for fossil fuel-fired steam electric generating units.

The actual hourly emission rates were calculated based on the reported annual emission rates and operating hours in the AORs, which are summarized in Table 5.

The actual emission factors in pounds per million British thermal units heat input (lb/MMBtu) were calculated in Table 6 for each calendar year in the period 2008 through 2012. The factors are calculated by dividing the total annual emissions by the total annual heat input for natural gas-firing. To conservatively estimate future emissions with the upgrade, the upper 90 percent confidence interval was used. Since 5 years of data are being evaluated, the Student "t" test probability function is the appropriate method. Since there is normal variability in emissions, the upper 90 percent confidence intervals will envelope the small potential increases in emissions due to increased performance. For CO₂, the emission rates in lb/MMBtu based on the Part 75 monitoring was used since this data was the basis of the annual CO₂ emissions. For the N₂O and CH₄, the Part 98 emission factors are used.

The PSD applicability analysis is presented in Table 7. The baseline emissions are obtained from Table 4, which are maximum 2-year average emissions for each pollutant. The projected annual heat input rates are obtained from Table 6, which are based on maximum 2-year average actual heat input

rate. As discussed, the future emission factors are based on Student "t" distribution upper 90 percentile confidence interval (C.I.) as calculated from Table 6. The projected annual emissions are based on the projected annual heat input rates based on the highest two-year average from 2008 - 2012 multiplied by the actual emission factors for Unit 2 from 2008 - 2012. The difference between the projected actual emissions and the baseline emissions were compared to the PSD significant emission rates. As shown, all emissions increases are less than the PSD significant emission rates.

GHG emissions as total CO₂e is also shown in Table 7. As shown, the projected increase in all regulated pollutants for the project including GHGs is less than the PSD significant emission rates in the EPA Tailoring Rule. As a result, the proposed project is not subject to PSD review since the proposed change alone does not exceed the PSD significant emission rates as provided for in EPA guidance. A minor source air construction permit application is applicable to the project.

While there is a slight project increase in GHG emissions, there is an overall reduction in heat rate (Btu/kWh) that reduces the amount of emissions for each megawatt-hour (MWh) generated. For example, there is an approximate 1 percent decrease in heat rate as a result of the project. As shown in Table 7, the baseline actual CO₂e emissions are approximately 3.8 million tons/year. With a 1 percent reduction in heat rate for the project, the CO₂e emissions for the same amount of generation as 2008-2009 would be approximately 38,000 tons lower. Since the proposed project will increase power output, on a lb CO₂e/MWh basis, Fort Myers Unit 2 will have less CO₂e emissions than it currently does. The output based emissions for other air emissions will also decrease on a lb/MWh basis.

NSPS

Fort Myers Units 2A through 2F are currently subject to 40 CFR 60 Subpart GG, Standard of Performance for Stationary Gas Turbines. For the purpose of New Source Performance Standards (NSPS) applicability, 40 CFR 60.14 defines modification as any physical or operational change to an existing facility that results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies. 40 CFR 60.14 also states that the emission rate shall be expressed as kilograms per hour (kg/hr). NO_x and SO₂ are regulated under NSPS for Stationary Gas Turbines. Since the hourly emission rates for these pollutants may potentially increase, the proposed project is a potential modification according to the rules for NSPS. As a result, the Unit 2 combustion turbines 2A through 2F may be subject to 40 CFR 60 Subpart KKKK, the revised Standard of Performance for Stationary Combustion Turbines, which applies to stationary combustion turbines with a heat input at peak load equal to greater than 10 MMBtu/hr that commence construction, modification, or reconstruction after February 18, 2005.

After the installation of the 7FA.04 components, the turbines will comply with the same concentration-based NO_x emissions standards they are currently subject to, which are 9 parts per million, dry volume

basis, at 15-percent oxygen (ppmvd @ 15% O₂) for natural gas-firing during normal combined-cycle operation and 15 ppmvd @15% O₂ for peak mode operation.

NSPS Subpart KKKK limits NO_x emissions to 15 ppmvd @ 15% O₂ for natural gas-firing with heat input rate greater than 850 MMBtu/hr (high heating value). NSPS Subpart KKKK also limits NO_x emissions to 0.43 pound per megawatt-hour (lb/MWh) for natural gas-firing. The improved combined-cycle units will comply with these emissions standards.

The 7FA.04 improvement increases the exhaust mass flow of the combustion turbine slightly. However, the NO_x emissions on a per MWh basis will decrease due to improved efficiency.

For these reasons, it is believed no increase in kg/hr NO_x emissions will occur from the project. It is proposed that the CEMs data post the upgrades be reviewed to determine if an increase has occurred. In any event, the 7FA.04 project will comply with, and be much less than, the emission limiting standards of Subpart KKKK for NO_x.

NSPS Subpart KKKK limits SO₂ emissions by limiting the sulfur in the fuel (0.06 lb/MMBtu) or based on the output (0.9 lb/MWh). Based on AOR data for the period 2008 – 2012, the current actual maximum SO₂ emission rate is 0.00061 lb/MMBtu. The potential heat input rate for the turbines will increase by approximately 2 percent. SO₂ emissions are directly proportional to heat input for the same sulfur content of fuel and the lb/MMBtu rate is expected to remain the same. Since natural gas is the primary fuel, the amount of sulfur will vary slightly. As a result, the projected minor increase in heat input may not increase emissions based on the normal variability of sulfur in natural gas. Indeed, Section 60.14(2) of 40 CFR 60 recognizes the potential for statistical variability in determining an increase in kg/hr (i.e., Appendix C of 40 CFR 60). For this reason, future sulfur content data post upgrades will be reviewed to determine if an increase in kg/hr SO₂ emissions has occurred. In any event, the 7FA.04 project will comply with the emission limiting standards of Subpart KKKK for SO₂.

PROPOSED CHANGES TO EXISTING PERMIT CONDITIONS

The Fort Myers Plant is currently operating under Title V air operating permit No. 0710002-018-AV. Condition Nos. B.9 through B.16 of Title V permit lists the emissions limitations and standards for Units 2A through 2F. NO_x, CO, and VOC are the three pollutants with concentration-based and mass emissions limits, which are based on GE performance data for baseload operation at 59°F ambient temperature. Based on GE data, the improved turbines will achieve the same concentration-based emissions and same mass emission rates for CO and VOC. Therefore, FPL is requesting no change to the existing emissions limits for CO and VOC, and the same concentration-based limits for NO_x. Based on GE data, the mass emission rate potential for NO_x could theoretically slightly increase. However, the slightly increased NO_x hourly emissions rates are well within the current maximum hourly emission rates and will

be less than the currently permitted hourly mass emissions rates. Therefore, FPL is requesting no change to the existing NO_x emissions limits.

It should be noted that the NO_x mass emissions are used only for comparison with annual emissions tests (baseline-to-projected actual). The hourly mass emission rates also vary significantly with compressor inlet temperature, unit load, etc. while the concentration-based rates remain the same. Compliance is based on 9 ppmvd corrected to 15 percent oxygen. As shown in the CEM data for 2012 in Appendix C, the actual mass emission rates varied about 5 to 10 lb/hr for same heat input rates.

FPL also requests no change to the turbine heat input rates in permit No. 0710002-018-AV. Although, there would be theoretically a slight increase in heat input rate based on GE data, the small increase is within the normal operating heat input range for the CTs.

TABLES

Table 1. Fort Myers Power Plant Unit 2 Annual Heat Inputs and Operating Hours, 2008 - 2012

UNIT 2

Year	Actual Heat Input from Natural gas (MMBtu/yr)						Total
	Unit 2A	Unit 2B	Unit 2C	Unit 2D	Unit 2E	Unit 2F	
2012	10,359,000	10,976,000	10,956,000	10,632,000	10,970,000	10,440,000	64,333,000
2011	8,475,000	9,407,468	7,158,622	9,177,539	8,923,028	9,139,000	52,280,657
2010	10,276,000	10,285,000	10,376,000	10,332,000	11,280,000	10,993,000	63,542,000
2009	10,757,000	11,165,000	10,436,000	10,894,000	10,991,000	10,863,000	65,106,000
2008	11,165,000	11,743,000	10,184,000	11,757,000	9,242,000	11,840,000	65,931,000

UNIT 2

Year	Operating Hours (hr/yr)						Total
	Unit 2A	Unit 2B	Unit 2C	Unit 2D	Unit 2E	Unit 2F	
2012	7,427	7,779	7,774	7,542	7,780	7,556	45,858
2011	5,956	6,570	6,372	6,244	6,410	4,163	35,715
2010	7,172	7,161	7,216	7,184	7,814	7,617	44,164
2009	7,525	7,781	7,326	7,625	7,666	7,606	45,529
2008	7,729	8,115	7,027	8,108	6,401	8,178	45,558

Note: All values are based on annual operating reports for the period 2008 - 2012.

Table 2. Annual Emissions Reported in 2008-2012 Annual Operating Reports and Acid Rain Database for Unit 2

Year	Pollutant	Unit 2A (tons)	Unit 2B (tons)	Unit 2C (tons)	Unit 2D (tons)	Unit 2E (tons)	Unit 2F (tons)	Total (tons)
2012	NO _x	133.9	149.8	161.9	141.0	147.1	139.6	673.2
	CO	10.5	7.4	9.3	6.9	9.4	9.6	53.1
	SO ₂	3.2	3.3	3.3	3.2	3.3	3.2	19.6
	VOC	0.011	0.012	0.012	0.011	0.012	0.011	0.069
	PM	34.2	36.2	36.2	35.1	36.2	34.5	212.3
	PM ₁₀	34.2	36.2	36.2	35.1	36.2	34.5	212.3
	SAM ^a	--	--	--	--	--	--	3.0
	CO ₂	625,365.1	662,596.8	661,366.1	641,793.9	662,227.6	630,236.2	3,883,585.7
2011	NO _x	130.3	153.1	106.0	125.4	140.9	137.7	793.4
	CO	2.8	4.0	4.6	5.9	5.8	2.9	26.0
	SO ₂	2.6	2.8	2.2	2.8	2.8	2.7	15.9
	VOC	0.009	0.010	0.007	0.010	0.009	0.010	0.055
	PM	27.97	31.04	23.62	30.29	29.4	30.2	172.5
	PM ₁₀	27.97	31.04	23.62	30.29	29.4	30.2	172.5
	SAM ^a	--	--	--	--	--	--	2.4
	CO ₂	503,635.1	559,072.3	425,427.1	545,405.3	530,284.2	543,116.9	3,106,940.9
2010	NO _x	149.7	152.0	149.4	137.6	148.9	153.1	890.7
	CO	5.5	4.4	6.1	7.4	6.3	5.0	34.6
	SO ₂	3.1	3.1	3.1	3.1	3.3	3.3	19.0
	VOC	0.011	0.011	0.011	0.011	0.012	0.011	0.066
	PM	33.9	33.9	34.2	34.1	37.2	36.3	209.7
	PM ₁₀	33.9	33.9	34.2	34.1	37.2	36.3	209.7
	SAM ^a	--	--	--	--	--	--	2.9
	CO ₂	604,805.0	606,658.6	610,736.1	611,177.0	665,799.9	655,706.3	3,754,882.9
2009	NO _x	159.8	154.0	148.7	145.4	154.6	155.9	918.4
	CO	5.1	6.7	7.2	5.5	7.4	6.5	38.4
	SO ₂	3.2	3.3	3.1	3.2	3.3	3.1	19.2
	VOC	0.011	0.012	0.011	0.011	0.011	0.011	0.068
	PM ^b	35.50	36.84	34.44	35.95	36.3	35.8	214.8
	PM ₁₀	35.50	36.84	34.44	35.95	36.3	35.8	214.8
	SAM ^a	--	--	--	--	--	--	2.9
	CO ₂	641,893.1	663,942.5	618,333.8	642,406.0	649,491.6	647,286.1	3,863,353.0
2008	NO _x	167.4	166.1	144.2	155.4	129.3	171.5	933.9
	CO	6.0	6.5	7.0	7.3	4.2	6.9	37.9
	SO ₂	3.4	3.5	3.0	3.4	2.8	3.6	19.7
	VOC	0.012	0.012	0.011	0.012	0.010	0.012	0.068
	PM	36.8	38.8	33.6	38.8	30.5	39.1	217.6
	PM ₁₀	36.8	38.8	33.6	38.8	30.5	39.1	217.6
	SAM ^a	--	--	--	--	--	--	3.0
	CO ₂	662,822.9	699,855.4	600,908.8	696,774.7	544,751.1	707,666.2	3,912,779.3

^a Not reported in AORs - based on assuming 10% of SO₂ converts to SO₃, all of which converts to SAM.

Source: Annual Operating Report (AOR) for Fort Myers Power Plant, 2008 - 2012; EPA's Acid Rain database.

Table 3. Actual Annual Emissions of N₂O and CH₄ for the Period 2008 - 2012
Units 2 CT Improvement Project

Year	Actual Annual Heat Input ^a (MMBtu/yr)	N ₂ O Emissions				CH ₄ Emissions			
		Emission Factor ^b (lb/MMBtu)	Annual Emissions		CO ₂ e ^c Rate (TPY)	Emission Factor ^b (lb/MMBtu)	Annual Emissions		CO ₂ e ^c Rate (TPY)
			(lb/yr)	(TPY)			(lb/yr)	(TPY)	
2012	64,333,000	2.20E-04	14,179.0	7.1	2,197.7	2.2E-03	141,789.9	70.9	1,488.8
2011	52,280,657	2.20E-04	11,522.7	5.8	1,786.0	2.2E-03	115,226.6	57.6	1,209.9
2010	63,542,000	2.20E-04	14,004.7	7.0	2,170.7	2.2E-03	140,046.6	70.0	1,470.5
2009	65,106,000	2.20E-04	14,349.4	7.2	2,224.2	2.2E-03	143,493.6	71.7	1,506.7
2008	65,931,000	2.20E-04	14,531.2	7.3	2,252.3	2.2E-03	145,311.9	72.7	1,525.8

^a Based on AOR data - see Table 1.

^b Table C-2, Subpart C, 40 CFR 98. Emission factors in kg/MMBtu were converted to lb/MMBtu by multiplying by 2.204.

^c N₂O and CH₄ are multiplied by a factor of 310 and 21, respectively, to determine CO₂ equivalence.

Table 4. Annual Average Emissions for Fort Myers Power Plant Unit 2 for Each Consecutive Two-Year Period, 2008-2012

Pollutant	Annual Emissions for Unit 2					Two-Year Average Emissions			
	2012	2011	2010	2009	2008	2012-2011 (tons)	2011-2010 (tons)	2010-2009 (tons)	2009-2008 (tons)
NO _x	873.2	793.4	890.7	918.4	933.9	833.3	842.1	904.6	926.15
CO	53.1	26.0	34.6	38.4	37.9	39.5	30.3	36.5	38.1
SO ₂	19.6	15.9	19.0	19.2	19.7	17.8	17.5	19.1	19.45
VOC	0.069	0.055	0.066	0.068	0.068	0.0618	0.0605	0.0673	0.0683
PM	212.3	172.5	209.7	214.8	217.6	192.4	191.1	212.3	216.2
PM ₁₀	212.3	172.5	209.7	214.8	217.6	192.4	191.1	212.3	216.2
PM _{2.5} ^a	212.3	172.5	209.7	214.8	217.6	192.4	191.1	212.3	216.2
SAM ^b	3.0	2.4	2.9	2.9	3.0	2.7	2.7	2.9	3.0
CO ₂	3,883,585.7	3,106,940.9	3,754,882.9	3,863,353.0	3,912,779.3	3,495,263.3	3,430,911.9	3,809,118.0	3,888,066.1
N ₂ O ^c (CO ₂ e)	2,197.7	1,786.0	2,170.7	2,224.2	2,252.3	1,991.9	1,978.4	2,197.4	2,238.2
CH ₄ ^c (CO ₂ e)	1,488.8	1,209.9	1,470.5	1,506.7	1,525.8	1,349.3	1,340.2	1,488.6	1,516.2

^a Assuming equal to PM₁₀ emissions.

^b Not reported in AORs - based on assuming 10% of SO₂ converts to SO₃, all of which converts to SAM.

^c Calculated based on actual annual heat input - see Table 3.

Source: Annual Operating Report (AOR) for Fort Myers Power Plant, 2008 - 2012; EPA's Acid Rain database.

Table 5. Actual Hourly Emission Rates, FPL Fort Myers Power Plant Units 2A, 2B, 2C, 2D, 2E and 2F

Pollutant	Year	Annual Emissions ^a (tons)						Operating Hours ^a						Hourly Emission Rates (lb/hr)						Maximum Rate (lb/hr)
		Unit 2A	Unit 2B	Unit 2C	Unit 2D	Unit 2E	Unit 2F	Unit 2A	Unit 2B	Unit 2C	Unit 2D	Unit 2E	Unit 2F	Unit 2A	Unit 2B	Unit 2C	Unit 2D	Unit 2E	Unit 2F	
NO _x	2012	133.9	149.8	161.9	141.0	147.1	139.6	7,427	7,779	7,774	7,542	7,780	7,556	36.1	38.5	41.7	37.4	37.8	37.0	66.15
	2011	130.3	153.1	106.0	125.4	140.9	137.7	5,956	6,570	6,372	6,244	6,410	4,163	43.8	46.6	33.3	40.2	44.0	66.2	
	2010	149.7	152.0	149.4	137.6	148.9	153.1	7,172	7,161	7,216	7,184	7,814	7,617	41.7	42.5	41.4	38.3	38.1	40.2	
	2009	159.8	154.0	148.7	145.4	154.6	155.9	7,525	7,781	7,326	7,625	7,666	7,606	42.5	39.6	40.6	38.1	40.3	41.0	
	2008	167.4	166.1	144.2	155.4	129.3	171.5	7,729	8,115	7,027	8,108	6,401	8,178	43.3	40.9	41.0	38.3	40.4	41.9	
														Maximum =						
CO	2012	10.5	7.4	9.3	6.9	9.4	9.6	7,427	7,779	7,774	7,542	7,780	7,556	2.8	1.9	2.4	1.8	2.4	2.6	2.82
	2011	2.8	4.0	4.6	5.9	5.8	2.9	5,956	6,570	6,372	6,244	6,410	4,163	0.9	1.2	1.4	1.9	1.8	1.4	
	2010	5.5	4.4	6.1	7.4	6.3	5.0	7,172	7,161	7,216	7,184	7,814	7,617	1.5	1.2	1.7	2.1	1.6	1.3	
	2009	5.1	6.7	7.2	5.5	7.4	6.5	7,525	7,781	7,326	7,625	7,666	7,606	1.4	1.7	2.0	1.5	1.9	1.7	
	2008	6.0	6.5	7.0	7.3	4.2	6.9	7,729	8,115	7,027	8,108	6,401	8,178	1.6	1.6	2.0	1.8	1.3	1.7	
														Maximum =						
VOC	2012	0.011	0.012	0.012	0.011	0.012	0.011	7,427	7,779	7,774	7,542	7,780	7,556	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0046
	2011	0.009	0.010	0.007	0.010	0.009	0.010	5,956	6,570	6,372	6,244	6,410	4,163	0.0030	0.0030	0.0024	0.0031	0.0029	0.0046	
	2010	0.011	0.011	0.011	0.011	0.012	0.011	7,172	7,161	7,216	7,184	7,814	7,617	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	
	2009	0.011	0.012	0.011	0.011	0.011	0.011	7,525	7,781	7,326	7,625	7,666	7,606	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	
	2008	0.012	0.012	0.011	0.012	0.010	0.012	7,729	8,115	7,027	8,108	6,401	8,178	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	
														Maximum =						
SO ₂	2012	3.2	3.3	3.3	3.2	3.3	3.2	7,427	7,779	7,774	7,542	7,780	7,556	0.9	0.9	0.9	0.9	0.9	0.8	1.30
	2011	2.6	2.8	2.2	2.8	2.8	2.7	5,956	6,570	6,372	6,244	6,410	4,163	0.9	0.9	0.7	0.9	0.9	1.3	
	2010	3.1	3.1	3.1	3.1	3.3	3.3	7,172	7,161	7,216	7,184	7,814	7,617	0.9	0.9	0.9	0.9	0.8	0.9	
	2009	3.2	3.3	3.1	3.2	3.3	3.1	7,525	7,781	7,326	7,625	7,666	7,606	0.9	0.8	0.8	0.8	0.9	0.8	
	2008	3.4	3.5	3.0	3.4	2.8	3.6	7,729	8,115	7,027	8,108	6,401	8,178	0.9	0.9	0.9	0.8	0.9	0.9	
														Maximum =						
PM/PM ₁₀ /PM _{2.5}	2012	34.2	36.2	36.2	35.1	36.2	34.5	7,427	7,779	7,774	7,542	7,780	7,556	9.2	9.3	9.3	9.3	9.3	9.1	14.49
	2011	27.97	31.04	23.62	30.29	29.45	30.16	5,956	6,570	6,372	6,244	6,410	4,163	9.4	9.5	7.4	9.7	9.2	14.5	
	2010	33.9	33.9	34.2	34.1	37.2	36.3	7,172	7,161	7,216	7,184	7,814	7,617	9.5	9.5	9.5	9.5	9.5	9.5	
	2009	35.50	36.84	34.44	35.95	36.27	35.85	7,525	7,781	7,326	7,625	7,666	7,606	9.4	9.5	9.4	9.4	9.5	9.4	
	2008	36.8	38.8	33.6	38.8	30.5	39.1	7,729	8,115	7,027	8,108	6,401	8,178	9.5	9.6	9.6	9.6	9.5	9.6	
														Maximum =						

^a Reported in AORs for the period 2008 - 2012.

Table 6. Fort Myers Power Plant Unit 2 Actual Emissions as a Function of Heat Input, 2008 - 2012

Year	Actual Annual Heat Input (MMBtu/yr) ^a							Units 2A, 2B, 2C, 2D, 2E & 2F Total Actual Emissions (TPY) ^b							Emissions per Unit Heat Input ^c (lb/MMBtu)							
	Unit 2A	Unit 2B	Unit 2C	Unit 2D	Unit 2E	Unit 2F	Total	NO _x	CO	VOC	SO ₂	PM/PM ₁₀	SAM	CO ₂	NO _x	CO	VOC	SO ₂	PM/PM ₁₀	SAM	CO ₂	
2012	10,359,000	10,976,000	10,956,000	10,632,000	10,970,000	10,440,000	64,333,000	873.2	53.1	0.07	19.6	212.3	3.0	3,883,585.7	0.0271	0.0016	2.14E-06	0.00061	0.00660	9.33E-05	118.9	
2011	8,475,000	9,407,468	7,158,622	9,177,539	8,923,028	9,139,000	52,280,657	793.4	26.0	0.05	15.9	172.5	2.4	3,106,940.9	0.0304	0.0010	2.10E-06	0.00061	0.00660	9.31E-05	118.9	
2010	10,276,000	10,285,000	10,376,000	10,332,000	11,280,000	10,993,000	63,542,000	890.7	34.6	0.07	19.0	209.7	2.9	3,754,882.9	0.0280	0.0011	2.09E-06	0.00060	0.00660	9.16E-05	118.9	
2009	10,757,000	11,165,000	10,436,000	10,894,000	10,991,000	10,863,000	65,106,000	918.4	38.4	0.07	19.2	214.8	2.9	3,863,353.0	0.0282	0.0012	2.10E-06	0.00059	0.00660	9.03E-05	118.9	
2008	11,165,000	11,743,000	10,184,000	11,757,000	9,242,000	11,840,000	65,931,000	933.9	37.9	0.07	19.7	217.6	3.0	3,912,779.3	0.0283	0.0011	2.07E-06	0.00060	0.00660	9.15E-05	118.9	
Maximum 2-year Average =							65,518,500								Upper 90% C.I. =	0.0292	0.0014	2.12E-06	6.06E-04	0.0066	9.28E-05	118.86
															Average =	0.0284	0.0012	2.10E-06	0.0006	0.0066	9.20E-05	118.86
															Std. Deviation =	0.0012	0.0003	2.46E-08	8.17E-06	5.46E-10	1.25E-06	0.0000
															t =	1.533	1.533	1.533	1.533	1.533	1.533	1.533
															n =	5	5	5	5	5	5	5
															Upper 90% C.I. =	0.0292	0.0014	2.12E-06	6.06E-04	0.0066	9.28E-05	118.86

Notes: Confidence Interval (C.I.), n= number of values
 Student 't' test Upper 90% C.I = Average + "t" x (Std. Deviation/(√n))

^a Based on AOR data, see Table 1.

^b Based on AOR data, see Table 2.

^c Total actual emissions divided by total heat input for all pollutant except CO₂. For CO₂, the emission rates are based on the Part CEMs lb/MMBtu emission rates since annual CO₂ emissions are based on Part 75 data.

**Table 7. PSD Applicability - Fort Myers Power Plant Unit 2
GE 7FA.04 Improvements**

Pollutant	Baseline (Maximum 2-Year Average Actual) Emissions ^a (TPY)	Actual Emission Factor ^b (lb/MMBtu)	Projected Actual Heat Input ^c (MMBtu)	Projected Actual Emissions ^d (TPY)	Increase/Decrease in Annual Emissions ^e (TPY)	PSD Significant Emission Rates (TPY)
NO _x	926.15	0.0292	65,518,500	957.32	31.17	40
CO	39.52	0.0014	65,518,500	45.43	5.91	100
SO ₂	19.45	6.06E-04	65,518,500	19.86	0.41	40
VOC	0.0683	2.12E-06	65,518,500	0.0693	9.76E-04	40
PM	216.21	0.0066	65,518,500	216.211	2.03E-05	25
PM ₁₀	216.21	0.0066	65,518,500	216.21	2.03E-05	15
PM _{2.5}	216.21	0.0066	65,518,500	216.21	2.03E-05	10
SAM	2.98	9.28E-05	65,518,500	3.04	0.063	7
<u>GHGs</u>						
CO ₂	3,888,066.15	118.86	65,518,500	3,893,764	5,698	
N ₂ O (CO ₂ e)	2,238.24	6.83E-02	65,518,500	2,238.24	0.0	
CH ₄ (CO ₂ e)	1,516.23	4.63E-02	65,518,500	1,516.23	0.0	
Total GHGs (CO₂e)	3,891,821			3,897,519	5,698	75,000

^a Maximum 2-Year average emissions - see Table 4.

^b Based on Upper 90 percentile C.I for the 2008-2012 period- see Table 6.

^c Maximum 2-year average heat input for 2008-2012 - see Table 6.

^d Projected actual emissions = Emission factor x Projected actual heat input x (1 ton/2000 lb)

^e Projected actual emissions minus baseline actual emissions.

APPENDIX A

Appendix A
Fort Myers Point Power Plant
Summary of AOR Data for Unit 2 (EU IDs 018, 019, 020, 021, 022, 023)

Emission Unit 018 Unit 2A - Combined Cycle CT with Non-fired HRSG (170 MW)					Emission Unit 019 Unit 2B - Combined Cycle CT with Non-fired HRSG (170 MW)				
2012	Diesel TPY	Natural Gas TPY	Total TPY	Hours	2012	Diesel TPY	Natural Gas TPY	Total TPY	Hours
NOx		133.91	133.91	7427	NOx		149.75	149.75	7779
CO		10.4721	10.47		CO		7.35116	7.35	
SO2		3.16	3.16		SO2		3.34	3.34	
VOC		0.011141	0.01		VOC		0.011669	0.01	
PM		34.1847	34.18		PM		36.2208	36.22	
PM10		34.1847	34.18		PM10		36.2208	36.22	
Unit 2A - Combined Cycle CT with Non-fired HRSG (170 MW)					Unit 2B - Combined Cycle CT with Non-fired HRSG (170 MW)				
2011	Diesel TPY	Natural Gas TPY	Total TPY	Hours	2011	Diesel TPY	Natural Gas TPY	Total TPY	Hours
NOx		130.3	130.30	5956	NOx		153.1	153.10	6570
CO		2.76954	2.77		CO		4.0077	4.01	
SO2		2.6	2.60		SO2		2.8	2.80	
VOC		0.008934	0.0089		VOC		0.009855	0.010	
PM		27.9675	27.97		PM		31.0446	31.04	
PM10		27.9675	27.97		PM10		31.0446	31.04	
Unit 2A - Combined Cycle CT with Non-fired HRSG (170 MW)					Unit 2B - Combined Cycle CT with Non-fired HRSG (170 MW)				
2010	Diesel TPY	Natural Gas TPY	Total TPY	Hours	2010	Diesel TPY	Natural Gas TPY	Total TPY	Hours
NOx		149.7	149.70	7172	NOx		152	152.00	7161
CO		5.48658	5.49		CO		4.40402	4.40	
SO2		3.1	3.10		SO2		3.1	3.10	
VOC		0.010758	0.01		VOC		0.010742	0.01	
PM		33.9108	33.91		PM		33.9405	33.94	
PM10		33.9108	33.91		PM10		33.9405	33.94	
Unit 2A - Combined Cycle CT with Non-fired HRSG (170 MW)					Unit 2B - Combined Cycle CT with Non-fired HRSG (170 MW)				
2009	Diesel TPY	Natural Gas TPY	Total TPY	Hours	2009	Diesel TPY	Natural Gas TPY	Total TPY	Hours
NOx		159.8	159.80	7525	NOx		154	154.00	7781
CO		5.07938	5.08		CO		6.69166	6.69	
SO2		3.2	3.20		SO2		3.3	3.30	
VOC		0.011288	0.01		VOC		0.011672	0.01	
PM		35.4981	35.50		PM		36.8445	36.84	
PM10		35.4981	35.50		PM10		36.8445	36.84	
Unit 2A - Combined Cycle CT with Non-fired HRSG (170 MW)					Unit 2B - Combined Cycle CT with Non-fired HRSG (170 MW)				
2008	Diesel TPY	Natural Gas TPY	Total TPY	Hours	2008	Diesel TPY	Natural Gas TPY	Total TPY	Hours
NOx		167.4	167.40	7729	NOx		166.1	166.10	8115
CO		6.02862	6.03		CO		6.45143	6.45	
SO2		3.4	3.40		SO2		3.5	3.50	
VOC		0.011594	0.01		VOC		0.012173	0.01	
PM		36.8445	36.84		PM		38.7519	38.75	
PM10		36.8445	36.84		PM10		38.7519	38.75	

Appendix A
Fort Myers Point Power Plant
Summary of AOR Data for Unit 2 (EU IDs 018, 019, 020, 021, 022, 023)

Emission Unit 020 Unit 2C - Combined Cycle CT with Non-fired HRSG (170 MW)					Emission Unit 021 Unit 2D - Combined Cycle CT with Non-fired HRSG (170 MW)				
	Diesel	Natural Gas	Total	Hours		Diesel	Natural Gas	Total	Hours
2012	TPY	TPY	TPY		2012	TPY	TPY	TPY	
NOx		161.9	161.90	7774	NOx		140.97	140.97	7542
CO		9.3288	9.33		CO		6.86322	6.86	
SO2		3.34	3.34		SO2		3.24	3.24	
VOC		0.011661	0.01		VOC		0.011313	0.01	
PM		36.1548	36.15		PM		35.0856	35.09	
PM10		36.1548	36.15		PM10		35.0856	35.09	
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Unit 2C - Combined Cycle CT with Non-fired HRSG (170 MW)					Unit 2D - Combined Cycle CT with Non-fired HRSG (170 MW)				
	Diesel	Natural Gas	Total	Hours		Diesel	Natural Gas	Total	Hours
2011	TPY	TPY	TPY		2011	TPY	TPY	TPY	
NOx		106	106.00	6372	NOx		125.4	125.40	6244
CO		4.6176	4.62		CO		5.8941	5.89	
SO2		2.2	2.20		SO2		2.8	2.80	
VOC		0.007488	0.01		VOC		0.009558	0.01	
PM		23.6235	23.62		PM		30.2859	30.29	
PM10		23.6235	23.62		PM10		30.2859	30.29	
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Unit 2C - Combined Cycle CT with Non-fired HRSG (170 MW)					Unit 2D - Combined Cycle CT with Non-fired HRSG (170 MW)				
	Diesel	Natural Gas	Total	Hours		Diesel	Natural Gas	Total	Hours
2010	TPY	TPY	TPY		2010	TPY	TPY	TPY	
NOx		149.4	149.40	7216	NOx		137.6	137.60	7184
CO		6.06144	6.06		CO		7.39952	7.40	
SO2		3.1	3.10		SO2		3.1	3.10	
VOC		0.010824	0.01		VOC		0.010776	0.01	
PM		34.2408	34.24		PM		34.0956	34.10	
PM10		34.2408	34.24		PM10		34.0956	34.10	
<hr/>					<hr/>				
Unit 2C - Combined Cycle CT with Non-fired HRSG (170 MW)					Unit 2D - Combined Cycle CT with Non-fired HRSG (170 MW)				
	Diesel	Natural Gas	Total	Hours		Diesel	Natural Gas	Total	Hours
2009	TPY	TPY	TPY		2009	TPY	TPY	TPY	
NOx		148.7	148.70	7326	NOx		145.4	145.40	7625
CO		7.17948	7.18		CO		5.52813	5.53	
SO2		3.1	3.10		SO2		3.2	3.20	
VOC		0.010989	0.01		VOC		0.011438	0.01	
PM		34.4388	34.44		PM		35.9502	35.95	
PM10		34.4388	34.44		PM10		35.9502	35.95	
<hr/>					<hr/>				
Unit 2C - Combined Cycle CT with Non-fired HRSG (170 MW)					Unit 2D - Combined Cycle CT with Non-fired HRSG (170 MW)				
	Diesel	Natural Gas	Total	Hours		Diesel	Natural Gas	Total	Hours
2008	TPY	TPY	TPY		2008	TPY	TPY	TPY	
NOx		144.2	144.20	7027	NOx		155.4	155.40	8108
CO		6.99187	6.99		CO		7.33774	7.34	
SO2		3	3.00		SO2		3.4	3.40	
VOC		0.010541	0.01		VOC		0.012162	0.01	
PM		33.6072	33.61		PM		38.7981	38.80	
PM10		33.6072	33.61		PM10		38.7981	38.80	

Appendix A
Fort Myers Point Power Plant
Summary of AOR Data for Unit 2 (EU IDs 018, 019, 020, 021, 022, 023)

<u>Fuel Usage</u>		<u>Fuel Heat Content</u>		<u>Heat Input per Year</u>		
Diesel 1000 gal/yr	Natural Gas MMft3/yr	Diesel MMBtu/1000 gal	Natural Gas MMBtu/MMft3	Diesel MMBtu/yr	Natural Gas MMBtu/yr	Total MMBtu/yr
Unit 2A - Combined Cycle CT with Non-fired HRSG (170 MW)		Unit 2A - Combined Cycle CT with Non-fired HRSG (170 MW)		Unit 2A - Combined Cycle CT with Non-fired HRSG (170 MW)		
2012	10359	2012	1000	2012	0	10359000
2011	8475	2011	1000	2011	0	8475000
2010	10276	2010	1000	2010	0	10276000
2009	10757	2009	1000	2009	0	10757000
2008	11165	2008	1000	2008	0	11165000
Unit 2B - Combined Cycle CT with Non-fired HRSG (170 MW)		Unit 2B - Combined Cycle CT with Non-fired HRSG (170 MW)		Unit 2B - Combined Cycle CT with Non-fired HRSG (170 MW)		
2012	10976	2012	1000	2012	0	10976000
2011	9407	2011	1000	2011	0	9407468
2010	10285	2010	1000	2010	0	10285000
2009	11165	2009	1000	2009	0	11165000
2008	11743	2008	1000	2008	0	11743000
Unit 2C - Combined Cycle CT with Non-fired HRSG (170 MW)		Unit 2C - Combined Cycle CT with Non-fired HRSG (170 MW)		Unit 2C - Combined Cycle CT with Non-fired HRSG (170 MW)		
2012	10956	2012	1000	2012	0	10956000
2011	7159	2011	1000	2011	0	7158622
2010	10376	2010	1000	2010	0	10376000
2009	10436	2009	1000	2009	0	10436000
2008	10184	2008	1000	2008	0	10184000
Unit 2D - Combined Cycle CT with Non-fired HRSG (170 MW)		Unit 2D - Combined Cycle CT with Non-fired HRSG (170 MW)		Unit 2D - Combined Cycle CT with Non-fired HRSG (170 MW)		
2012	10632	2012	1000	2012	0	10632000
2011	9178	2011	1000	2011	0	9177539
2010	10332	2010	1000	2010	0	10332000
2009	10894	2009	1000	2009	0	10894000
2008	11757	2008	1000	2008	0	11757000
Unit 2E - Combined Cycle CT with Non-fired HRSG (170 MW)		Unit 2E - Combined Cycle CT with Non-fired HRSG (170 MW)		Unit 2E - Combined Cycle CT with Non-fired HRSG (170 MW)		
2012	10970	2012	1000	2012	0	10970000
2011	8923	2011	1000	2011	0	8923028
2010	11280	2010	1000	2010	0	11280000
2009	10991	2009	1000	2009	0	10991000
2008	9242	2008	1000	2008	0	9242000
Unit 2F - Combined Cycle CT with Non-fired HRSG (170 MW)		Unit 2F - Combined Cycle CT with Non-fired HRSG (170 MW)		Unit 2F - Combined Cycle CT with Non-fired HRSG (170 MW)		
2012	10440	2012	1000	2012	0	10440000
2011	9139	2011	1000	2011	0	9139000
2010	10993	2010	1000	2010	0	10993000
2009	10863	2009	1000	2009	0	10863000
2008	11840	2008	1000	2008	0	11840000

Appendix A
Fort Myers Point Power Plant
Summary of AOR Data for Unit 2 (EU IDs 018, 019, 020, 021, 022, 023)

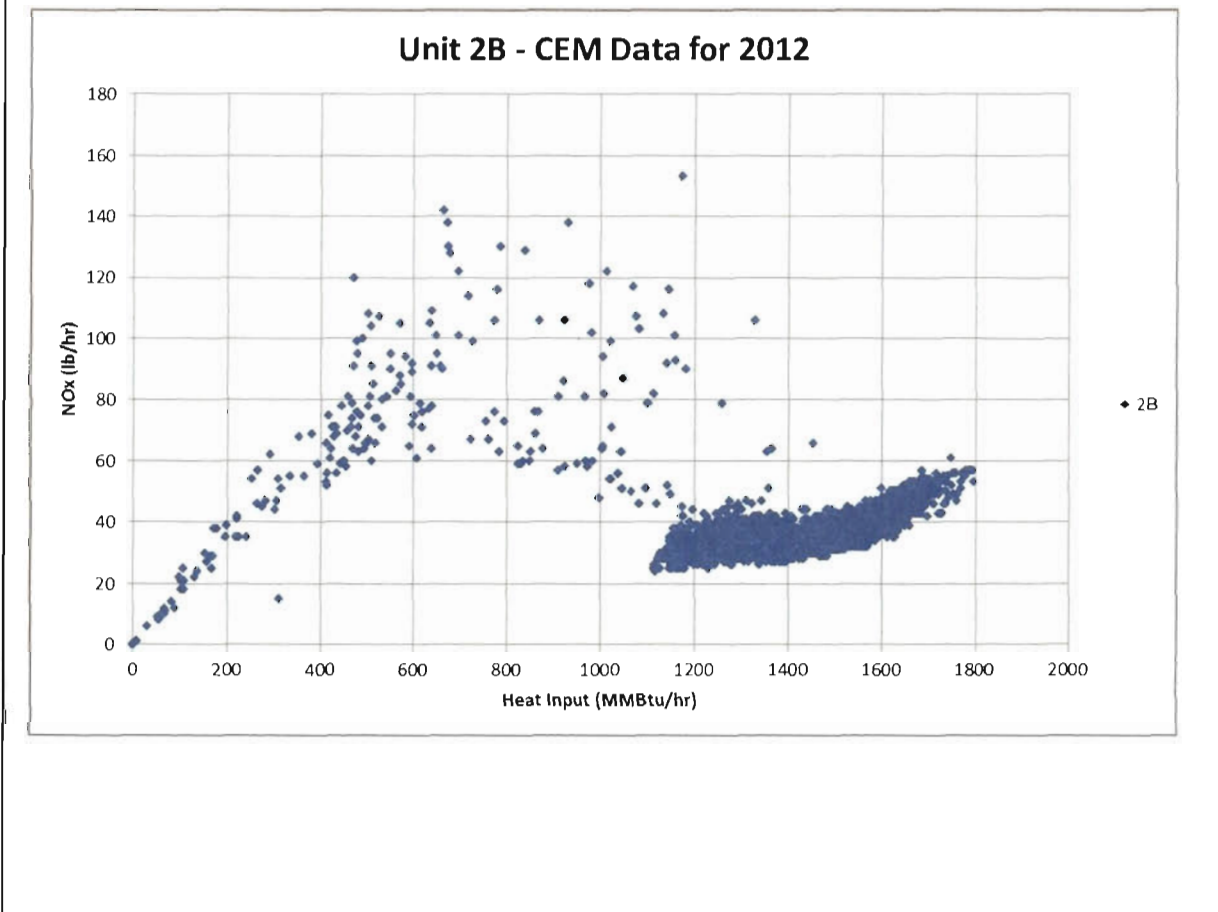
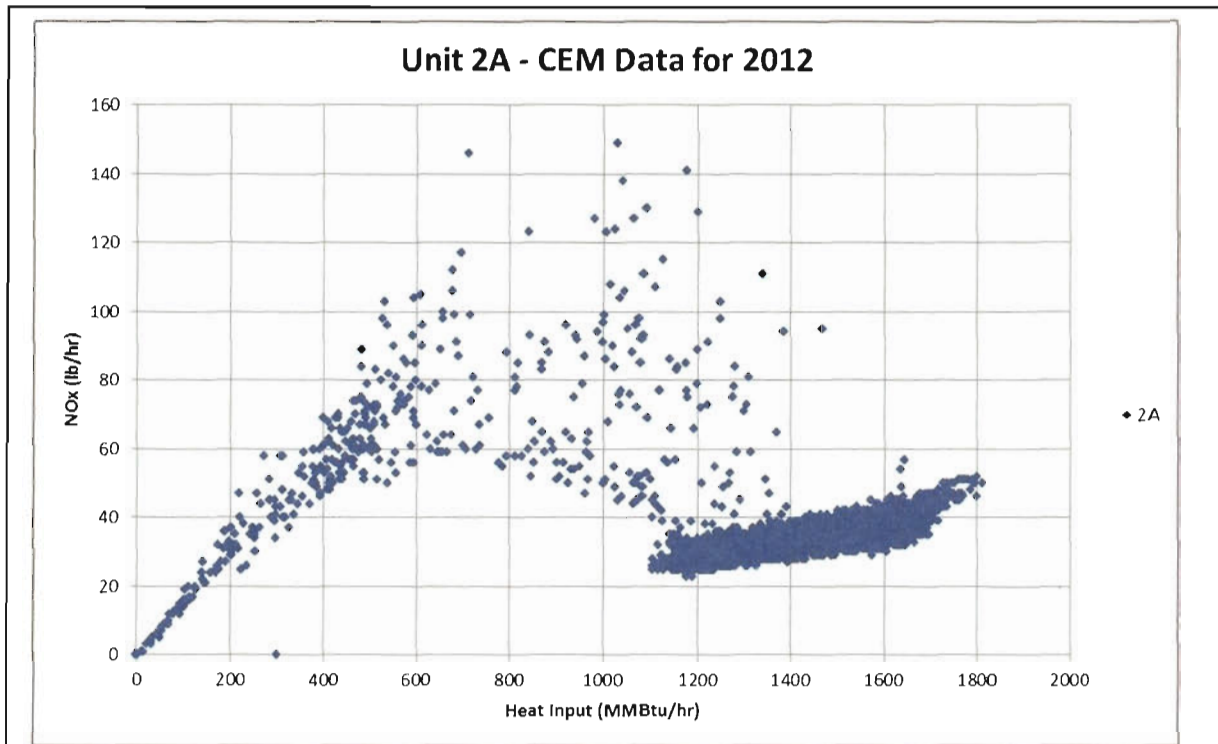
Emission Unit 022 Unit 2E - Combined Cycle CT with Non-fired HRSG (170 MW)						Emission Unit 023 Unit 2F - Combined Cycle CT with Non-fired HRSG (170 MW)					
2012	Diesel	Natural Gas	Total	TPY	Hours	2012	Diesel	Natural Gas	Total	TPY	Hours
	TPY	TPY					TPY	TPY			
NOx		147.11	147.11		7780	NOx		139.6	139.60		7556
CO		9.4138	9.41			CO		9.6339	9.63		
SO2		3.34	3.34			SO2		3.18	3.18		
VOC		0.01167	0.01			VOC		0.011334	0.01		
PM		36.201	36.20			PM		34.452	34.45		
PM10		36.201	36.20			PM10		34.452	34.45		
Unit 2E - Combined Cycle CT with Non-fired HRSG (170 MW)						Unit 2F - Combined Cycle CT with Non-fired HRSG (170 MW)					
2011	Diesel	Natural Gas	Total	TPY	Hours	2011	Diesel	Natural Gas	Total	TPY	Hours
	TPY	TPY					TPY	TPY			
NOx		140.9	140.90		6410	NOx		137.7	137.70		4163
CO		5.83814	5.84			CO		2.85245	2.85		
SO2		2.8	2.80			SO2		2.7	2.70		
VOC		0.009366	0.01			VOC		0.009615	0.01		
PM		29.446	29.45			PM		30.1587	30.16		
PM10		29.446	29.45			PM10		30.1587	30.16		
Unit 2E - Combined Cycle CT with Non-fired HRSG (170 MW)						Unit 2F - Combined Cycle CT with Non-fired HRSG (170 MW)					
2010	Diesel	Natural Gas	Total	TPY	Hours	2010	Diesel	Natural Gas	Total	TPY	Hours
	TPY	TPY					TPY	TPY			
NOx		148.9	148.90		7814	NOx		153.1	153.10		7617
CO		6.2512	6.25			CO		4.95105	4.95		
SO2		3.3	3.30			SO2		3.3	3.30		
VOC		0.011721	0.01			VOC		0.011426	0.01		
PM		37.224	37.22			PM		36.2769	36.28		
PM10		37.224	37.22			PM10		36.2769	36.28		
Unit 2E - Combined Cycle CT with Non-fired HRSG (170 MW)						Unit 2F - Combined Cycle CT with Non-fired HRSG (170 MW)					
2009	Diesel	Natural Gas	Total	TPY	Hours	2009	Diesel	Natural Gas	Total	TPY	Hours
	TPY	TPY					TPY	TPY			
NOx		154.6	154.60		7666	NOx		155.9	155.90		7606
CO		7.39769	7.40			CO		6.54116	6.54		
SO2		3.3	3.30			SO2		3.1	3.10		
VOC		0.011499	0.01			VOC		0.011409	0.01		
PM		36.2703	36.27			PM		35.8479	35.85		
PM10		36.2703	36.27			PM10		35.8479	35.85		
Unit 2E - Combined Cycle CT with Non-fired HRSG (170 MW)						Unit 2F - Combined Cycle CT with Non-fired HRSG (170 MW)					
2008	Diesel	Natural Gas	Total	TPY	Hours	2008	Diesel	Natural Gas	Total	TPY	Hours
	TPY	TPY					TPY	TPY			
NOx		129.3	129.30		6401	NOx		171.5	171.50		8178
CO		4.16065	4.16			CO		6.91041	6.91		
SO2		2.8	2.80			SO2		3.6	3.60		
VOC		0.009602	0.01			VOC		0.012267	0.01		
PM		30.4986	30.50			PM		39.072	39.07		
PM10		30.4986	30.50			PM10		39.072	39.07		

APPENDIX B

Appendix B
CEM Reports from Acid Rain Database
Annual Reports

STATE	FACILITY_ NAME	ORISPL_ CODE	UNITID	OP_ YEAR	ASSOC_ STACKS	PRG_ COD	SUM_ OP_ TIME	NUM_ MONTHS_ REPORTE	GLOAD	SO2_ MASS	NOX_ RATE	NOX_ MASS	CO2_ MASS	HEAT_ INPUT	UNIT_ TYPE_ INFO	PRIMARY_ FUEL_ INF_ O	CAPACITY INPUT
FL	Fort Myers Power Plant	612	FMCT2A	2008	ARP		7687.2	12	1016402.6	3.346	0.0313	167.36	662822.949	11153238.35	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2B	2008	ARP		8082.9	12	1078457.1	3.533	0.0293	166.18	699855.37	11776457.63	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2C	2008	ARP		7011.7	12	905499.7	3.033	0.0292	144.23	600908.831	10111381.95	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2D	2008	ARP		8089.5	12	1067845.5	3.517	0.0271	155.35	696774.746	11724618.82	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2E	2008	ARP		6367.3	12	828536.5	2.75	0.0294	140.94	544751.143	9166502.528	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2F	2008	ARP		8133.1	12	1079705.8	3.572	0.0296	171.45	707666.218	11907815.76	Combined cycle Pipeline Natural Gas	1910	
							45371.7		5976447.1			945.50					
FL	Fort Myers Power Plant	612	FMCT2A	2009	ARP		7473.2	12	973985.1	3.24	0.032	159.73	641893.05	10801065.66	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2B	2009	ARP		7752.7	12	1014755.9	3.352	0.0289	153.99	663942.469	11172182.02	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2C	2009	ARP		7253.2	12	933207.7	3.122	0.0312	148.69	618333.778	10404659.48	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2D	2009	ARP		7567.0	12	976755.3	3.243	0.0295	145.40	642406.033	10809655.23	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2E	2009	ARP		7632.0	12	985226.6	3.279	0.03	154.60	649491.643	10928937.27	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2F	2009	ARP		7547.8	12	980063.0	3.268	0.0309	155.89	647286.065	10891799.85	Combined cycle Pipeline Natural Gas	1910	
							45226.0		5863993.6			918.30					
FL	Fort Myers Power Plant	612	FMCT2A	2010	ARP		7075.2	12	923551.2	3.053	0.0334	149.82	604805.018	10177032.73	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2B	2010	ARP		7079.8	12	932924.9	3.063	0.0333	152.00	606658.648	10208181.45	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2C	2010	ARP		7141.4	12	928107.3	3.083	0.0317	149.43	610736.12	10276762.75	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2D	2010	ARP		7112.6	12	931689.1	3.085	0.0295	137.54	611176.991	10284259.92	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2E	2010	ARP		7761.6	12	1019471.6	3.361	0.0286	148.85	665799.852	11203360.56	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2F	2010	ARP		7566.6	12	999942.8	3.31	0.03	153.20	655706.305	11033597.88	Combined cycle Pipeline Natural Gas	1910	
							43737.2		5735686.9			890.84					
FL	Fort Myers Power Plant	612	FMCT2A	2011	ARP		5833.2	12	773274.2	2.543	0.0417	130.29	503635.083	8474630.504	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2B	2011	ARP		6470.7	12	860275.4	3.193	0.0411	153.13	559072.254	9407468.742	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2C	2011	ARP		4936.2	12	644213.9	2.148	0.0325	106.00	425427.143	7158622.427	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2D	2011	ARP		6275.4	12	830532.6	2.753	0.0312	125.35	545405.299	9177538.632	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2E	2011	ARP		6132.7	12	808212.9	2.677	0.0408	140.94	530284.183	8923027.769	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2F	2011	ARP		6311.6	12	839837.5	2.742	0.0392	137.79	543116.889	9139068.616	Combined cycle Pipeline Natural Gas	1910	
							35959.8		4756346.6			793.50					
FL	Fort Myers Power Plant	612	FMCT2A	2012	ARP		7327.5	12	954011.4	3.157	0.029	133.91	625365.116	10522898.07	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2B	2012	ARP		7728.4	12	1010151.5	3.584	0.0288	149.75	662596.781	11149393.48	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2C	2012	ARP		7730.0	12	993207.5	3.339	0.0305	161.90	661366.108	11128790.58	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2D	2012	ARP		7483.1	12	971515.9	3.24	0.0281	140.97	641793.91	10799447.5	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2E	2012	ARP		7721.3	12	998563.9	3.343	0.0286	147.11	662227.646	11143221.77	Combined cycle Pipeline Natural Gas	1910	
FL	Fort Myers Power Plant	612	FMCT2F	2012	ARP		7497.4	12	977740.4	3.182	0.029	139.60	630236.156	10604931.03	Combined cycle Pipeline Natural Gas	1910	
							45487.7		5905190.7			873.23					

APPENDIX C

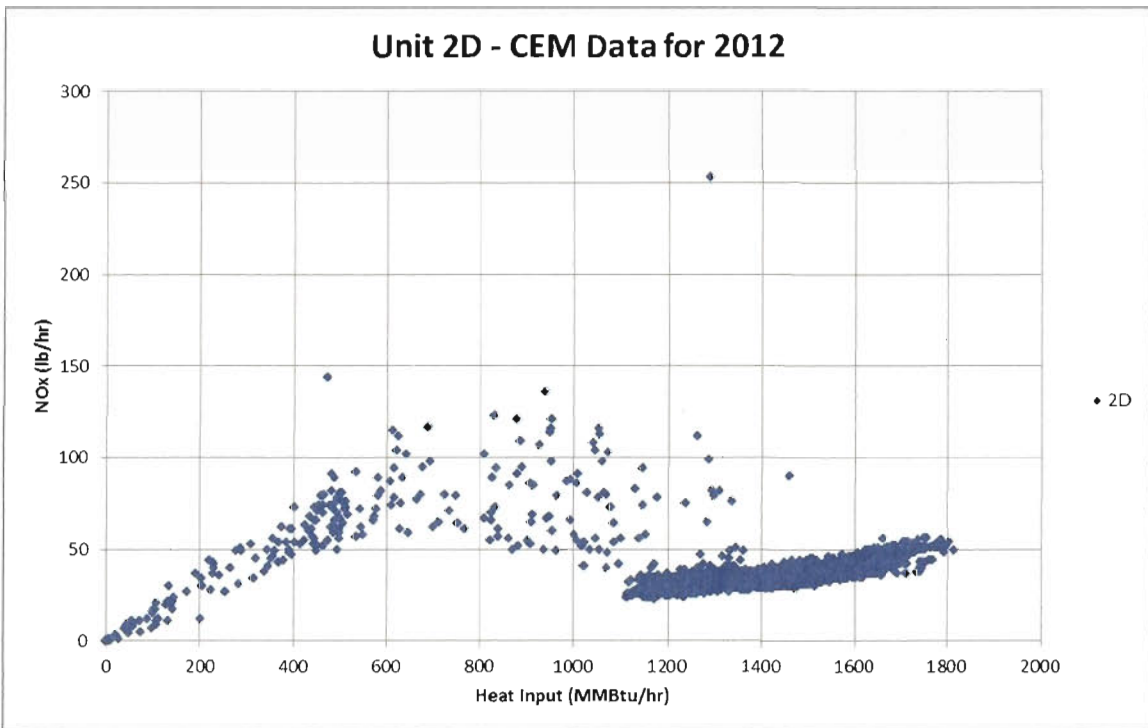
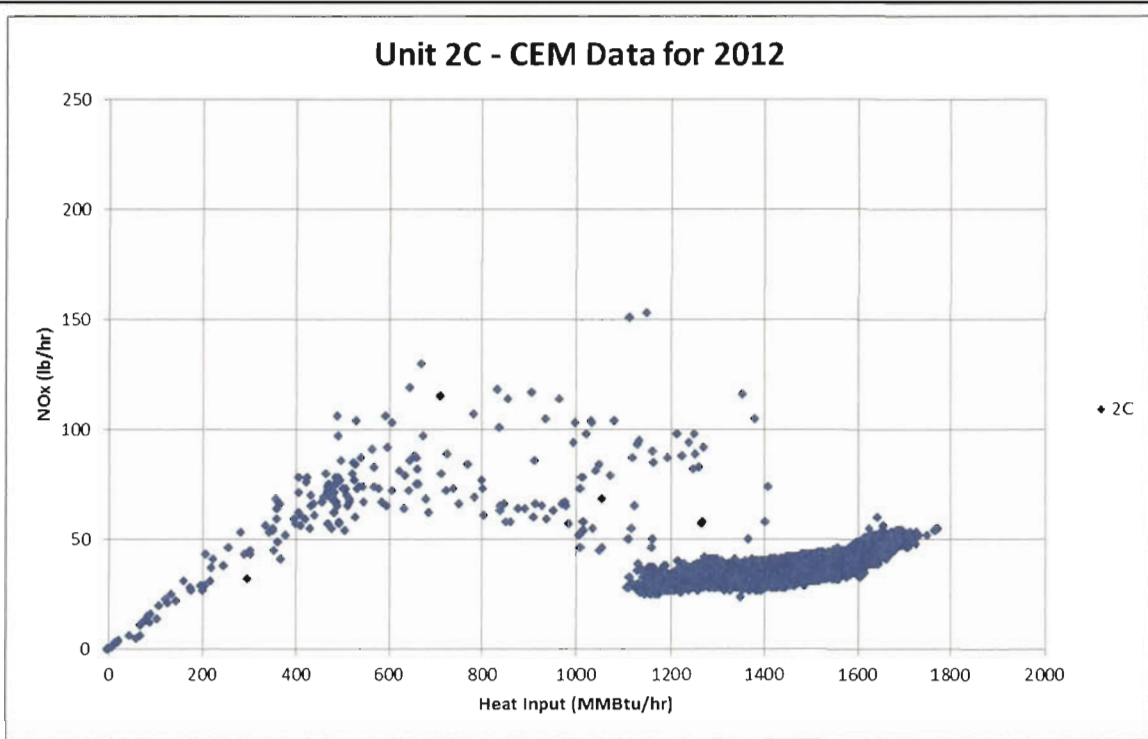


Appendix C
Hourly Acid Rain

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Source: Golder, 2013.



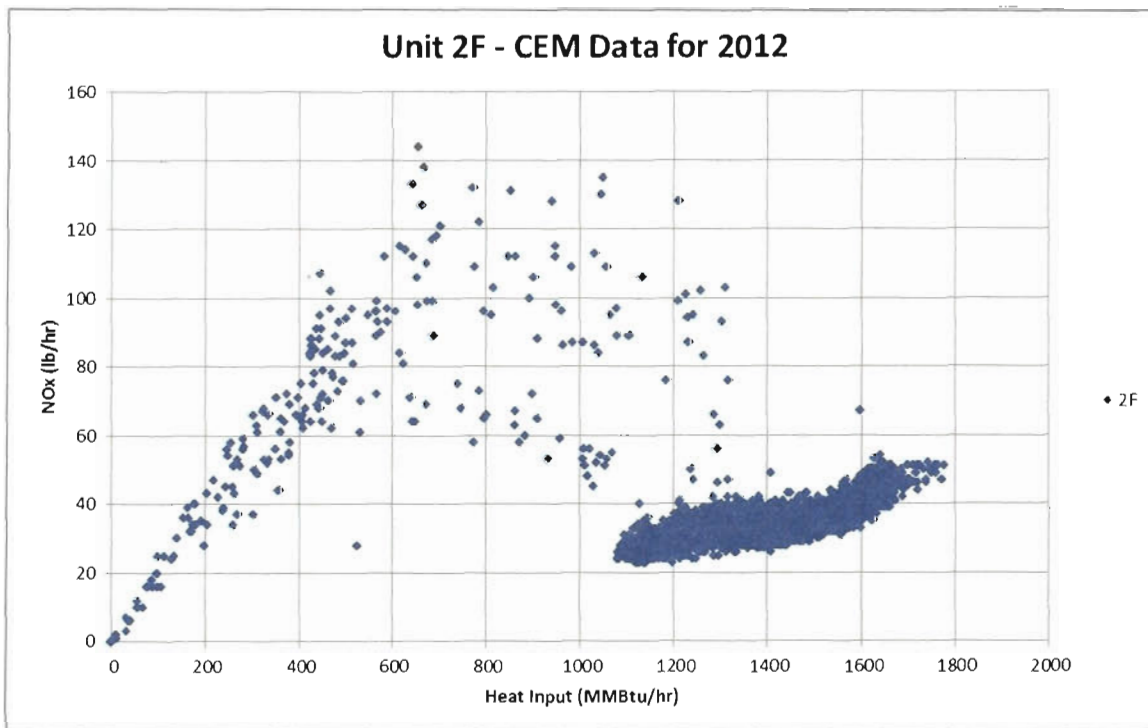
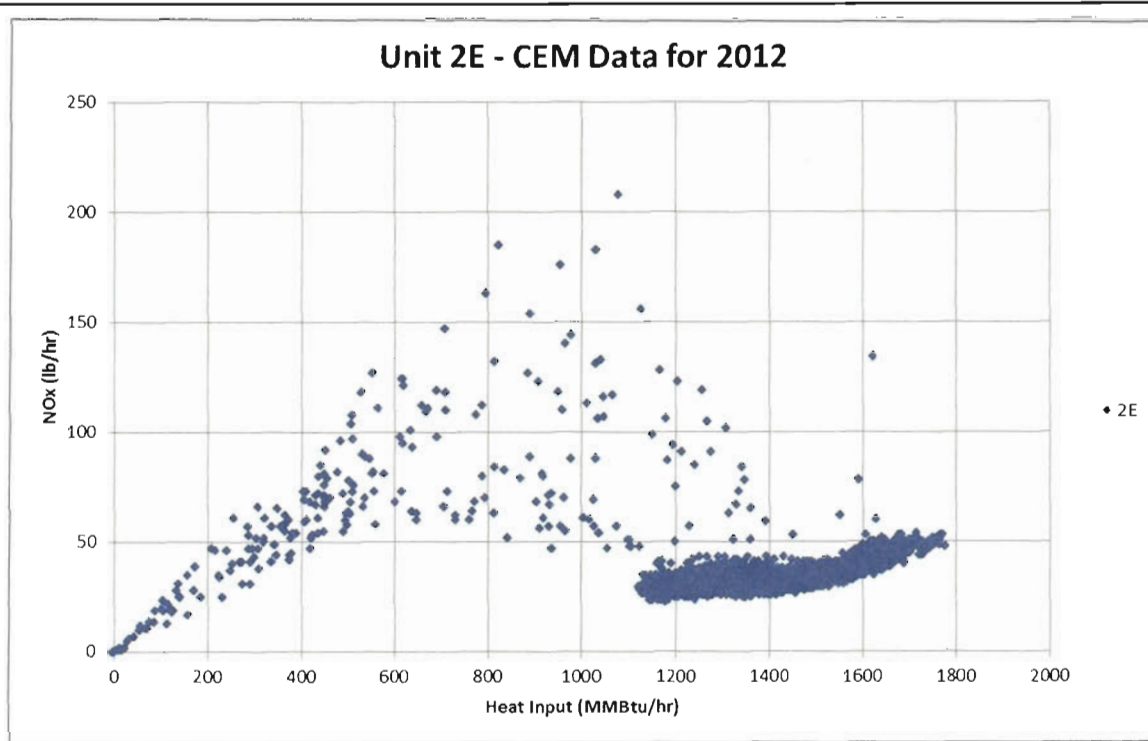


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Hourly Acid Rain

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Source: Golder, 2013.





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Source: Golder, 2013.

