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January 24, 2000

JAN 31 2000

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:

1270028-004-AC

Re: Inlet Fogging Permit Application - FPC DeBary Facility

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) DeBary plant. As you know, as it did at the Intercession City plant in 1999, FPC wishes to install inlet fogging systems on these units in order to obtain additional electric output during summer peak demand periods.

FPC requests that the inlet fogging be permitted for use at the DeBary facility for a total of 5,100 hours/year. Permitting the use of inlet fogging will help FPC address a very real need for additional generating capacity during the summer of 2000 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. Jeffrey Pardue".

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

cc: CD ✓

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JAN 31 2000

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 : DeBary Plant	
3. Facility Identification Number :	1270028 [] Unknown
4. Facility Location : DeBary Street Address or Other Locator : 788 West Highbanks Rd. City : DeBary County : Volusia Zip Code : 32713	
5. Relocatable Facility? [] Yes [X] No	6. Existing Permitted Facility? [X] Yes [] No

Rec'd January 31, 2000
Air ID # 1270028-004 AC

I. Part 1 - 1

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.

Genardo A. Stange
Signature
(seal)

1/25/00
Date

I. Part 6 - 1

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

* I am certifying the technical content of the permit application, but not the engineering design/construction of the inlet fogging system.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type
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

-] 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.

I. Part 4 - 3

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

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 :	15-Mar-2000
3. Projected Date of Completion of Construction :	01-May-2000

Professional Engineer Certification

1. Professional Engineer Name : Jennifer A. Stenger 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

I. Part 5 - 1

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

Effective : 3-21-96

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 [x] 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.

Samuel A. Stange
Signature
(seal)

1/25/00
Date

I. Part 6 - 1

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

Effective : 3-21-96

* I am certifying the technical content of the permit application, but not the engineering design/construction of the inlet fogging system.

* Attach any exception to certification statement.

I. Part 6 - 2

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

Effective : 3-21-96

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 BBIA 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 DeBary Units 7 through 10.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility, Location, and Type

6

1. Facility UTM Coordinates : Zone : 17 East (km) : 467.50 North (km) : 3197.20			
2. Facility Latitude/Longitude : Latitude (DD/MM/SS) : 28 54 17 Longitude (DD/MM/SS) : 81 19 55			
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 10 combustion turbine peaking units. Six CTs are fired with #2 distillate oil with a maximum sulfur content of 0.5%. Four CTs are fired with #2 distillate oil with a maximum sulfur content of 0.2% or natural gas. These 4 CTs are limited to average annual capacity factor of 33% based on weighted 12-month rolling average sulfur content of 0.3%, which may be increased up to 38.7% if average sulfur content is 0.26% or less.			

Facility Contact

1. Name and Title of Facility Contact : W. B. Hicks Asset Manager
2. Facility Contact Mailing Address : Organization/Firm : Florida Power Corporation Street Address : 788 West Highbanks Rd. City : DeBary State : FL Zip Code : 32713
3. Facility Contact Telephone Numbers : Telephone : (407)668-5103 Fax : (407)646-8370

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).	

II. Part 2 - 1

B. FACILITY REGULATIONS

Rule Applicability Analysis

Not Applicable

B. FACILITY REGULATIONS

List of Applicable Regulations

Refer to Attachment DB-FI-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

II. Part 4 - 1

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

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

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

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

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

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

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

D. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location :	DB-F1-E1
2. Facility Plot Plan :	DB-F1-E2
3. Process Flow Diagram(s) :	DB-F1-E3
4. Precautions to Prevent Emissions of Unconfined Particulate Matter :	NA
5. Fugitive Emissions Identification :	NA
6. Supplemental Information for Construction Permit Applicat	DB-F1-E4

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 Require

II. Part 5 - 1

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

Effective : 3-21-96

II. Part 5 - 2

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

Effective : 3-21-96

ATTACHMENT DB-FI-B

ATTACHMENT DB-FI-B
APPLICABLE REQUIREMENTS LISTING - POWER PLANTS

FACILITY: FPC DeBary 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)

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 ft²
- 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) - AOR's
- 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.

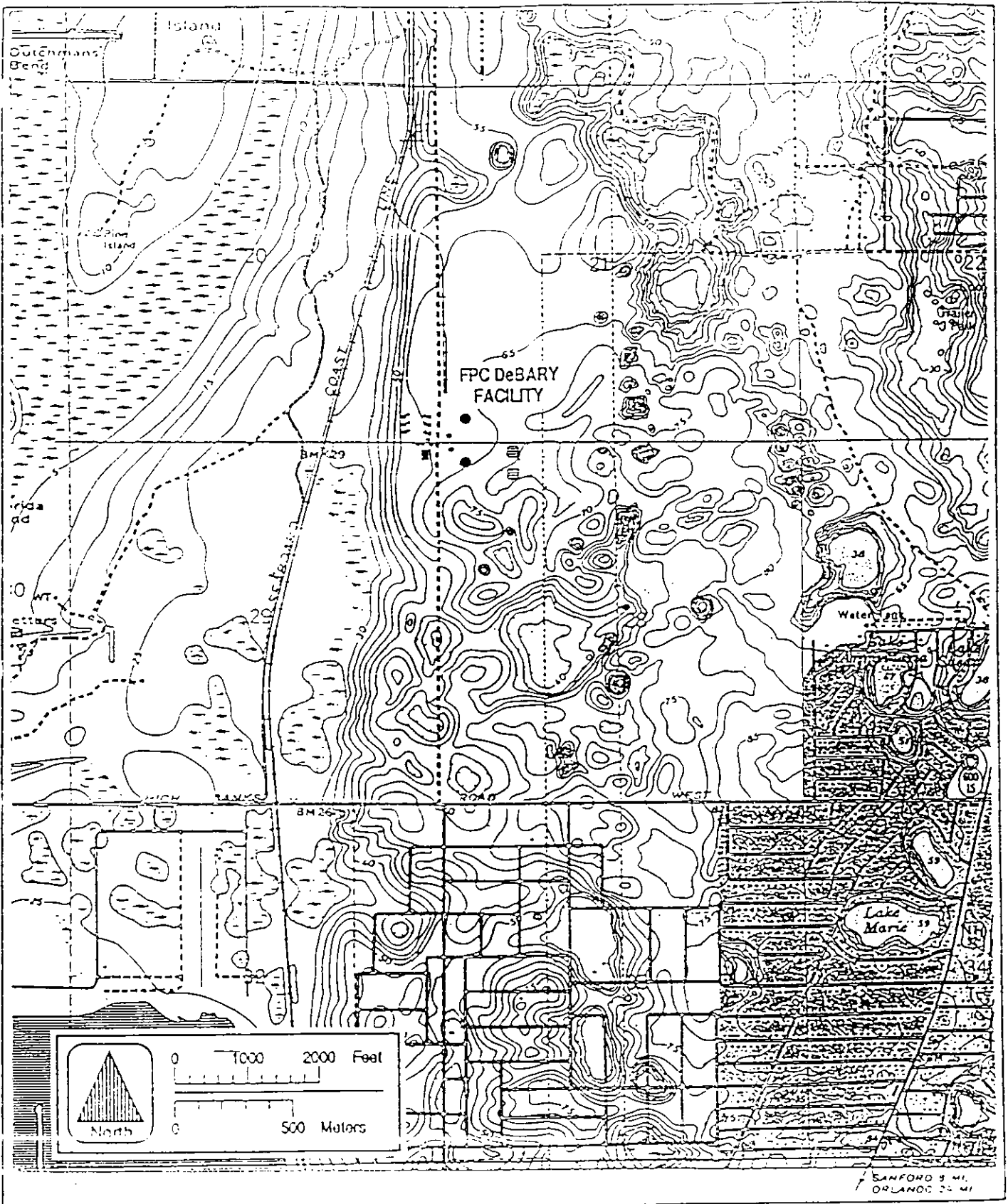
Federal Regulations:

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 CRF 61.145 - Demolition and Renovation
- 40 CFR 61.148 - Standard for Insulating Material

ATTACHMENT DB-FI-E1

AREA MAP

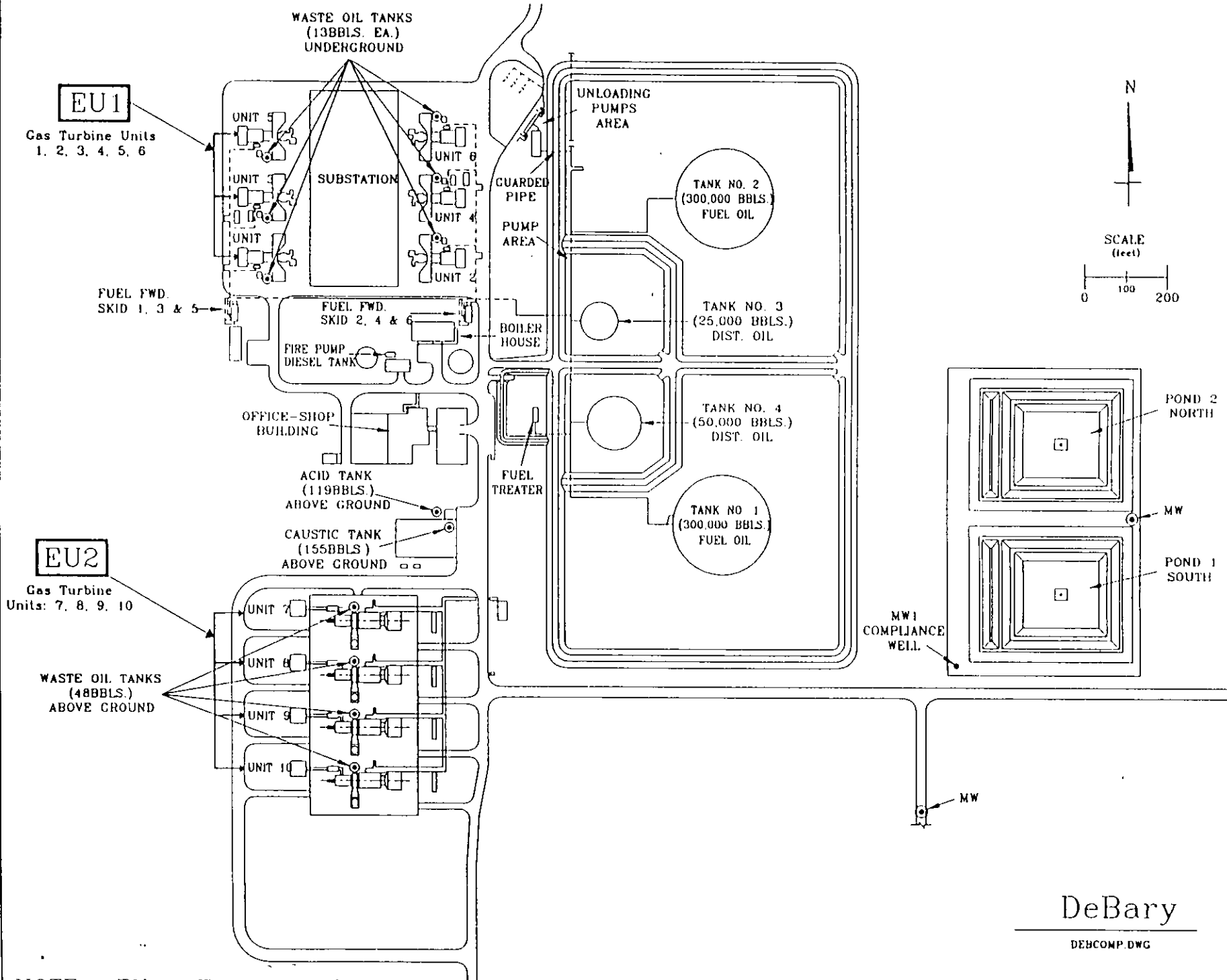


LOCATION OF THE FPC DeBARY FACILITY



ATTACHMENT DB-FI-E2

FACILITY PLOT PLAN

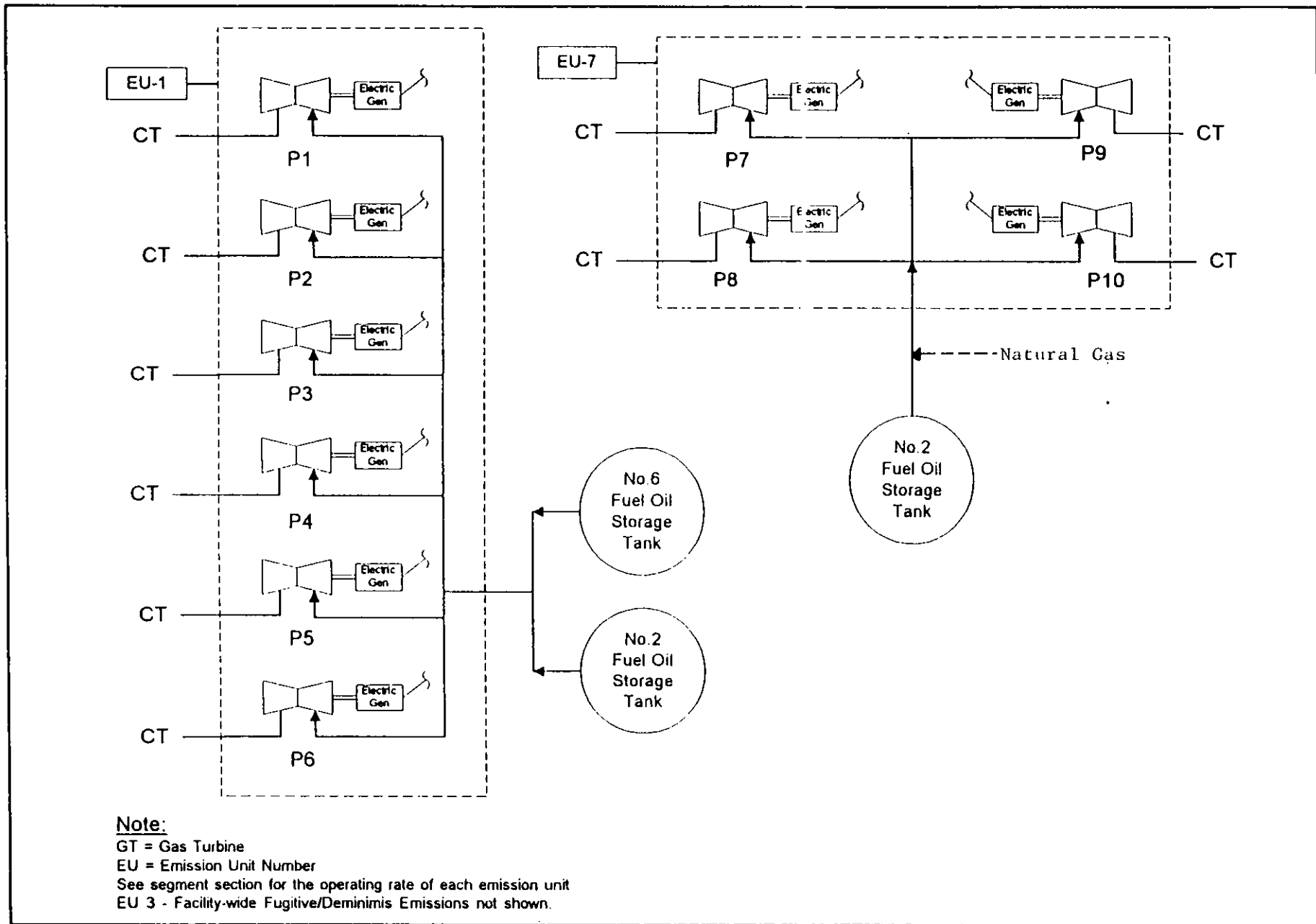


NOTE: EU = Emission Unit

DeBary

DEBCOMP.DWG

ATTACHMENT DB-FI-E3
PROCESS FLOW DIAGRAM



Attachment DB-F1-E4

Supplemental Information

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 DeBary. 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 7,000 hrs/year and remain below the PSD significant emissions increase threshold of 40 tons/year. However, as shown below, sulfur dioxide is the controlling pollutant in this case, limiting total inlet fogging time to 4,900 hrs/year.

For the criteria pollutants, the emissions increase due to inlet fogging 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 60 mmBtu/hour. This is then multiplied by the permitted emissions rate in lb/mmBtu in order to obtain the maximum increase in hourly emissions. The following table summarizes the results.

Pollutant	Emission Rate (lb/mmBtu)	Emission Increase (lb/hr)	Tons/Year @ 4,900 hr/yr	PSD Threshold
SO ₂	0.27	16.2	39.9	40
NOx	See Curve	11.0	28.1	40
PM	0.015	0.9	2.2	25
PM10	0.015	0.9	2.2	15
CO	0.05	3.0	7.4	100
VOC	0.004	0.2	0.5	40
SAM	0.016	1.0	2.5	7

All pollutant increases will remain less than the respective PSD thresholds at an aggregate fogging use limit of 4,900 hours per year for Units 7 through 10.

Unit Hours of Operation

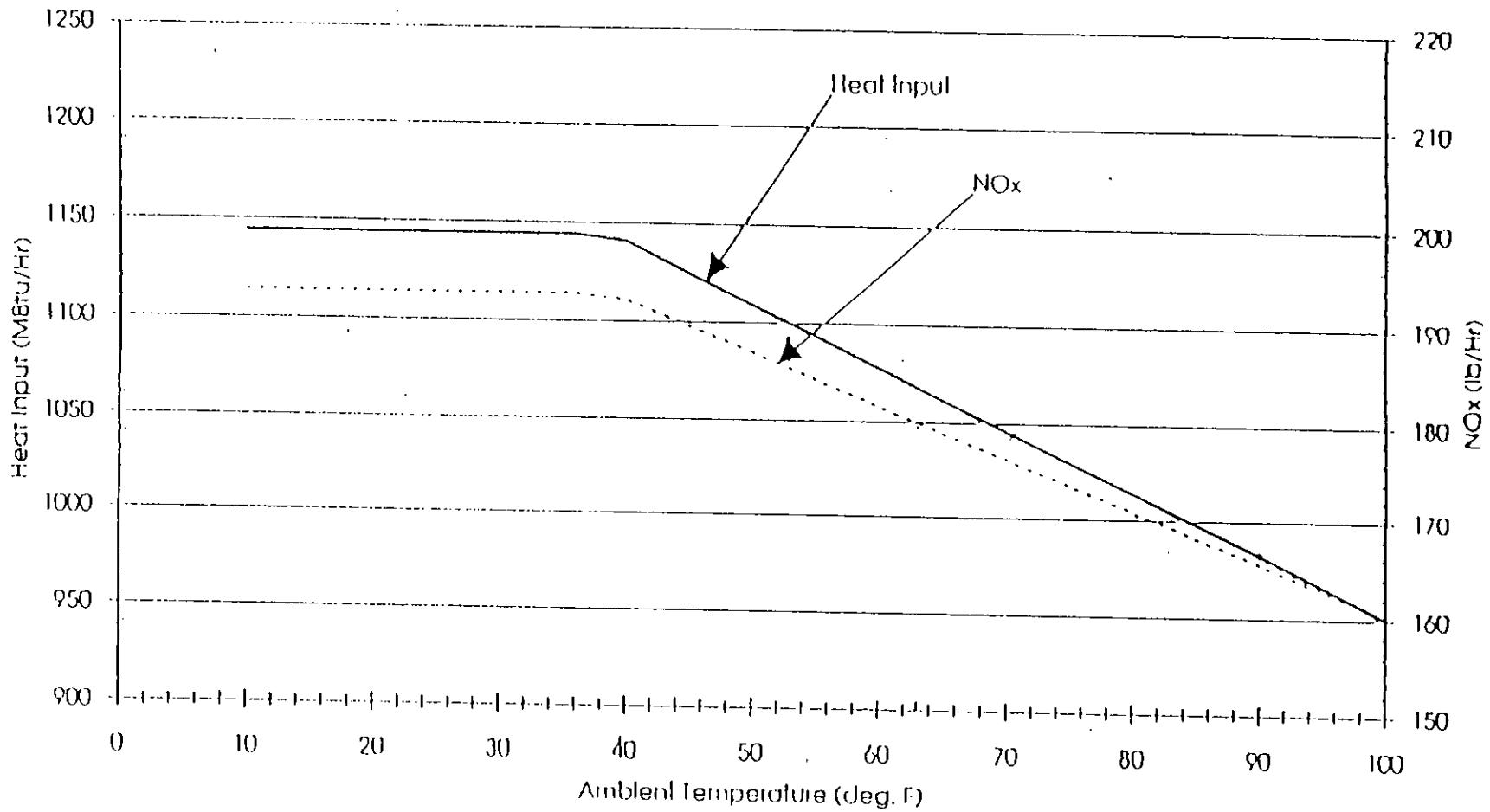
Total annual hours of operation for Units 7 through 10 for 1997 and 1998 are as follows.

Unit	1997 Hours	1998 Hours	1999 Hours
7	1,817	2,563	1,980
8	870	1,114	1,746
9	1,722	2,418	1,969
10	822	1,145	1,019

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

Florida Power Corporation

GE Frame 7EA Combustion Turbines



Heat Input vs. Ambient Temperature Curve

Florida Power Corporation

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 :	01-Nov-1992	
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 DB-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

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

List of Applicable Regulations

See Attachment DB-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. DB-FI-E2	
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 :	17	East (km) : 467.500 North (km) : 3197.200

III. Part 7a - 1

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

Effective : 3-21-96

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

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 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 : 29,493.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur : 0.50	8. Maximum Percent Ash : 0.10
9. Million Btu per SCC Unit : 132	
10. Segment Comment : Data for one CT at 59 deg. F. Weighted 12-month rolling avg. sulfur content limit of 0.3%.	

III. Part 8 - 1

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

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
2 - NOX	028		EL
3 - PM			EL
4 - PM10			EL
5 - CO			EL
6 - VOC			EL
7 - SAM			EL
1 - SO2			EL

III. Part 9a - 1

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

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted : SO2	
2. Total Percent Efficiency of Control :	%
3. Potential Emissions :	555.000000 lb/hour 1,925.000000 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;">to tons/year</div>	
6. Emissions Factor 1	Units : % S
Reference : AC permit limit	
7. Emissions Method Code : 0	
8. Calculations of Emissions : Oil-firing at 59 deg. F. AC permit limit. Four CTs have an aggregate limit of 1,925 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 33% capacity factor.	

III. Part 9b - 1

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 - 2

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

Pollutant Potential/Estimated Emissions : Pollutant 2

1. Pollutant Emitted : NOX		
2. Total Percent Efficiency of Control :	80.00	%
3. Potential Emissions :	182.0000000 lb/hour	1,234.0000000 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. 4 CTs have aggregate limit of 1,234 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.		

III. Part 9b - 3

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 - 4

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

Pollutant Potential/Estimated Emissions : Pollutant 3

1. Pollutant Emitted : PM
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 15.000000 lb/hour 25.400000 tons/year
4. Synthetically Limited? [] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor 15 Units : lb/hr Reference : AC 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; 4CTs have aggregate limit of 102 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

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

Pollutant Potential/Estimated Emissions : Pollutant 4

1. Pollutant Emitted : PM10		
2. Total Percent Efficiency of Control :		%
3. Potential Emissions :	15.0000000 lb/hour	25.4000000 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
5. Range of Estimated Fugitive/Other Emissions:		to tons/year
6. Emissions Factor	15	Units : lb/hr
Reference : AC permit limit		
7. Emissions Method Code : 0		
8. Calculations of Emissions : Oil-firing at 59 deg. F. AC permit limit. Equivalent TPY for single CT; 4 CTs have an aggregate limit of 102 TPY.		
9. Pollutant Potential/Estimated Emissions Comment : Max. hourly emissions based on ambient temp. at 59 deg. F. Annual emissions based on 59 deg. F and 38.7% capacity factor.		

III. Part 9b - 7

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

Pollutant Potential/Estimated Emissions : Pollutant 5

1. Pollutant Emitted : CO	
2. Total Percent Efficiency of Control :	%
3. Potential Emissions :	54.0000000 lb/hour 91.5000000 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive/Other Emissions:	
to	tons/year
6. Emissions Factor 25	Units : ppmvd
Reference : AC permit limit	
7. Emissions Method Code : 0	
8. Calculations of Emissions :	
Oil-firing @ 59 deg. F. AC permit limit. Equivalent TPY for 1 CT; 4 CTs limited to 366 TPY.	
9. Pollutant Potential/Estimated Emissions Comment :	
Max. hourly emissions based on ambient temp. @ 59 deg. F. Annual emissions based on 59 deg. F. and 38.7% capacity factor.	

III. Part 9b - 9

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

Pollutant Potential/Estimated Emissions : Pollutant 6

1. Pollutant Emitted : VOC		
2. Total Percent Efficiency of Control :		%
3. Potential Emissions :		
5.0000000 lb/hour		8.5000000 tons/year
4. Synthetically Limited?		
[] Yes [X] No		
5. Range of Estimated Fugitive/Other Emissions:		
		to tons/year
6. Emissions Factor 5		Units : ppmvd
Reference : AC permit limit		
7. Emissions Method Code : 0		
8. Calculations of Emissions :		
Oil-firing @ 59 deg. F. AC permit limit. Equivalent TPY for 1 CT; 4 CTs limited to an aggregate of 34 TPY.		
9. Pollutant Potential/Estimated Emissions Comment :		
Max. hourly emissions based on ambient temp. @ 59 deg. F. Annual emissions based on 59 deg. F 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

III. Part 9b - 12

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

Pollutant Potential/Estimated Emissions : Pollutant 7

1. Pollutant Emitted : SAM	
2. Total Percent Efficiency of Control :	%
3. Potential Emissions :	<div style="display: flex; justify-content: space-between;"> 69.0000000 lb/hour 117.0000000 tons/year </div>
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-top: 10px;">to tons/year</div>	
6. Emissions Factor 1 Reference : Permit limit	Units : % S
7. Emissions Method Code : 0	
8. Calculations of Emissions : Oil-firing at 59 deg. F. AC permit limit. Equivalent TPY for single CT; four CTs have limit of 469 TPY.	
9. Pollutant Potential/Estimated Emissions Comment : Max. hourly emissions based on ambient temp. at 50 deg. F. Annual emissions based on 59 deg. and 33% 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

III. Part 9b - 14

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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 :		0.30	% S avg.
4. Equivalent Allowable Emissions :			
	555.00	lb/hour	1,925.00 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. Lb/hr limit for 1 CT . No ann. emiss. limit for single CT; 4 CTs have aggregate limit of 1,925 TPY. 33% cap. fact. limit @ 0.3 %S, 38.7% @ 0.26 %S.			

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	1,234.00 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 1,234 TPY @ 38.7% capacity factor.		

III. Part 9c - 2

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	726.00 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 - 3

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 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.		

III. Part 9c - 5

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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 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.		

III. Part 9c - 7

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 :	0.50	% S max.	
4. Equivalent Allowable Emissions :	69.00	lb/hour	469.00 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, 0.3% S 12-mo. rolling avg limit; 4 CTs have limit of 469 TPY. If S content met, SAM test not req'd. 33% cap. fact., 38.7% if S content 0.16% or less.		

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.

III. Part 10 - 1

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

III. Part 10 - 2

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

**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):
3. CMS Requirement : RULE	
4. Monitor Information Manufacturer : Model Number : Serial Number :	
5. Installation Date :	01-Nov-1992
6. Performance Specification Test Date :	01-Nov-1992
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):
3. CMS Requirement : RULE	
4. Monitor Information Manufacturer : Model Number : Serial Number :	
5. Installation Date :	01-Nov-1992
6. Performance Specification Test Date :	01-Nov-1992
7. Continuous Monitor Comment : 40 CFR 75, Appendix E.	

III. Part 11 - 1

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

Effective : 3-21-96

**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.

III. Part 12 - 1

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2. Increment Consuming for Nitrogen Dioxide?

- [X] 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	SO2 :	tons/year
SO2 :	lb/hour	NO2 :	tons/year
NO2 :			tons/year
5. PSD Comment :			

III. Part 12 - 2

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 :	DB-EO2-L1
2. Fuel Analysis or Specification :	DB-EO2-L2
3. Detailed Description of Control Equipment :	DB-EO2-L3
4. Description of Stack Sampling Facilities :	DB-EO2-L4
5. Compliance Test Report :	7/28/99
6. Procedures for Startup and Shutdown :	DB-EO2-L6
7. Operation and Maintenance Plan :	NA
8. Supplemental Information for Construction Permit Application :	Attachment DB-F1-E4
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

ATTACHMENT DB-E02-D
EMISSION UNIT REGULATIONS

**ATTACHMENT DB-E02-D
APPLICABLE REQUIREMENTS LISTING - POWER PLANTS**

EMISSION UNIT: Combustion Turbines 7-10 - FPC DeBary Plant

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/H₂SO₄/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)
- 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)

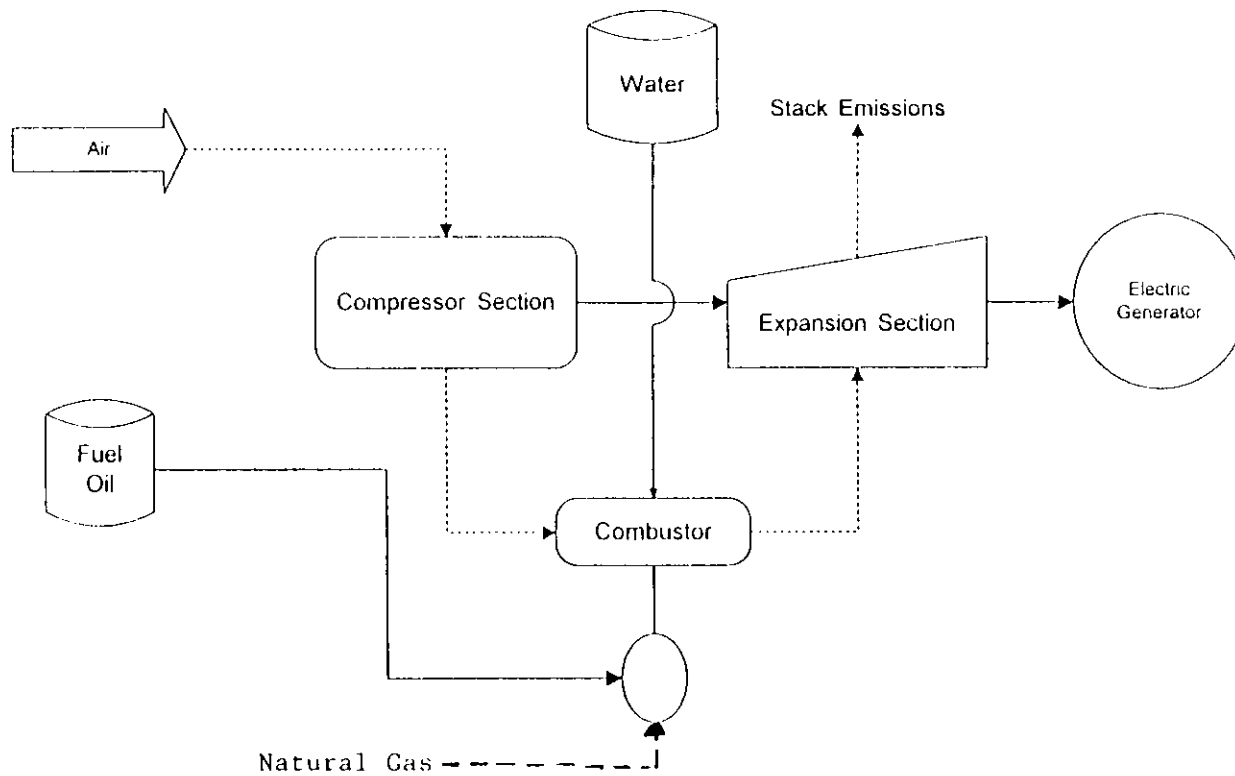
- 40 CFR 72.32
 - 40 CFR 72.33(b)
 - 40 CFR 72.33(c)
 - 40 CFR 72.33(d)
 - 40 CFR 72.40(a)
 - 40 CFR 72.40(b)
 - 40 CFR 72.40(c)
 - 40 CFR 72.40(d)
 - 40 CFR 72.51
 - 40 CFR 72.90
- Permit Application Shield
 - Dispatch System ID;unit/system ID
 - Dispatch System ID;ID requirements
 - Dispatch System ID;ID change
 - General; compliance plan
 - General; multi-unit compliance options
 - General; conditional approval
 - General; termination of compliance options
 - Permit Shield
 - Annual Compliance Certification


Monitoring Part 75:

- 40 CFR 75.5
 - 40 CFR 75.10(a)(2)
 - 40 CFR 75.10(b)
 - 40 CFR 75.10(c)
 - 40 CFR 75.10(f)
 - 40 CFR 75.10(g)
 - 40 CFR 75.11(d)
 - 40 CFR 75.11(e)
 - 40 CFR 75.12(b)
- Prohibitions
 - Primary Measurement; NOx; except 75.12&.17; Subpart E
 - Primary Measurement; Performance Requirements
 - Primary Measurement; Heat Input; Appendix F
 - Primary Measurement; Minimum Measurement
 - Primary Measurement; Minimum Recording
 - SO2 Monitoring; Gas- and Oil-fired units
 - SO2 Monitoring; Gaseous fuel firing
 - NOx Monitoring; Determination of NOx emission rate; Appendix F
- 40 CFR 75.20(a)(5)
 - 40 CFR 75.20(b)
 - 40 CFR 75.20(c)
 - 40 CFR 75.20(g)
 - 40 CFR 75.21(a)
 - 40 CFR 75.21(b)
 - 40 CFR 75.21(c)
 - 40 CFR 75.21(d)
 - 40 CFR 75.21(e)
 - 40 CFR 75.21(f)
 - 40 CFR 75.22
 - 40 CFR 75.24
 - 40 CFR 75.30(a)(3)
 - 40 CFR 75.32
 - 40 CFR 75.33
 - 40 CFR 75.36
 - 40 CFR 75.53
 - 40 CFR 75.54(a)
 - 40 CFR 75.54(b)
 - 40 CFR 75.54(d)
 - 40 CFR 75.55(c);(e)
 - 40 CFR 75.56
- Initial Certification Approval Process; Loss of Certification
 - Recertification Procedures
 - Certification Procedures
 - Exceptions to CEMS; oil/gas/diesel; Addendix D & E
 - QA/QC; CEMS;
 - QA/QC; Opacity;
 - QA/QC; Calibration Gases
 - QA/QC; Notification of RATA
 - QA/QC; Audits
 - QA/QC; CEMS
 - Reference Methods
 - Out-of-Control Periods; CEMS
 - General Missing Data Procedures; NOx
 - Monitoring Data Availability for Missing Data
 - Standard Missing Data Porcedures
 - Missing Data Procedures for Heat Input
 - Monitoring Plan (revisions)
 - Recordkeeping-general
 - Recordkeeping-operating parameter
 - Recordkeeping-NOx
 - Recordkeeping; Special Situations (gas & oil firing)
 - Certification; QA/QC Provisions

- 40 CFR 75.60
 - 40 CFR 75.61
 - 40 CFR 75.63
 - 40 CFR 75.64(a)
 - 40 CFR 75.64(b)
 - 40 CFR 75.64(c)
 - 40 CFR 75.64(d)
 - Appendix A-3.
 - Appendix A-4.
 - Appendix A-5.
 - Appendix A-6.
 - Appendix B
 - Appendix C-1.
 - Appendix C-2.
 - Appendix F
 - Appendix G-2.
 - Appendix H
 - 40 CFR Part 77.3
 - 40 CFR Part 77.5(b)
 - 40 CFR Part 77.6
- Reporting Requirements-General
 - Reporting Requirements-Notification cert/recertification
 - Reporting Requirements-Certification/Recertification
 - Reporting Requirements-Quarterly reports; submission
 - Reporting Requirements-Quarterly reports; DR statement
 - Rep. Req.; Quarterly reports; Compliance Certification
 - Rep. Req.; Quarterly reports; Electronic format
 - Performance Specifications
 - Data Handling and Acquisition Systems
 - Calibration Gases
 - Certification Tests and Procedures
 - QA/QC Procedures
 - Missing Data; SO₂/NO_x for controlled sources
 - Missing Data; Load-Based Procedure; NO_x & flow
 - Conversion Procedures
 - Determination of CO₂; from combustion sources
 - Traceability Protocol
 - Offset Plans (future)
 - Deductions of Allowances (future)
 - Excess Emissions Penalties SO₂ and NO_x

ATTACHMENT DB-E02-L1
PROCESS FLOW DIAGRAM



Florida Power Corporation		Emission Unit: Turbines No. 7, 8, 9, 10	 KBN Engineering and Applied Sciences, Inc.
Emission Units		Process Area: Overall Plant	
DeBary		Filename: FPCDB1.VSD	
		Latest Revision Date: 6/20/95 01:12 PM	

ATTACHMENT DB-E02-L2

FUEL ANALYSIS OR SPECIFICATION

ATTACHMENT DB-E02-L2

FUEL ANALYSIS
NO. 2 FUEL OIL

<u>Parameter</u>	<u>Typical Value</u>	<u>Max Value</u>
API gravity @ 60 F	30 ¹	-
Relative density	7.09 lb/gal ²	
Heat content	18,550 Btu/lb (LHV)	
% sulfur	0.3 ²	0.5 ³
% nitrogen	0.025-0.030	
% ash	negligible	0.10 ¹

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.

¹ Data taken from the FPC fuel procurement specification

² Data from laboratory analysis

³ Data from current air permit.

ATTACHMENT DB-E02-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 DB-E02-L4

DESCRIPTION OF STACK SAMPLING FACILITIES

ATTACHMENT DB-E02-L4**Description of Stack Sampling Facilities**

The DeBary Combustion Turbine No. 7, 8, 9, and 10 are required by Permit AO64-233544 to perform annual stack testing in accordance with standard EPA reference methods. Pursuant to Rule 62-297.310, F.A.C., the annual stack test required is performed with the required stack sampling facilities. A diagram depicting stack sampling facilities is presented as an attachment. As specified by Rule 62-297.310(6) , the permanent test facilities meet the following:

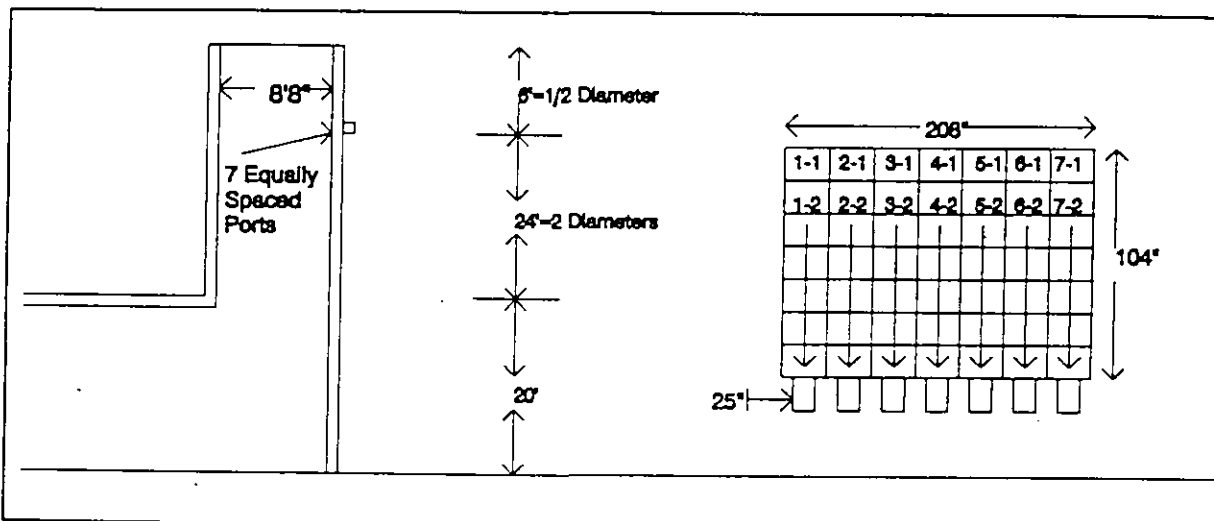
- The sampling ports have a minimum effective diameter of 3 inches.
- The location of the sampling ports are 2 stack diameters downstream and 0.5 stack diameters upstream of flow disturbances.
- Sampling ports are provided to allow access to each sampling point in the cross sectional area of the rectangular stack.
- The working platform is at least 24 square feet in area, at least three feet wide, extends 180 degrees around the stack, has safety rails, toeboards, and a hinged floor opening attached to it. There are no obstructions 14 inches below the port and 6 inches on either side of the port.
- The platform access ladder is equipped with a safety cage.

Rectangular Stack Sampling Traverse Point Layout (EPA Method 1)

Intercession City Power Station

Date: _____ Port + Stack ID: 129 in.
 Plant: Florida Power Corporation Port Extension (Ref. Pt.) 25 in.
 Source: P-7,8,9,10 Stack ID: 104 in.
 Technician(s) _____ Stack Area 150.2 ft.².
 Stack Length (L) 104 in. Total Req'd Trav. Pts (P) 49
 Stack Width (W) 208 in. No. of Traverse Pts. 7 /dimen.
 No. of Traverse Pts. 7 /port

Stack Diagram (Side View showing major unit components, dimensions and nearest upstream & downstream flow disturbances. Top view showing length, width, and sample ports.



Calculate the Equivalent Diameter of Rectangular Stack

$$D_e = \frac{2 \times L \times W}{(L + W)} \quad 140 \text{ in.} = \frac{2 \times (104 \text{ in.}) \times (208 \text{ in.})}{((104 \text{ in.}) + (208 \text{ in.}))}$$

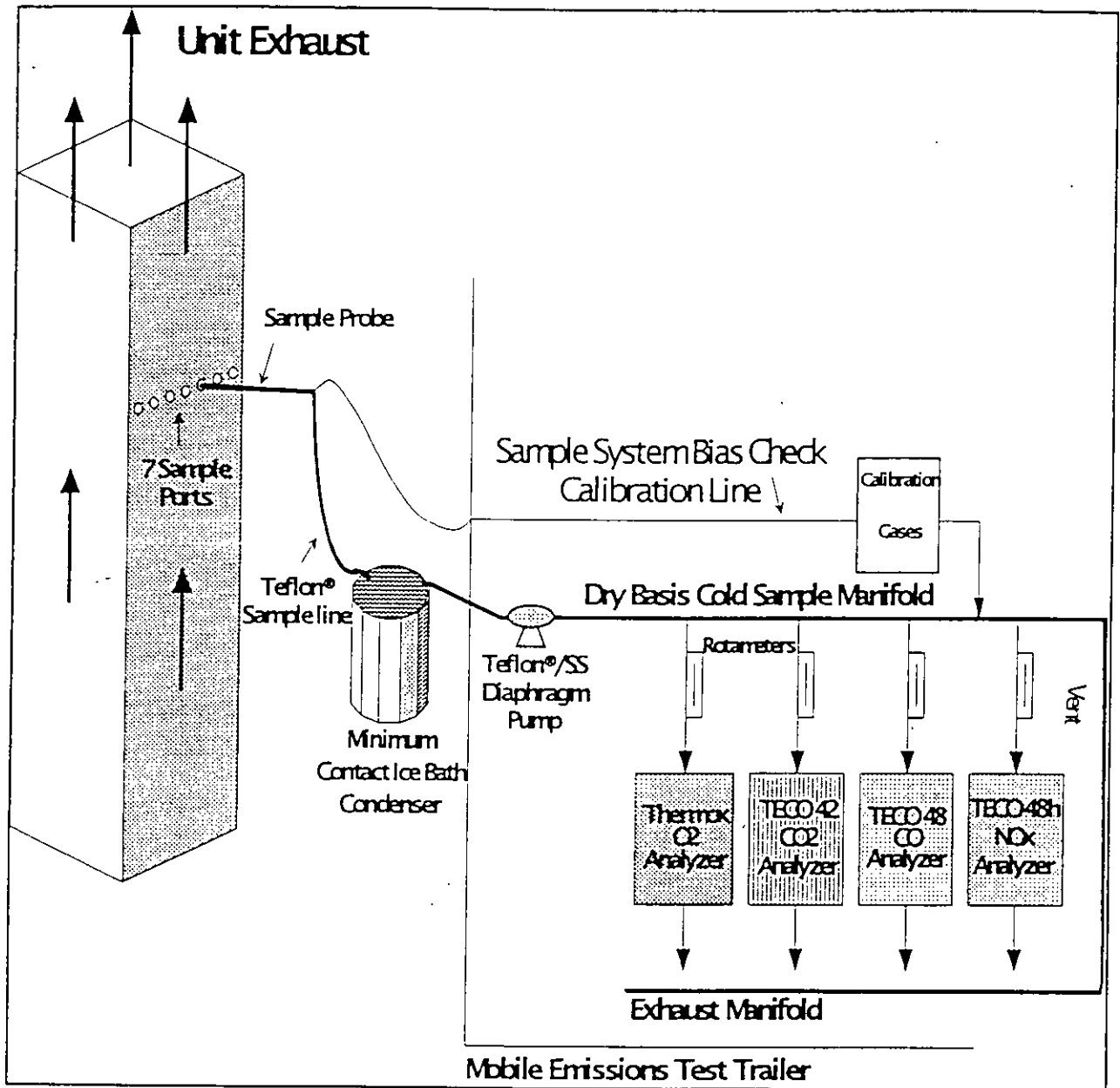
Calculate Distance from Stack Wall to Traverse Points

(Example for Point No. 2)

$$\text{Distance} = \frac{L \times 1.5}{P} \quad 22.3 \text{ in.} = \frac{(104 \text{ in.}) \times 1.5}{7}$$

Point No.	Length Factor	Distance from Ref. Point (inches)	Distance Sample Pt. to Probe Tip
1	0.5	7.4	32.4
2	1.5	22.3	47.3
3	2.5	37.1	62.1
4	3.5	52.0	77.0
5	4.5	66.9	91.9
6	5.5	81.7	106.7
7	6.5	96.6	121.6

Figure 1
Gaseous Sampling and Analysis Diagram



ATTACHMENT DB-E02-L6

PROCEDURES FOR STARTUP AND SHUTDOWN

ATTACHMENT DB-E02-L6

PROCEDURES FOR STARTUP/SHUTDOWN

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

If excess emissions are encountered during startup or shutdown, the nature and cause of any malfunction is identified, along with the corrective actions taken or preventative measures adopted. Corrective actions may include switching the unit from automatic (remote) to local control. 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 DB-E02-L10
ALTERNATIVE METHODS OF OPERATION

ATTACHMENT DB-EU2-L10

ALTERNATIVE METHODS OF OPERATION - COMBUSTION TURBINES P-7 TO P-10

The DeBary Facility's four combustion turbines, P-7, P-8, P-9, and P-10, rated at 92.9 megawatts (MW) at 59 degrees Fahrenheit (°F) (GE PG7111EA), were limited in the air construction permit to an average maximum capacity factor of 38.7 percent (3,390 hours per year operating time) (It should be noted that the air construction permit included six combustion turbines). In addition, the capacity factors for these turbines were limited to 33 percent based on a weighted 12 month rolling maximum sulfur content of 0.3 percent. However, if the weighted rolling average sulfur content of the fuel oil is less than 0.3 percent, the capacity factor may be adjusted using the following table:

<u>Percent Average Sulfur Content</u>	<u>Percent Capacity Factor</u>
0.3 - 0.295	33.0
0.29 - 0.285	34.4
0.28 - 0.275	35.8
0.27 - 0.265	37.2
0.26 - or less	38.7

The four combustion turbines (GE Frame 7EA) were also limited in fuel oil consumption and heat input rate on a per unit basis, per aggregate units, or prorated consumption based on the table as described above.

Therefore, any combination of the four 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.