

February 22, 1999

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FEB 24 1999

BUREAU OF  
AIR REGULATION

Mr. Al Linero, P.E.  
Bureau of Air Regulation  
Florida Department of Environmental Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

Dear Mr. Linero:

Re: Inlet Fogging Permit Application

0970014-002-AC

Enclosed are three originals of a construction permit application for installation of inlet fogging systems on Units 7 through 10 at Florida Power Corporation's (FPC) Intercession City plant. As you know, FPC wishes to install inlet fogging systems on its newer peaking units at the two facilities in order to obtain additional electric output during summer peak demand periods.

FPC requests that the inlet fogging be permitted for use at the Intercession City facilities for a total of 7,200 hrs/year. Permitting the use of inlet fogging will help FPC address a very real need for additional generating capacity during the summer of 1999 with a corresponding insignificant increase in emissions. Please contact Mike Kennedy at (727) 826-4334 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Pardue", written over a circular scribble.

W. Jeffrey Pardue, C.E.P.  
Director

CC: file  
Central District

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FEB 24 1999

Department of  
Environmental Protection

BUREAU OF  
AIR REGULATION

DIVISION OF AIR RESOURCES MANAGEMENT  
APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION


Identification of Facility Addressed in This Application

1. Facility Owner/Company Name : Florida Power Corporation	
2. Site Name : Intercession City Plant	
3. Facility Identification Number :	0970014 <input type="checkbox"/> Unknown
4. Facility Location : Intercession City  Street Address or Other Locator : 6525 Osceola Polk Co. Line Rd. City : Intercession City County : Osceola Zip Code : 33848	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

0970014-002-AC

I. Part 1 - 1

**Owner/Authorized Representative or Responsible Official**

1. Name and Title of Owner/Authorized Representative or Responsible Official :	
Name :	W. Jeffrey Pardue, C.E.P.
Title :	Director, Environmental Services
2. Owner or Authorized Representative or Responsible Official Mailing Address :	
Organization/Firm :	Florida Power Corporation
Street Address :	P.O. Box 14042, MAC BB1A
City :	St. Petersburg
State :	FL
Zip Code :	33733
3. Owner/Authorized Representative or Responsible Official Telephone Numbers :	
Telephone :	(727)826-4301
Fax :	(727)826-4216
4. Owner/Authorized Representative or Responsible Official Statement :	
<p><i>I, the undersigned, am the owner or authorized representative* of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., of the Title V source addressed in this application, whichever is applicable. 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. 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 any permitted emissions units.</i></p>	
 Signature	<u>2/25/99</u> Date

\* Attach letter of authorization if not currently on file.

**Scope of Application**

<b>Emissions Unit ID</b>	<b>Description of Emissions Unit</b>	<b>Permit Type</b>
002	Combustion Turbine (CT) Peaking Unit Nos. 7-10	

**Purpose of Application and Category**

Category I: All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.

This Application for Air Permit is submitted to obtain :

- Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.
  
- Initial air operation permit under Chapter 62-213, F.A.C., for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number :

- Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed :

- Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number :

Operation permit to be revised :

- Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application.

Operation permit to be revised/corrected :

I. Part 4 - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

- Air operation permit revision for a Title V source for reasons other than construction or modification of an emissions unit.

Operation permit to be revised :

Reason for revision :

**Category II : All Air Operation Permit Applications Subject to Processing Under Rule 2-210.300(2)(b), F.A.C.**

This Application for Air Permit is submitted to obtain :

- Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s) :

- Renewal air operation permit under Rule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed :

- Air operation permit revision for a synthetic non-Title V source.

Operation permit to be revised :

Reason for revision :

**Category III : All Air Construction Permit Applications for All Facilities and Emissions Units**

This Application for Air Permit is submitted to obtain :

- Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

I. Part 4 - 2

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

Current operation permit number(s), if any :  
0970014-001-AV

- Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

Current operation permit number(s) :

- Air construction permit for one or more existing, but unpermitted, emissions units.

**Application Processing Fee**

Check one :

Attached - Amount : \$0.00

Not Applicable.

**Construction/Modification Information**

1. Description of Proposed Project or Alterations :	
Project to add inlet fogging to each of Units 7 through 10. Fogging consists of atomized water to cool the inlet air to the turbine, producing additional electric generation output.	
2. Projected or Actual Date of Commencement of Construction :	01-May-1999
3. Projected Date of Completion of Construction :	30-Jun-1999

**Professional Engineer Certification**

1. Professional Engineer Name : Jennifer L. Tillman Registration Number : 0052125	
2. Professional Engineer Mailing Address :  Organization/Firm : Florida Power Corporation Street Address : P.O. Box 14042, MAC BB1A City : St. Petersburg State : FL Zip Code : 33733	
3. Professional Engineer Telephone Numbers : Telephone : (727)826-4132 Fax : (727)826-4216	



4. Professional Engineer Statement :

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

*(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollutant control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and*

*(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.*

*If the purpose of this application is to obtain a Title V source air operation permit (check here [ ] if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.*

*If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [] if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.*

*If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ] if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions 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.*

*Jennifer L. Tillman*  
\_\_\_\_\_  
Signature  
(seal)

*2/22/99*  
\_\_\_\_\_  
Date

I. Part 6 - 1

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\* Attach any exception to certification statement.

I. Part 6 - 2

DEP Form No. 62-210.900(1) - Form

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**Application Contact**

1. Name and Title of Application Contact :
Name : J. Michael Kennedy, Q.E.P. Title : Manager, Air Programs
2. Application Contact Mailing Address :
Organization/Firm : Florida Power Corporation Street Address : P.O. Box 14042, MAC BB1A City : St. Petersburg State : FL                      Zip Code : 33733
3. Application Contact Telephone Numbers :
Telephone : (727)826-4334                      Fax : (727)826-4216

**Application Comment**

This application is for a permit to authorize the installation of inlet fogging on Intercession City Units 7 through 10.

## II. FACILITY INFORMATION

### A. GENERAL FACILITY INFORMATION

#### Facility, Location, and Type

2

1. Facility UTM Coordinates : Zone : 17                      East (km) : 446.30                      North (km) : 3126.00			
2. Facility Latitude/Longitude : Latitude (DD/MM/SS) : 28 15 38      Longitude (DD/MM/SS) : 81 32 51			
3. Governmental Facility Code : 0	4. Facility Status Code : A	5. Facility Major Group SIC Code : 49	6. Facility SIC(s) :
7. Facility Comment :  Facility consists of 11 combustion turbine peaking units. Six CTs are fired with #2 distillate oil with a maximum sulfur content of 0.5%. Five CTs are fired with #2 distillate oil with a maximum sulfur content of 0.2% or natural gas. These 5 CTs are limited to average annual capacity factor of 33% based on weighted 12-month rolling average sulfur content of 0.2%, which may be increased up to 38.7% if average sulfur content is 0.16% or less.			

#### Facility Contact

1. Name and Title of Facility Contact : M. J. Drango Asset Manager
2. Facility Contact Mailing Address : Organization/Firm : Florida Power Corporation Street Address : 6525 Osceola Polk Co. Line Rd. City : Intercession City                      State : FL      Zip Code : 33848
3. Facility Contact Telephone Numbers : Telephone : (407)396-2111                      Fax : (407)678-4453

II. Part 1 - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

**Facility Regulatory Classifications**

1. Small Business Stationary Source?	N
2. Title V Source?	Y
3. Synthetic Non-Title V Source?	N
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	Y
5. Synthetic Minor Source of Pollutants Other than HAPs?	N
6. Major Source of Hazardous Air Pollutants (HAPs)?	N
7. Synthetic Minor Source of HAPs?	N
8. One or More Emissions Units Subject to NSPS?	Y
9. One or More Emission Units Subject to NESHAP?	N
10. Title V Source by EPA Designation?	N
11. Facility Regulatory Classifications Comment :	
Combustion Turbine Units 7 through 10, to which this application applies, are subject to NSPS for stationary gas turbines (40 CFR Part 60, Subpart GG).	

## B. FACILITY REGULATIONS

### Rule Applicability Analysis

Not Applicable

## **B. FACILITY REGULATIONS**

### **List of Applicable Regulations**

Refer to Attachment IC-FE-B

II. Part 3b - 1

DEP Form No. 62-210.900(1) - Form  
Effective : 3-21-96

## C. FACILITY POLLUTANTS

### Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification
PM10	A
NOX	A
PM	A
CO	A
SO2	A
VOC	A
SAM	A



**D. FACILITY POLLUTANT DETAIL INFORMATION**

**Facility Pollutant Information**

Pollutant   1  

1. Pollutant Emitted :	PM10	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :		

II. Part 4b - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

**D. FACILITY POLLUTANT DETAIL INFORMATION**

**Facility Pollutant Information**

Pollutant   2  

1. Pollutant Emitted :	NOX	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :		

II. Part 4b - 2

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

**D. FACILITY POLLUTANT DETAIL INFORMATION**

**Facility Pollutant Information**

Pollutant   3  

1. Pollutant Emitted :	PM	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :		

II. Part 4b - 3

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

**D. FACILITY POLLUTANT DETAIL INFORMATION**

**Facility Pollutant Information**

Pollutant   4  

1. Pollutant Emitted :	CO	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :		

II. Part 4b - 4

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

**D. FACILITY POLLUTANT DETAIL INFORMATION**

**Facility Pollutant Information**

Pollutant   5  

1. Pollutant Emitted :	SO2	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :		

II. Part 4b - 5

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

**D. FACILITY POLLUTANT DETAIL INFORMATION**

**Facility Pollutant Information**

Pollutant   6  

1. Pollutant Emitted :	VOC	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :		

II. Part 4b - 6

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

**D. FACILITY POLLUTANT DETAIL INFORMATION**

**Facility Pollutant Information**

Pollutant   7  

1. Pollutant Emitted :	SAM	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :		

II. Part 4b - 7

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

## D. FACILITY SUPPLEMENTAL INFORMATION

### Supplemental Requirements for All Applications

1. Area Map Showing Facility Location :	IC-FE-1
2. Facility Plot Plan :	IC-FE-2
3. Process Flow Diagram(s) :	IC-FE-3
4. Precautions to Prevent Emissions of Unconfined Particulate Matter :	NA
5. Fugitive Emissions Identification :	NA
6. Supplemental Information for Construction Permit Applica	IC-FE-4

### Additional Supplemental Requirements for Category I Applications Only

7. List of Proposed Exempt
8. List of Equipment/Activities Regulated under
9. Alternative Methods of Operation :
10. Alternative Modes of Operation (Emissions
11. Identification of Additional Applicable
12. Compliance Assurance Monitoring
13. Risk Management Plan Verification :
14. Compliance Report and Plan :
15. Compliance Certification (Hard-copy Requir



II. Part 5 - 2

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

**ATTACHMENT IC-FE-B**  
**FACILITY REGULATIONS**

**ATTACHMENT IC-FE-B**  
**FACILITY REGULATIONS**

**Applicable Requirements Listing - Power Plants**

**FACILITY: FPC Intercession City Plant**

**FDEP Rules:**

**General Permits:**

62-4.030

62-4.040(1)(a)

- Exemptions from permitting

62-4.040(1)(b)

- Exemptions from permitting

62-4.100

62-4.130

**Asbestos NESHAP:**

62-204.800(8)(b)8.(State Only)

- Asbestos Removal

62-204.800(8)(d) (State Only)

- General Provisions (Asbestos)

62-204.800(19) (State Only)

- CFCs; Part 82

**Stationary Sources-General:**

62-210.300(2)

**Exemptions - Plant Specific:**

62-210.300(3)(a)4.

- comfort heating < 1 mmBtu/hr

62-210.300(3)(a)5.

- mobile sources

62-210.300(3)(a)7.

- non-industrial vacuum cleaning

62-210.300(3)(a)8.

- refrigeration equipment

62-210.300(3)(a)9.

- vacuum pumps for labs

62-210.300(3)(a)10.

- steam cleaning equipment

62-210.300(3)(a)11.

- sanders < 5 ft<sup>2</sup>

62-210.300(3)(a)12.

- space heating equip.; (non-boilers)

62-210.300(3)(a)14.

- bakery ovens

62-210.300(3)(a)15.

- lab equipment

62-210.300(3)(a)16.

- brazing, soldering or welding

62-210.300(3)(a)17.

- laundry dryers

62-210.300(3)(a)20.

- emergency generators < 32,000 gal/yr

62-210.300(3)(a)21.

- general purpose engines < 32,000 gal.yr

62-210.300(3)(a)22.

- fire and safety equipment

62-210.300(3)(a)23.

- surface coating > 5% VOC; 6 gal/month

62-210.300(3)(a)24.

- surface coating < 5% VOC

62-210.300(3)(b)

- Temporary Exemptions

62-210.370(3)

- AORs

62-210.900(5)

- AOR Form

Title V Permits:

- 62-213.205(1)(a) - Fees
- 62-213.205(1)(b)
- 62-213.205(1)(c)
- 62-213.205(1)(e)
- 62-213.205(1)(f)
- 62-213.205(1)(g)
- 62-213.205(1)(I)
- 62-213.205(1)(j)
- 62-213.400 - Permits/Revisions
- 62-213.410 - Changes without permit revisions
- 62-213.420.(1)(b)2. - Permits-allows continued operation
- 62-213.420.(1)(b)3. - Permits-additional information
- 62-213.460 - Permit Shield
- 62-213.900(1) - Fee Form

Open Burning:

- 62-256.300 - Prohibitions
- 62-256.700 - Open burning Allowed

Asbestos Removal:

- 62-257.301 - Notification and Fee
- 62-257.400 - Fee Schedule
- 62-257.900 - Form

Stationary Sources-Emission Standards:

- 62-296.320(2) (State Only) - Odor
- 62-296.320(3)(b) (State Only) - Emergency Open Burning
- 62-296.320(4)(b) - General VE Standard
- 62-296.320(4)(c) - Unconfined Emissions of Particulate Matter

Stationary Sources-Emission Monitoring

- 62-297.310(7)(a)10. - Exemption of annual VE for 210.300(3)(a) sources/Gen. Per.

Federal Regulations:

Asbestos Removal:

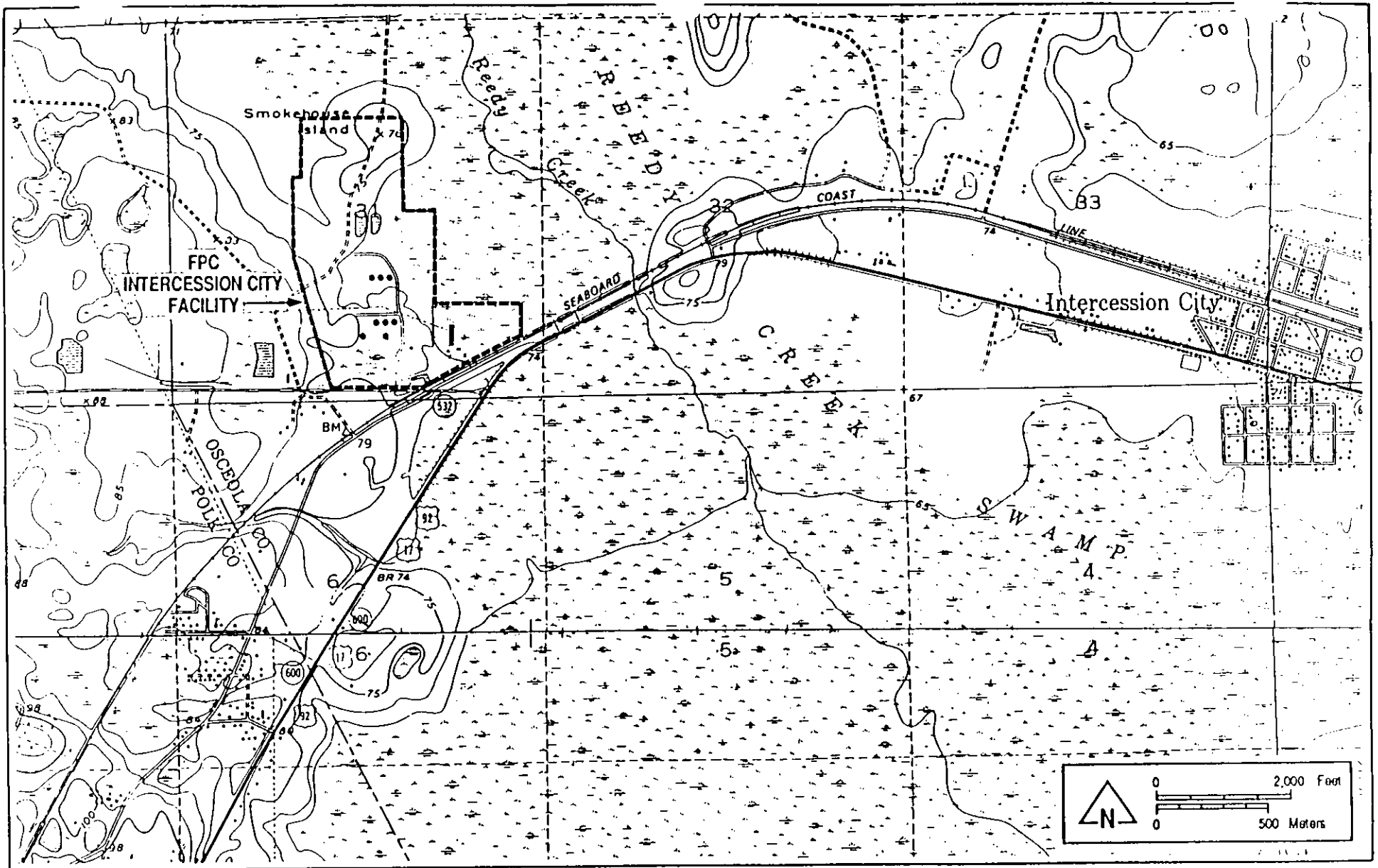
- 40 CFR 61.05 - Prohibited Activities
- 40 CFR 61.12(b) - Compliance with work practice standard
- 40 CFR 61.14 - Monitoring Requirements (if required)
- 40 CFR 61.19 - Circumvention
- 40 CFR 61.145 - Demolition and Renovation
- 40 CFR 61.148 - Standard for Insulating Material

CFCs > 50 lb:

- 40 CFR 82.166(k) - Service Documentation
- 40 CFR 82.166(m) - Recordkeeping

**ATTACHMENT IC-FE-1**

**AREA MAP**



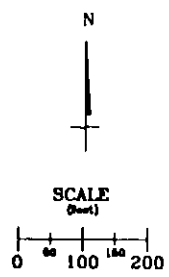
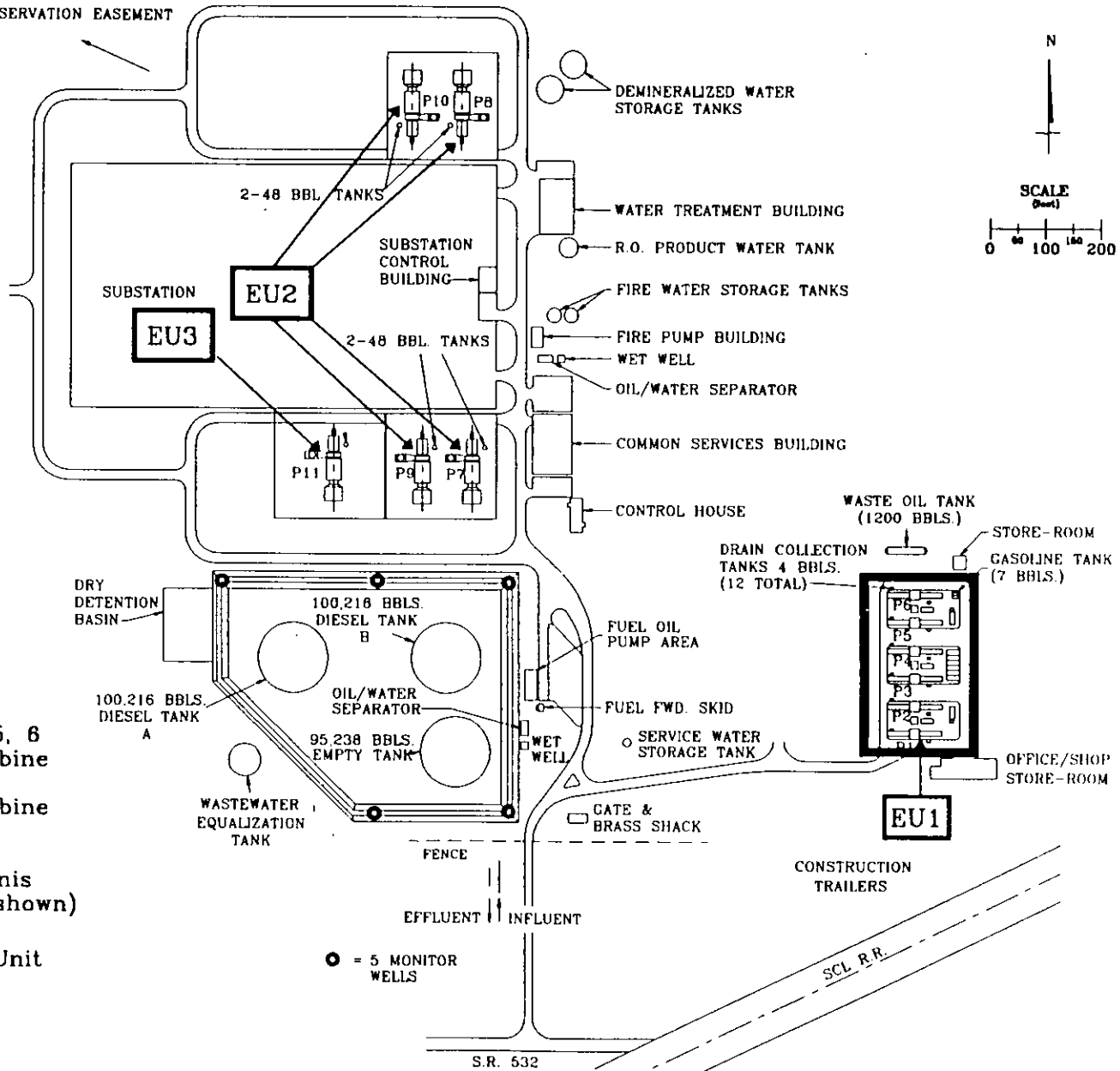
LOCATION OF THE FPC INTERCESSION CITY FACILITY



**ATTACHMENT IC-FE-2**

**FACILITY PLOT PLAN**

NORTHWEST CORNER- CONSERVATION EASEMENT

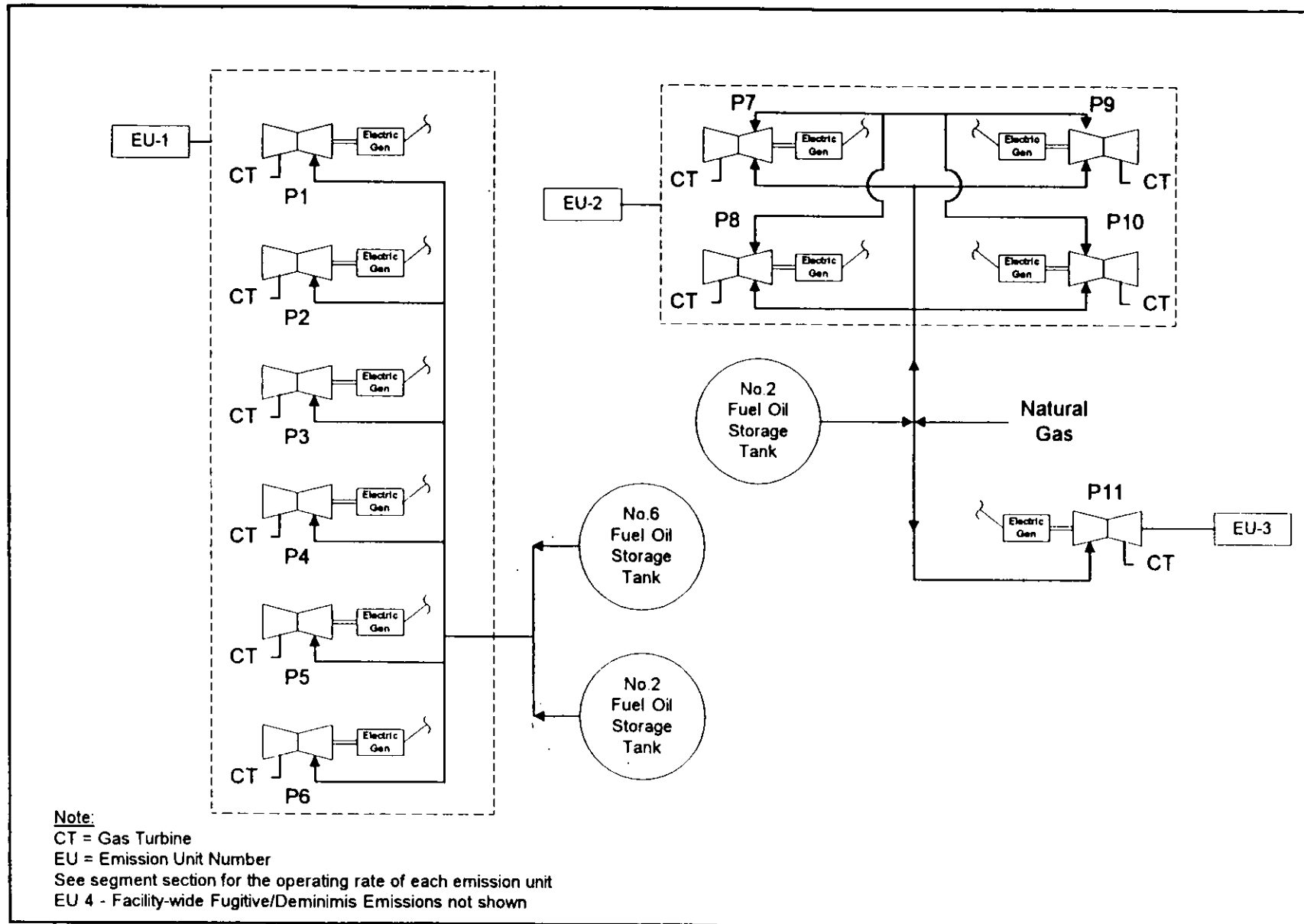



- Key**
- EU1 - Gas Turbine No. 1, 2, 3, 4, 5, 6
  - EU2 - Combustion Turbine No. 7, 8, 9, 10
  - EU3 - Combustion Turbine No. 11
  - EU4 - Facility-wide Fugitive/Deminimis Emissions (not shown)

Note: EU = Emission Unit



**ATTACHMENT IC-FE-3**  
**PROCESS FLOW DIAGRAM**



Florida Power Corporation		Emission Unit	Significant Units	 <b>KBN</b> Engineering and Applied Sciences, Inc.
Emission Units - Intercession City		Process Area	Overall Plant	
		Filename	FPCIC1.VSD	
		Latest Revision Date	6/3/96 03:45 PM	

**Attachment IC-FE-4**

**Supplemental Information**

# Florida Power Corporation GE Frame 7EA Combustion Turbines

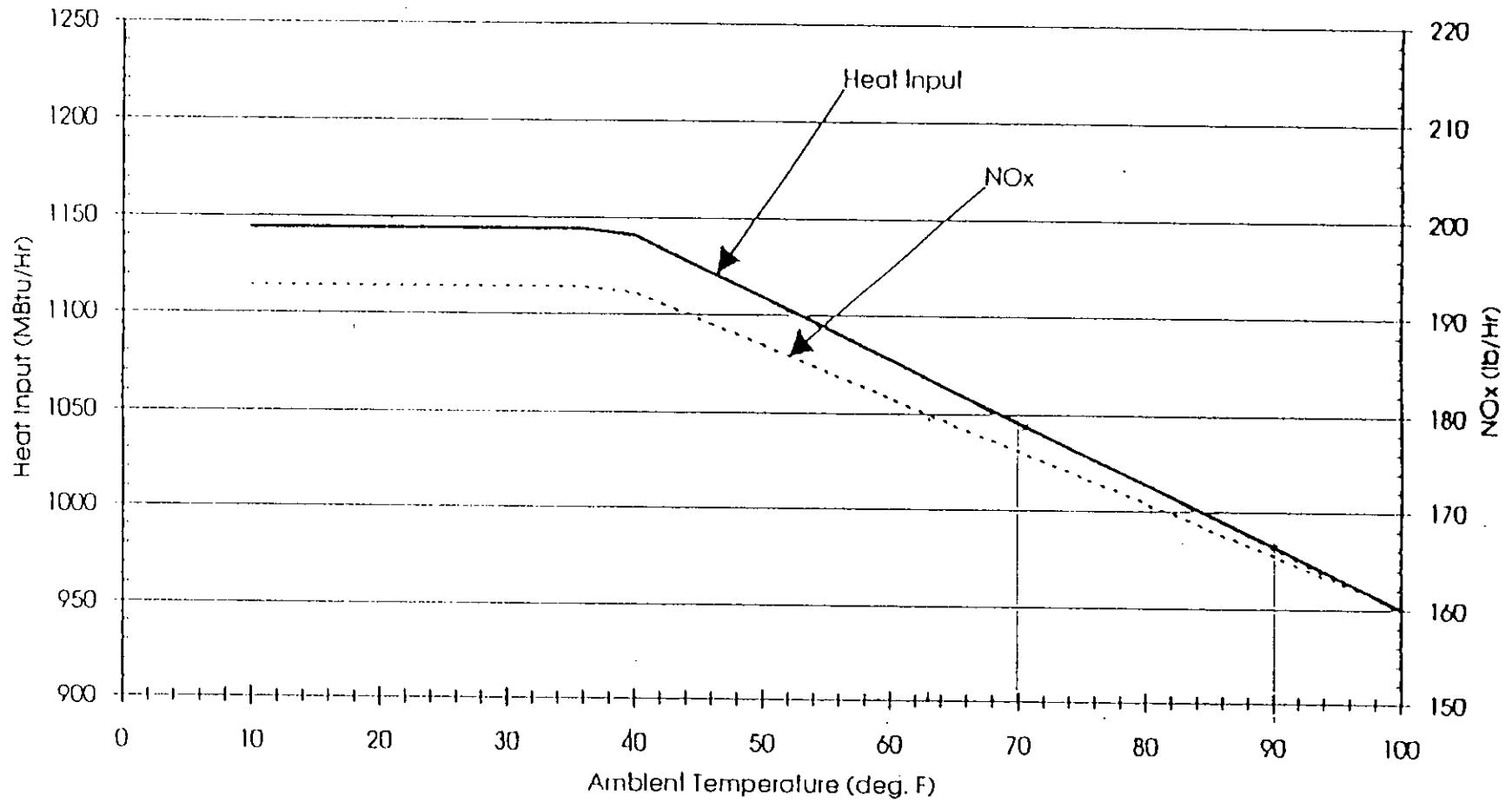


Figure II  
Florida Power Corporation  
Intercession City Facility  
Heat Input vs. Ambient Temperature Curve

## Description of Project and Estimated Emissions Increase

The inlet fogging system is useful on hot summer days. A water mist is sprayed into the inlet of the combustion turbine. The mist cools the inlet air by evaporation, resulting in a 20 degrees F. reduction in temperature. The air is therefore denser, and the unit can achieve higher output (nominally, 4 to 6 MW of additional output will be obtained). This also results in slightly higher heat input and NOx emissions, although they are within the allowable limits for the inlet temperature achieved. In addition, the fogging system improves unit efficiency slightly. Efficiency is expected to increase by approximately 1% as a result of the fogging. This will have a nominal offsetting effect on the direct increase in emissions resulting from the use of inlet fogging.

The attached curves, which are a part of the current permit for the facility, show the relationship between inlet temperature and heat input and NOx emissions for the GE Frame 7EA combustion turbines at Intercession City. These curves do not take into account the improved efficiency achieved with inlet fogging, so they are conservative.

A typical scenario would occur when the ambient temperature is 90 degrees F. If fogging is used, the inlet air to the combustion turbine would be cooled to approximately 70 deg. NOx emissions could increase from 165 lbs/hr to 176 lbs/hr, which is an increase of 11 lbs/hr per unit. This is a worst-case estimate, because it is based on oil firing. The increase would be only 6 lbs/hr while operating on natural gas. At an increase of 11 lbs/hr, inlet fogging could be used for an aggregate of over 7,200 hrs/year and remain below the PSD significant emissions increase threshold of 40 tons/year. Given the long, hot summers in Florida, limiting the use of the fogging systems to an aggregate total of 7,200 hrs/year per facility should provide adequate operating time while ensuring that emissions do not increase significantly.

For other criteria pollutants, the emissions increase can be estimated by using the heat input increase associated with a 20 deg. F decrease in temperature. Using the heat input curve, a 20 deg. F temperature decrease results in an increase in heat input of 55 mmBtu/hour. This is then multiplied by the emissions rate in lb/mmBtu in order to obtain the increase in hourly emissions. The following table summarizes the results.

Pollutant	Emission Rate (lb/mmBtu)	Emission Increase (lb/hr)	Tons/Year @ 7,200 hr/yr	PSD Threshold
SO <sub>2</sub>	0.19	10.5	37.8	40
PM	0.015	0.8	2.9	25
PM10	0.015	0.8	2.9	15
CO	0.05	2.8	10.1	100
VOC	0.004	0.2	11.0	40
SAM	0.016	0.9	2.9	7

All pollutant increases will remain less than the respective PSD thresholds at an aggregate fogging use limit of 7,200 hours per year for Units 7 through 10.

### Unit Hours of Operation

Total annual hours of operation for Units 7 through 10 for 1997 and 1998 are as follows.

Unit	1997 Hours	1998 Hours
7	1,996	1,927
8	1,974	1,796
9	2,031	1,981
10	1,893	2,015

Units 7 through 10 will continue to be used as peaking units after the installation of inlet fogging.

### III. EMISSIONS UNIT INFORMATION

#### A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Emissions Unit Information Section     1    

Combustion Turbine (CT) Peaking Unit Nos. 7-10

#### Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

[ X ] 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.

2. Single Process, Group of Processes, or Fugitive Only? 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).

[ X ] 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.

III. Part 1 - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

Emissions Unit Information Section 1

**B. GENERAL EMISSIONS UNIT INFORMATION  
(Regulated and Unregulated Emissions Units)**

**Emissions Unit Description and Status**

1. Description of Emissions Unit Addressed in This Section :  Combustion Turbine (CT) Peaking Unit Nos. 7-10		
2. Emissions Unit Identification Number : 002 [ ] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code : A	4. Acid Rain Unit? [X] Yes [ ] No	5. Emissions Unit Major Group SIC Code : 49
6. Emissions Unit Comment :		



**Emissions Unit Information Section**      1

Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Emissions Unit Control Equipment**      1

1. Description : Water Injection
2. Control Device or Method Code :

**C. EMISSIONS UNIT DETAIL INFORMATION  
(Regulated Emissions Units Only)**

**Emissions Unit Information Section**          1      
 Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Emissions Unit Details**

1. Initial Startup Date :	19-Aug-1993	
2. Long-term Reserve Shutdown Date :		
3. Package Unit :		
Manufacturer :	General Electric	Model Number : PG 7111EA
4. Generator Nameplate Rating :	93      MW	
5. Incinerator Information :		
Dwell Temperature :		Degrees Fahrenheit
Dwell Time :		Seconds
Incinerator Afterburner Temperature :		Degrees Fahrenheit

**Emissions Unit Operating Capacity**

1. Maximum Heat Input Rate :	1144	mmBtu/hr
2. Maximum Incinerator Rate :		lb/hr      tons/day
3. Maximum Process or Throughput Rate :		
4. Maximum Production Rate :		
5. Operating Capacity Comment :	See Attachment IC-EU2-C5	

**Emissions Unit Operating Schedule**

Requested Maximum Operating Schedule :		
	24 hours/day	7 days/week
	52 weeks/year	3,390 hours/year

**D. EMISSIONS UNIT REGULATIONS  
(Regulated Emissions Units Only)**

**Emissions Unit Information Section**      1    
Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Rule Applicability Analysis**

Not Applicable

III. Part 6a - 1

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**Emissions Unit Information Section** 1  
Combustion Turbine (CT) Peaking Unit Nos. 7-10

**List of Applicable Regulations**

See Attachment IC-EU2-D

III. Part 6b - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

## E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 1

Combustion Turbine (CT) Peaking Unit Nos. 7-10

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	See Attach. IC-FE-2
2. Emission Point Type Code :	1
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :  Combustion turbine gases exhaust through a single stack per turbine.	
5. Discharge Type Code :	V
6. Stack Height :	50 feet
7. Exit Diameter :	13.8 feet
8. Exit Temperature :	1043 °F
9. Actual Volumetric Flow Rate :	1551317 acfm
10. Percent Water Vapor :	0.00 %
11. Maximum Dry Standard Flow Rate :	0 dscfm
12. Nonstack Emission Point Height :	0 feet
13. Emission Point UTM Coordinates :	
Zone : 0	East (km) : 0.000
	North (km) : 0.000

III. Part 7a - 1

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14. Emission Point Comment :

Exit temperature and flow rate given for a single CT at an ambient temperature of 59 deg. F (oil firing).

III. Part 7a - 2

DEP Form No. 62-210.900(1) - Form

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## F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Segment Description and Rate :** Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Distillate fuel oil.	
2. Source Classification Code (SCC) : 20100101	
3. SCC Units : Thousand Gallons Burned (all liquid fuels)	
4. Maximum Hourly Rate : 8.70	5. Maximum Annual Rate : 26,523.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur : 0.2	8. Maximum Percent Ash : 0.10
9. Million Btu per SCC Unit : 132	
10. Segment Comment :	

III. Part 8 - 1

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Effective : 3-21-96

## F. SEGMENT (PROCESS/FUEL) INFORMATION

**Emissions Unit Information Section**        1  

Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Segment Description and Rate :**      Segment   2  

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) :  Natural gas	
2. Source Classification Code (SCC) :      20100201	
3. SCC Units :      Million Cubic Feet Burned (all gaseous fuels)	
4. Maximum Hourly Rate :      1.05	5. Maximum Annual Rate :      3,553.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :      1,000	
10. Segment Comment :  Maximum % sulfur: 1 grain/100 cf. 1) Max. hourly and annual rates at 59 deg. F for one CT. Annual rate based on 3390 hours. However, permitted rate is actually an aggregate of all four units. 2)	

III. Part 8 - 2

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96



**G. EMISSIONS UNIT POLLUTANTS  
(Regulated and Unregulated Emissions Units)**

**Emissions Unit Information Section** 1  
 Combustion Turbine (CT) Peaking Unit Nos. 7-10

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - SO <sub>2</sub>			EL
2 - NO <sub>X</sub>	028		EL
3 - PM			EL
4 - PM <sub>10</sub>			EL
5 - CO			EL
6 - VOC			EL
7 - SAM			EL



**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

**Emissions Unit Information Section**     1    

Combustion Turbine (CT) Peaking Unit Nos. 7-10

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**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

**Emissions Unit Information Section**       1  

Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Pollutant Potential/Estimated Emissions :**     Pollutant       2  

1. Pollutant Emitted : <b>NOX</b>		
2. Total Percent Efficiency of Control :	80.00	%
3. Potential Emissions :	182.0000000 lb/hour	308.5000000 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
5. Range of Estimated Fugitive/Other Emissions: <div style="text-align: right; margin-right: 100px;">to</div> <div style="text-align: right;">tons/year</div>		
6. Emissions Factor	42	Units ppmvd@15% O2
Reference	Permit limit	
7. Emissions Method Code :    0		
8. Calculations of Emissions :  Oil-firing at 59 deg. F. AC permit limit. Equivalent TPY for 1 CT; 4 CTs have aggregate limit of 1,232 TPY.		
9. Pollutant Potential/Estimated Emissions Comment :  Max. hourly emissions based on ambient temp. at 59 deg. F. Annual emissions based on 59 deg. and 38.7% capacity factor.		

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

**Emissions Unit Information Section**     1    

Combustion Turbine (CT) Peaking Unit Nos. 7-10

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**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

**Emissions Unit Information Section**        1    

Combustion Turbine (CT) Peaking Unit Nos. 7-10

III. Part 9b - 6

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96





**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

**Emissions Unit Information Section**     1    

Combustion Turbine (CT) Peaking Unit Nos. 7-10

III. Part 9b - 8

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96



**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

**Emissions Unit Information Section**     1    

Combustion Turbine (CT) Peaking Unit Nos. 7-10

III. Part 9b - 10

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96



**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

**Emissions Unit Information Section**      1  

Combustion Turbine (CT) Peaking Unit Nos. 7-10

III. Part 9b - 12

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96



**Emissions Unit Information Section** 1  
 Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Pollutant Information Section** 1

**Allowable Emissions** 1

1. Basis for Allowable Emissions Code :		OTHER	
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :		0.20	% S max.
4. Equivalent Allowable Emissions :			
	222.00	lb/hour	321.00 tons/year
5. Method of Compliance :			
Fuel analysis			
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :			
AC permit limit - oil firing at 59 deg. F. No applicable ann. emiss. limit for single CT; 4 CTs have aggregate limit of 1,283 TPY. 33% cap. fact. limit @ 0.2 %S, 38.7% @ 0.16 %S.			

**Emissions Unit Information Section** 1  
Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Pollutant Information Section** 1

**Allowable Emissions** 2

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	1.00	grain S/100 CF	
4. Equivalent Allowable Emissions :	2.99	lb/hour	5.06 tons/year
5. Method of Compliance :	Fuel analysis		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	AC permit limit - natural gas firing at 59 deg. F. No annual emissions limit applicable for 1 CT; 4 CTs have aggregate limit of 20.2 TPY.		



**Emissions Unit Information Section** 1  
Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Pollutant Information Section** 2

**Allowable Emissions** 1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	42.00	ppmvd@15% O2	
4. Equivalent Allowable Emissions :	182.00	lb/hour	308.50 tons/year
5. Method of Compliance :	Annual compliance test, EPA Method 20		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	AC permit limit - oil firing. No applicable annual emission limit for 1 CT; 4 CTs have a limit of 1,232 TPY @ 38.7% capacity factor.		

**Emissions Unit Information Section** 1  
Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Pollutant Information Section** 2

**Allowable Emissions** 2

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	25.00	ppmvd@15% O2	
4. Equivalent Allowable Emissions :	107.00	lb/hour	181.40 tons/year
5. Method of Compliance :	Annual compliance test, EPA Method 20		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	AC permit limit- natural gas-firing at 59 deg. F.. No applicable annual emission limit for 1 CT; 4 CTs have a limit of 725 TPY @ 38.7% capacity factor.		

III. Part 9c - 5

**Emissions Unit Information Section** 1  
 Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Pollutant Information Section** 3

**Allowable Emissions** 1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	15.00	lb/hr	
4. Equivalent Allowable Emissions :	15.00	lb/hour	25.40 tons/year
5. Method of Compliance :	Annual compliance test, EPA Mthd 5 or VE < 10% at full load		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	AC permit limit - oil-firing at 59 deg. F. No applicable annual emission limit for a single CT; 4 CTs have a limit of 102 TPY at a 38.7% capacity factor.		

**Emissions Unit Information Section** 1  
 Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Pollutant Information Section** 3

**Allowable Emissions** 2

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	7.50	lb/hr	
4. Equivalent Allowable Emissions :	7.50	lb/hour	12.71 tons/year
5. Method of Compliance :	VE, EPA Method 9		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	If VE < 10%, stack test not required. Permit limit - nat. gas-firing @ 59 deg. F. No applicable annual emissions limit for 1 CT; 4 CTs limited to 50.8 TPY @ 38.7% cap. fact.		

**Emissions Unit Information Section** 1  
Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Pollutant Information Section** 4

**Allowable Emissions** 1

1. Basis for Allowable Emissions Code :		OTHER	
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :		15.00	lb/hr
4. Equivalent Allowable Emissions :			
	15.00	lb/hour	25.40 tons/year
5. Method of Compliance :			
VE, EPA Method 9			
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :			
If VE < 10%, stack test not required. AC permit limit - oil-firing @ 59 deg. F. No applicable annual emission limit for 1 CT; 4 CTs limited to 102 TPY.			

**Emissions Unit Information Section** 1  
Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Pollutant Information Section** 4

**Allowable Emissions** 2

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	7.50	lb/hr	
4. Equivalent Allowable Emissions :	7.50	lb/hour	12.71 tons/year
5. Method of Compliance :	VE, EPA Method 9		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	If VE < 10%, stack test not required. AC permit limit - natural gas-firing @ 59 deg. F. No applicable annual emissions limit for 1 CT; 4 CTs limited to 50.8 TPY.		

**Emissions Unit Information Section** 1  
Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Pollutant Information Section** 5

**Allowable Emissions** 1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	25.00	ppm	
4. Equivalent Allowable Emissions :	54.00	lb/hour	91.50 tons/year
5. Method of Compliance :	Annual compliance test, EPA Method 10		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	AC permit limit - oil-firing @ 59 deg. F. No applicable annual emissions limit for 1 CT; 4 CTs limited to 366 TPY.		

**Emissions Unit Information Section** 1  
Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Pollutant Information Section** 5

**Allowable Emissions** 2

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	10.00	ppmvd	
4. Equivalent Allowable Emissions :	21.30	lb/hour	36.10 tons/year
5. Method of Compliance :	Annual compliance test, EPA Method 10		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	AC permit limit - natural gas-firing @ 59 deg. F. No applicable annual limit for 1 CT; 4 CTs limited to 144.4 TPY.		



**Emissions Unit Information Section**        1    
Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Pollutant Information Section**        6  

**Allowable Emissions**        1  

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	5.00	lb/hr	
4. Equivalent Allowable Emissions :	5.00	lb/hour	8.50 tons/year
5. Method of Compliance :	Annual test, EPA Method 25A. Test not req'd if CO met.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	AC permit limit - oil-firing @ 59 deg. F. No applicable annual emission limit for 1 CT; 4 CTs limited to aggregate of 34 TPY. VOC test not req'd if CO limit met.		

**Emissions Unit Information Section**        1    
Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Pollutant Information Section**        6  

**Allowable Emissions**        2  

1. Basis for Allowable Emissions Code :		OTHER	
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :		3.00	lb/hr
4. Equivalent Allowable Emissions :			
	3.00	lb/hour	5.08 tons/year
5. Method of Compliance :			
Annual test, EPA Method 25A. Test not req'd if CO met.			
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :			
AC permit limit - natural gas-firing @ 59 deg. F. No applicable annual emission limit for 1 CT; 4 CTs limited to 20.3 TPY. VOC test not req'd if CO limit met.			

**Emissions Unit Information Section** 1  
 Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Pollutant Information Section** 7

**Allowable Emissions** 1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	0.20	% S	
4. Equivalent Allowable Emissions :	18.00	lb/hour	26.50 tons/year
5. Method of Compliance :	Annual test (EPA Method 8) or fuel sulfur content		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	AC permit limit - oil firing. No annual emiss. limit for 1 CT; 4 CTs have limit of 106 TPY. If S content met, SAM test not req'd. 33% cap. fact., 38.7% if S content 0.16% or less.		

**Emissions Unit Information Section** 1  
Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Pollutant Information Section** 7

**Allowable Emissions** 2

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	0.44	lb/hr	
4. Equivalent Allowable Emissions :	0.44	lb/hour	0.75 tons/year
5. Method of Compliance :	Annual test, EPA Method 8. Test not req'd if S content met.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	AC permit limit - natural gas-firing @ 59 deg. F. No applicable annual emission limit for 1 CT; 4 CTs limited to 3.0 TPY. SAM test not req'd if sulfur content limit met.		

**I. VISIBLE EMISSIONS INFORMATION  
(Regulated Emissions Units Only)**

**Emissions Unit Information Section**   1    
Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Visible Emissions Limitation :** Visible Emissions Limitation   1  

1. Visible Emissions Subtype :	10
2. Basis for Allowable Opacity :	OTHER
3. Requested Allowable Opacity :	Normal Conditions : 10 % Exceptional Conditions : 20 % Maximum Period of Excess Opacity Allowed : min/hour
4. Method of Compliance :	Annual compliance test, EPA Method 9
5. Visible Emissions Comment :	AC permit limit. VE limit under normal conditions at full load; exceptional conditions are specified for other loads.

**I. VISIBLE EMISSIONS INFORMATION**  
**(Regulated Emissions Units Only)**

**Emissions Unit Information Section**   1    
Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Visible Emissions Limitation :** Visible Emissions Limitation   2  

1. Visible Emissions Subtype :		
2. Basis for Allowable Opacity :	RULE	
3. Requested Allowable Opacity :		
	Normal Conditions :	%
	Exceptional Conditions :	100 %
Maximum Period of Excess Opacity Allowed :	60	min/hour
4. Method of Compliance :		
EPA Method 9		
5. Visible Emissions Comment :		
1. Rule 62-210.700. 2. Max. period of excess opacity allowed - 2 hours/24 hours.		

**J. CONTINUOUS MONITOR INFORMATION**  
**(Regulated Emissions Units Only)**

**Emissions Unit Information Section**   1  

Combustion Turbine (CT) Peaking Unit Nos. 7-10

**Continuous Monitoring System** Continuous Monitor   1  

1. Parameter Code : EM	2. Pollutant(s): NOX
3. CMS Requirement RULE	
4. Monitor Information Manufacturer : Model Number : Serial Number :	
5. Installation Date :	19-Aug-1993
6. Performance Specification Test Date :	19-Aug-1993
7. Continuous Monitor Comment : Water/fuel ratio monitored on continuous basis (40 CFR 60.334). Monitoring incorporated into CT control system and recorded on hourly basis.	

**Continuous Monitoring System** Continuous Monitor   2  

1. Parameter Code : EM	2. Pollutant(s): NOX
------------------------	-------------------------

III. Part 11 - 1

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**J. CONTINUOUS MONITOR INFORMATION**  
**(Regulated Emissions Units Only)**

**Emissions Unit Information Section   1**

Combustion Turbine (CT) Peaking Unit Nos. 7-10

3. CMS Requirement		RULE
4. Monitor Information		
Manufacturer :		
Model Number :		
Serial Number :		
5. Installation Date :		19-Aug-1993
6. Performance Specification Test Date :		19-Aug-1993
7. Continuous Monitor Comment :		
40 CFR 75, Appendix E.		

III. Part 11 - 2

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**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT  
TRACKING INFORMATION**

**Emissions Unit Information Section**        1  

Combustion Turbine (CT) Peaking Unit Nos. 7-10

**PSD Increment Consumption Determination**

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

- [ X ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
- [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
- [ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

- The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
- The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :		
PM : C	SO2 : C	NO2 : C
4. Baseline Emissions :		
PM :	lb/hour	tons/year
SO2 :	lb/hour	tons/year
NO2 :		tons/year
5. PSD Comment :		

## L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 1

Combustion Turbine (CT) Peaking Unit Nos. 7-10

### Supplemental Requirements for All Applications

1. Process Flow Diagram :	IC-EU2-L1
2. Fuel Analysis or Specification :	IC-EU2-L2
3. Detailed Description of Control Equipment :	IC-EU2-L3
4. Description of Stack Sampling Facilities :	IC-EU2-L4
5. Compliance Test Report :	3/5/98
6. Procedures for Startup and Shutdown :	IC-EU2-L6
7. Operation and Maintenance Plan :	NA
8. Supplemental Information for Construction Permit Application :	Appendix A
9. Other Information Required by Rule or Statue :	NA

### Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operations :
11. Alternative Modes of Operation (Emissions Trading) :

12. Identification of Additional Applicable Requirements :

13. Compliance Assurance Monitoring  
Plan :

14. Acid Rain Application (Hard-copy Required) :

Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))

Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)

New Unit Exemption (Form No. 62-210.900(1)(a)2.)

Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)

III. Part 13 - 2

DEP Form No. 62-210.900(1) - Form

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**ATTACHMENT IC-EU2-C5  
OPERATING CAPACITY COMMENT**

The maximum heat input rate is based on the permit limit at 20°F for one combustion turbine (CT). The four turbines are permitted to operate up to the equivalent of 3,390 hours/year per CT at peak or other lesser loads and 38.7 percent capacity factor. The capacity factor shall be limited to 33 percent based on weighted 12-month rolling average sulfur content not to exceed 0.2 percent. If sulfur content is less than 0.2 percent, the capacity factor can be adjusted up to 38.7 percent. A single turbine can operate at more than 3,390 hours/year. Fuel usage not limited for a single turbine; usage up to 106,120,560 gallons/yr (59°F) is authorized by construction permit. There is no annual emission limit for a single CT.

**ATTACHMENT IC-EU2-D**  
**EMISSIONS UNIT REGULATIONS**

**ATTACHMENT IC-EU2-D**  
**EMISSIONS UNIT REGULATIONS**

Applicable Requirements Listing - Power Plants

EMISSION UNIT: FPC Intercession City Plant - Combustion Turbines 7-10 (Also CT 11)

FDEP Rules:

Air Pollution Control-General Provisions:

- 62-204.800(7)(b)37.(State Only) - NSPS Subpart GG
- 62-204.800(7)(d) (State Only) - NSPS General Provisions
- 62-204.800(12) (State Only) - Acid Rain Program
- 62-204.800(13) (State Only) - Allowances
- 62-204.800(14) (State Only) - Acid Rain Program Monitoring

Stationary Sources-General:

- 62-210.700(1) - Startup/shutdown/malfunction
- 62-210.700(4) - Maintenance
- 62-210.700(6)

Acid Rain:

- 62-214.300 - Acid Rain Units (Applicability)
- 62-214.320 - Acid Rain Units (Application Shield)
- 62-214.330 - Compliance Options (if 62-214.430)
- 62-214.350(2),(3),(6) - Acid Rain Units (Certification)
- 62-214.370 - Revisions; corrections; (potentially applicable)
- 62-214.430 - Acid Rain Units (Compliance Options)

Stationary Sources-Emission Monitoring (where stack test is required):

- 62-297.310(1) - Test Runs-Mass Emission
- 62-297.310(2)(b) - Operating Rate; other than CTs
- 62-297.310(3) - Calculation of Emission
- 62-297.310(4)(a) - Applicable Test Procedures; Sampling time
- 62-297.310(4)(b) - Sample Volume
- 62-297.310(4)(c) - Required Flow Rate Range-PM/H<sub>2</sub>SO<sub>4</sub>/F
- 62-297.310(4)(d) - Calibration
- 62-297.310(4)(e) - EPA Method 5-only
- 62-297.310(5) - Determination of Process Variables
- 62-297.310(6)(a) - Permanent Test Facilities-general
- 62-297.310(6)(c) - Sampling Ports
- 62-297.310(6)(d) - Work Platforms
- 62-297.310(6)(e) - Access
- 62-297.310(6)(f) - Electrical Power
- 62-297.310(6)(g) - Equipment Support
- 62-297.310(7)(a)2. - FFSG excess emissions
- 62-297.310(7)(a)3. - Permit Renewal Test Required

- 62-297.310(7)(a)4.
  - 62-297.310(7)(a)5.
  - 62-297.310(7)(a)6.
  - 62-297.310(7)(a)9.
  - 62-297.310(7)(c)
  - 62-297.310(8)
- PM exemption if < 400 hrs/yr
  - PM exemption if < 200 hrs/6 month
  - FDEP Notification - 15 days
  - Waiver of Compliance Tests (fuel sampling)
  - Test Reports

#### Federal Rules:

#### NSPS General Requirements:

- 40 CFR 60.7(b)
  - 40 CFR 60.7(f)
  - 40 CFR 60.8(c)
  - 40 CFR 60.8(e)
  - 40 CFR 60.8(f)
  - 40 CFR 60.11(a)
  - 40 CFR 60.11(d)
  - 40 CFR 60.12
- Notification/Recordkeeping (startup/shutdown/malfunction)
  - Notification/Recordkeeping (maintain records-2 years)
  - Performance Tests (representative conditions)
  - Performance Tests (Provide stack sampling facilities)
  - Test Runs
  - Compliance (ref. S. 60.8)
  - Compliance (maintain air pollution control equipment)
  - Circumvention

#### NSPS Subpart GG:

- 40 CFR 60.332(a)(1)
  - 40 CFR 60.333
  - 40 CFR 60.334
  - 40 CFR 60.335
- NOx for Electric Utility Cts
  - SO2 limits (0.8% sulfur)
  - Monitoring of Operations (WTF ratio)
  - Test Methods

#### Acid Rain-Permits:

- 40 CFR 72.9(a)
  - 40 CFR 72.9(b)
  - 40 CFR 72.9(c)(1)
  - 40 CFR 72.9(c)(2)
  - 40 CFR 72.9(c)(1)(iv)
  - 40 CFR 72.9(c)(4)
  - 40 CFR 72.9(c)(5)
  - 40 CFR 72.9(e)
  - 40 CFR 72.9(f)
  - 40 CFR 72.9(g)
  - 40 CFR 72.20(a)
  - 40 CFR 72.20(b)
  - 40 CFR 72.20(c)
  - 40 CFR 72.21
  - 40 CFR 72.22
  - 40 CFR 72.23
  - 40 CFR 72.30(a)
  - 40 CFR 72.30(c)
  - 40 CFR 72.30(d)
  - 40 CFR 72.32
  - 40 CFR 72.33(b)
  - 40 CFR 72.33(c)
  - 40 CFR 72.33(d)
  - 40 CFR 72.40(a)
  - 40 CFR 72.40(b)
  - 40 CFR 72.40(c)
- Permit Requirements
  - Monitoring Requirements
  - SO2 Allowances-hold allowances
  - SO2 Allowances-violation
  - SO2 Allowances- other utility units
  - SO2 Allowances-allowances held in ATS
  - SO2 Allowances-no deduction for 72.9(c)(1)(i)
  - Excess Emission Requirements
  - Recordkeeping and Reporting
  - Liability
  - Designated Representative; required
  - Designated Representative; legally binding
  - Designated Representative; certification requirements
  - Submissions
  - Alternate Designated Representative
  - Changing representatives; owners
  - Requirements to Apply (operate)
  - Requirements to Apply (reapply before expiration)
  - Requirements to Apply (submittal requirements)
  - Permit Application Shield
  - Dispatch System ID;unit/system ID
  - Dispatch System ID;ID requirements
  - Dispatch System ID;ID change
  - General; compliance plan
  - General; multi-unit compliance options
  - General; conditional approval



- 40 CFR 72.40(d) - General; termination of compliance options
- 40 CFR 72.51 - Permit Shield
- 40 CFR 72.90 - Annual Compliance Certification
  
- Monitoring Part 75:
- 40 CFR 75.5 - Prohibitions
- 40 CFR 75.10(a)(2) - Primary Measurement; NOx; except 75.12&.17; Subpart E
- 40 CFR 75.10(b) - Primary Measurement; Performance Requirements
- 40 CFR 75.10(c) - Primary Measurement; Heat Input; Appendix F
- 40 CFR 75.10(f) - Primary Measurement; Minimum Measurement
- 40 CFR 75.10(g) - Primary Measurement; Minimum Recording
- 40 CFR 75.11(d) - SO2 Monitoring; Gas- and Oil-fired units
- 40 CFR 75.11(e) - SO2 Monitoring; Gaseous fuel firing
- 40 CFR 75.12(b) - NOx Monitoring; Determination of NOx emission rate; Appendix F
  
- 40 CFR 75.20(a)(5) - Initial Certification Approval Process; Loss of Certification
- 40 CFR 75.20(b) - Recertification Procedures
- 40 CFR 75.20(c) - Certification Procedures
- 40 CFR 75.20(g) - Exceptions to CEMS; oil/gas/diesel; Appendix D & E
- 40 CFR 75.21(a) - QA/QC; CEMS;
- 40 CFR 75.21(b) - QA/QC; Opacity;
- 40 CFR 75.21(c) - QA/QC; Calibration Gases
- 40 CFR 75.21(d) - QA/QC; Notification of RATA
- 40 CFR 75.21(e) - QA/QC; Audits
- 40 CFR 75.21(f) - QA/QC; CEMS
- 40 CFR 75.22 - Reference Methods
- 40 CFR 75.24 - Out-of-Control Periods; CEMS
- 40 CFR 75.30(a)(3) - General Missing Data Procedures; NOx
- 40 CFR 75.32 - Monitoring Data Availability for Missing Data
- 40 CFR 75.33 - Standard Missing Data Procedures
- 40 CFR 75.36 - Missing Data Procedures for Heat Input
- 40 CFR 75.53 - Monitoring Plan (revisions)
- 40 CFR 75.54(a) - Recordkeeping-general
- 40 CFR 75.54(b) - Recordkeeping-operating parameter
- 40 CFR 75.54(d) - Recordkeeping-NOx
- 40 CFR 75.55(c);(e) - Recordkeeping; Special Situations (gas & oil firing)
- 40 CFR 75.56 - Certification; QA/QC Provisions
- 40 CFR 75.60 - Reporting Requirements-General
- 40 CFR 75.61 - Reporting Requirements-Notification cert/recertification
- 40 CFR 75.63 - Reporting Requirements-Certification/Recertification
- 40 CFR 75.64(a) - Reporting Requirements-Quarterly reports; submission
- 40 CFR 75.64(b) - Reporting Requirements-Quarterly reports; DR statement
- 40 CFR 75.64(c) - Rep. Req.; Quarterly reports; Compliance Certification
- 40 CFR 75.64(d) - Rep. Req.; Quarterly reports; Electronic format
- Appendix A-3. - Performance Specifications
- Appendix A-4. - Data Handling and Acquisition Systems
- Appendix A-5. - Calibration Gases
- Appendix A-6. - Certification Tests and Procedures
- Appendix B - QA/QC Procedures
- Appendix C-1. - Missing Data; SO2/NOx for controlled sources
- Appendix C-2. - Missing Data; Load-Based Procedure; NOx & flow
- Appendix F - Conversion Procedures

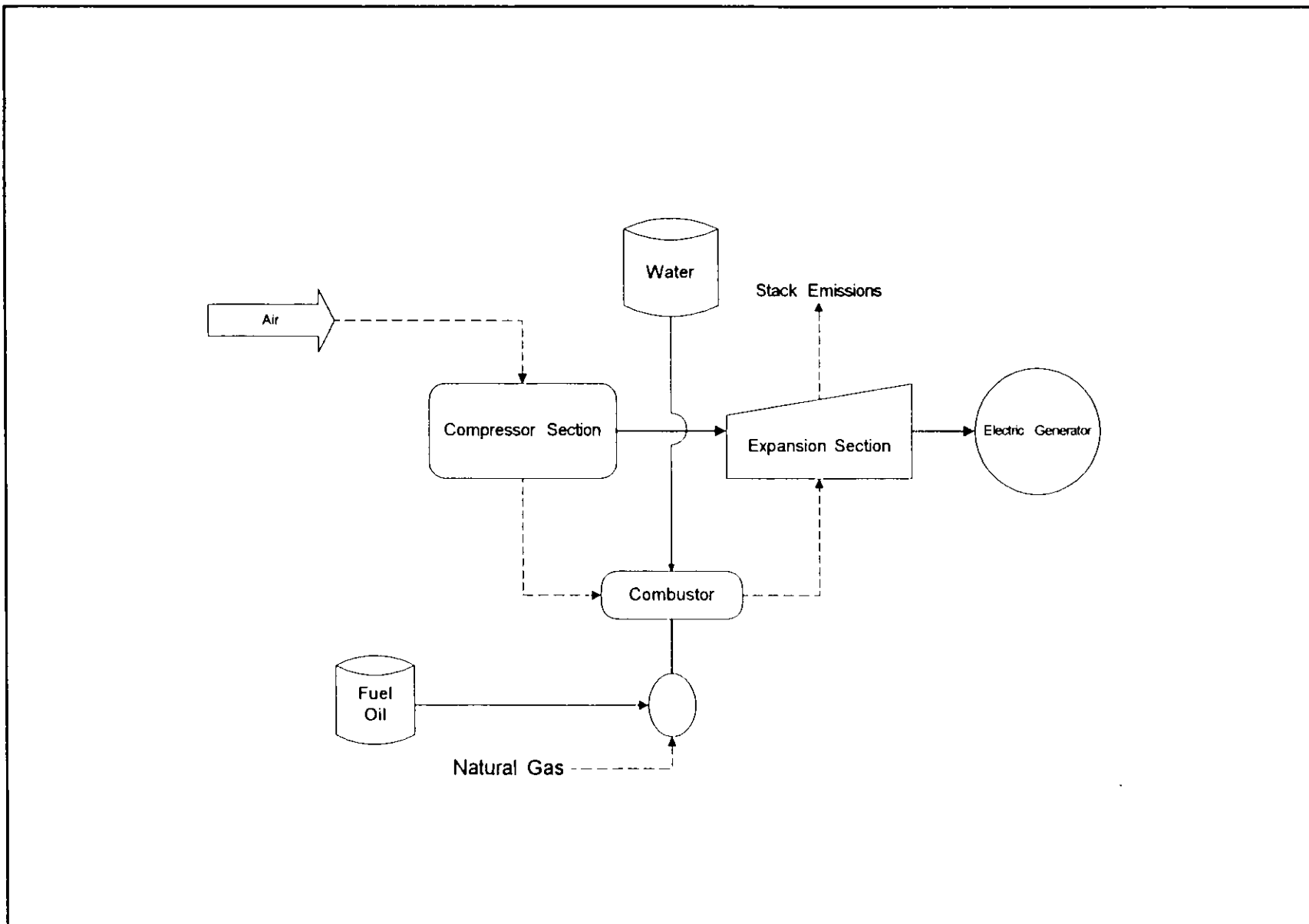
Appendix G-2.  
Appendix H

- Determination of CO<sub>2</sub>; from combustion sources
- Traceability Protocol

40 CFR Part 77.3  
40 CFR Part 77.5(b)  
40 CFR Part 77.6

- Offset Plans (future)
- Deductions of Allowances (future)
- Excess Emissions Penalties SO<sub>2</sub> and NO<sub>x</sub>

**ATTACHMENT IC-EU2-L1**  
**PROCESS FLOW DIAGRAM**



Florida Power Corporation

Emission Unit: Combustion Turbines No 7, 8, 9, 10, 11

Process Area: Overall Plant

Filename: FPCICB.VSD

Emission Units

Intercession City

Latest Revision Date: 6/8/96 03:15 PM



**KBN**

Engineering and Applied Sciences, Inc.

**ATTACHMENT IC-EU2-L2**  
**FUEL ANALYSIS OR SPECIFICATION**

Attachment IC-EU2-L2

Fuel Analysis

No. 2 Fuel Oil

<u>Parameter</u>	<u>Typical Value</u>	<u>Max Value</u>
API gravity @ 60 F	30 <sup>1</sup>	-
Relative density	7.02 lb/gal <sup>2</sup>	
Heat content	18,400 Btu / lb (LHV)	
% sulfur	0.2 <sup>2</sup>	0.2 <sup>3</sup>
% nitrogen	0.025 - 0.03	
% ash	negligible	0.01 <sup>1</sup>

Note: The values listed are "typical" values based upon 1) information gathered by laboratory analysis, and 2) FPC's fuel purchasing specifications. However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

<sup>1</sup> Data taken from the FPC fuel procurement specification

<sup>2</sup> Data from laboratory analysis

<sup>3</sup> Data from current air permit.

ATTACHMENT IC-EU2-L2

FUEL ANALYSIS  
NATURAL GAS ANALYSIS

<u>Parameter</u>	<u>Typical Value</u>	<u>Max Value</u>
Relative density	0.58 (compared to air)	
heat content	950 - 1124 Btu/cu ft.	
% sulfur	0.43 grains/CCF <sup>1</sup>	1 grain/100 CF
% nitrogen	0.8% by volume	
% ash	negligible	

Note: The values listed are "typical" values based upon information supplied to FPC by Florida Gas Transmission (FGT). However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

<sup>1</sup> Data from laboratory analysis

**ATTACHMENT IC-EU2-L3**  
**DETAILED DESCRIPTION OF CONTROL EQUIPMENT**

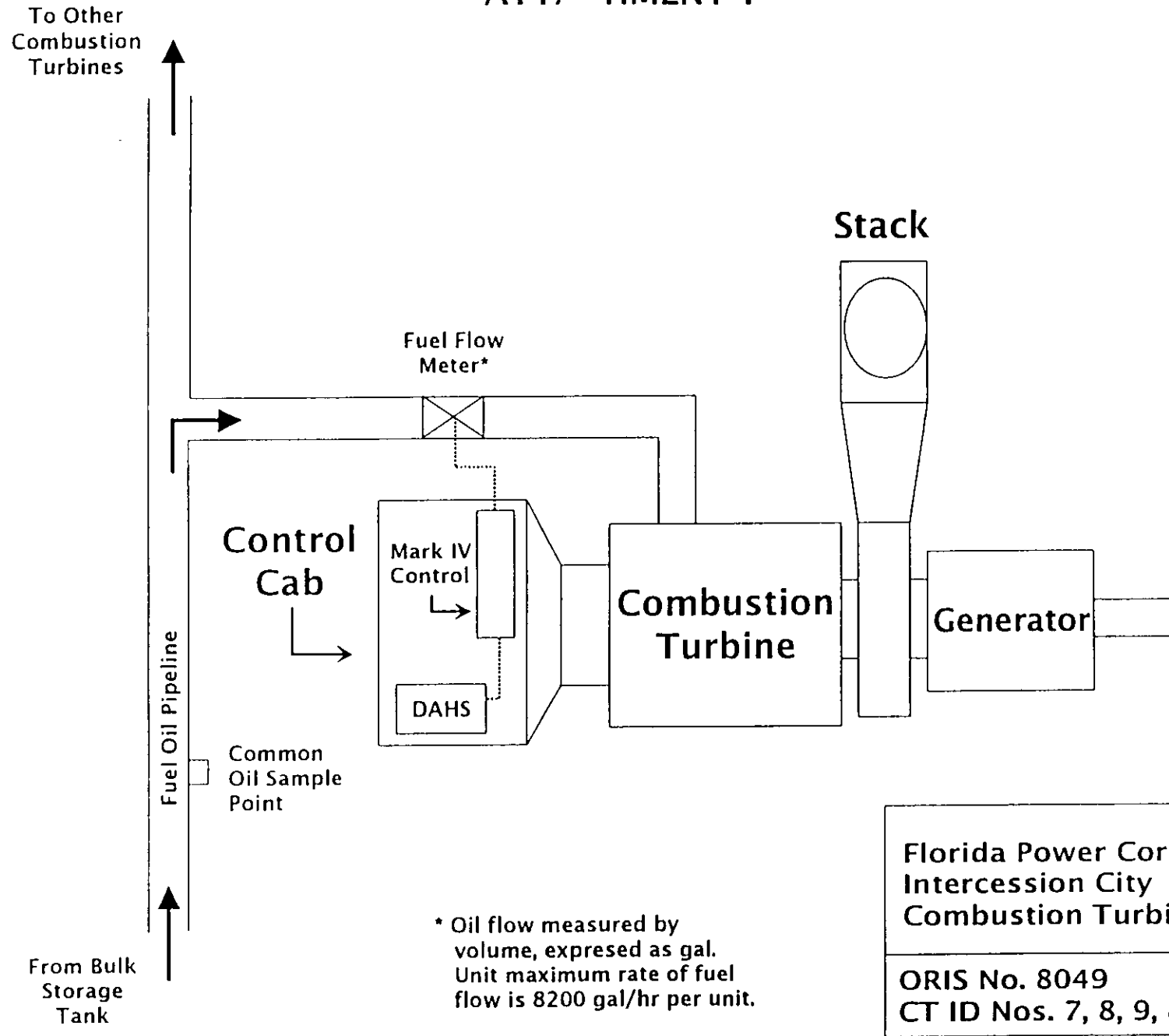


## **GE Mark IV Nox Control Algorithm Description**

The GE Mark IV Nox control algorithm utilizes data from digital temperature and humidity monitors located at each combustion turbine. The algorithm receives and processes the ambient temperature and humidity on a continuous basis. A temperature/humidity correction is used in determining the amount of water to inject for Nox control. This correction accounts for the ambient water entering the combustion chamber, and then it adds the correct amount of injection water in order to ensure compliance with the unit's required water to fuel ratio as determined from the water/fuel curve. This algorithm ensures compliance on a continuous basis regardless of the unit load and ambient weather conditions.

**ATTACHMENT IC-EU2-L4**  
**DESCRIPTION OF STACK SAMPLING FACILITIES**

# ATTACHMENT 1



\* Oil flow measured by volume, expressed as gal. Unit maximum rate of fuel flow is 8200 gal/hr per unit.

<b>Florida Power Corporation Intercession City Combustion Turbines</b>
<b>ORIS No. 8049 CT ID Nos. 7, 8, 9, &amp; 10</b>

**ATTACHMENT IC-EU2-L6**

**PROCEDURES FOR STARTUP AND SHUTDOWN**

**ATTACHMENT IC-EU2-L6  
PROCEDURES FOR STARTUP/SHUTDOWN**

Startup and shutdown for these units are fully automatic.

Startup for the combustion turbine begins with "lighting off" of the machines on distillate oil.

Corrective actions may include switching the unit from automatic (remote) to local control, or changing fuel. Best Operating Practices are adhered to and all efforts to minimize both the level and duration of excess emissions are undertaken.

Shutdown is performed by reducing the unit load (electrical production) to a minimum level, opening the breaker (which disconnects the unit from the system electrical grid), shutting off the fuel and coasting down to stop. The CT is then put "on turning gear" to prevent possible disfiguration of the turbine components.

**ATTACHMENT IC-EU2-L10**  
**ALTERNATIVE METHODS OF OPERATION**

**ATTACHMENT IC-EU2-L10  
Alternative Methods of Operation**

The four combustion turbines making up Emission Unit 2 (P7, P8, P9, and P10) rated at 92.9 megawatts (MW) at 59 degrees Fahrenheit (°F) (GE PG7111EA) and one combustion turbine rated at 171 MW at 59°F (Siemens V84.3) were limited in the air construction permit to an average maximum capacity factor of 38.7 percent (3,390 hours per year operating time). The total hours of operation for the turbines were not to exceed 16,950 unit hours per year (5 units times 3,390 hours/yr/unit). In addition, the capacity factors for these turbines were limited to 33 percent based on a weighted 12 month rolling maximum sulfur content of 0.2 percent. However, if the weighted rolling average sulfur content of the fuel oil is less than 0.2 percent, the capacity factor may be adjusted using the following table:

Percent Average Sulfur Content	Percent Capacity Factor
0.2 - 0.195	33.0
0.19 - 0.185	34.4
0.18 - 0.175	35.8
0.17 - 0.165	37.2
0.16 - or less	38.7

The four combustion turbines (GE Frame 7EA) were limited in fuel oil consumption on a per unit basis, per aggregate units, or prorated consumption based on the table as described above. The maximum No. 2 fuel oil consumption shall not exceed 7,826 gal/hr/unit or 106,120,560 gal/yr based on 59°F or prorated consumption based on the table as described above.

The other combustion turbine (Siemens V84.3) was limited in fuel oil consumption on a per unit basis, per aggregate units, or prorated consumption based on the table as described above. The maximum No. 2 fuel oil consumption shall not exceed 13,171 gal/hr/unit or 44,649,000 gal/yr based on 59°F or prorated consumption based on the table as described above.

Therefore, any combination of the five combustion turbines may operate for up to 8,760 hours per year provided that both the hourly and annual emission limitations, aggregate annual capacity factors, and aggregate fuel oil consumption limits are met.