Florida Power
A Progress Energy Company

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BUREAU OF AIR REGULATION

June 27, 2002

Mr. Scott Sheplak, P.E.
Florida Department of Environmental Protection
Bureau of Air Regulation, Title V Section
Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: SUBMITTAL OF TITLE V PERMIT RENEWAL APPLICATION
INTERCESSION CITY FACILITY NO. 0970014 - FLORIDA POWER

Dear Mr. Sheplak:

Enclosed for your review is an original and three copies of the Title V application for Florida Power's Intercession City Facility. An additional copy has been sent to the FDEP's Central District Office.

The following is a requested permit change for the reporting of excess emissions:

Permit No. 0970014-004-AV Conditions III.B.13 currently reads:

B.13.
The permittee shall operate a continuous monitoring system (CMS) to monitor and record the fuel consumption and the ratio of water to fuel being fired in each turbine. This system shall be accurate to within ± 5.0 percent and shall be approved by the Administrator. **[40 CFR 60. 334(a)]**

Florida Power is requesting that Condition III.B.13 be amended to read:

B.13.
a. The NO_x CEM data may be used in lieu of the monitoring system for water-to-fuel ratio and the reporting of excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG. Subject to EPA approval, the calibration of the water-to-fuel ratio-monitoring device required in 40 CFR 60.335(c)(2) will be replaced by the 40 CFR 75 certification tests of the NO_x CEMS.

b.The NO_x CEM data shall be used in lieu of the requirement for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG.

c. When requested by the Department, the CEMS emission rates for NO_x on this unit shall be corrected to ISO conditions to demonstrate compliance with the NO_x standard established in 40 CFR 60.332.

d. For the purposes of reporting excess emissions pursuant to 40 CFR 60.334(c)(1), 24-hour block average concentrations of the NO_x emission limits expressed in ppmvd @ 15% O_2 dry basis shall be used.

If you have any questions regarding any of the information contained in this application, please do not hesitate to contact Cal Ogburn at (919) 362-3585 or Jamie Hunter at (727) 826-4363.

Sincerely,

Martin J. Drango, P.E.
Plant Manager/Responsible Official

Enclosures

c: Leonard Kozlov, DEP Central District (w/enc)
Ken Kosky, Golder Associates Inc.

jjh/JJH037

enclosures

TITLE V OPERATION PERMIT RENEWAL APPLICATION FOR INTERCESSION CITY FACILITY OSCEOLA COUNTY, FLORIDA

Prepared For:
Florida Power
263 13th Street South
St. Petersburg, Florida 33701-5511

Prepared By:
Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500

June 2002
0237530

DISTRIBUTION:
4 Copies – FDEP Bureau of Air Regulation
1 Copy – FDEP Central District Office
1 Copy – Intercession City Facility
1 Copy – Florida Power – Progress Energy
2 Copies - Golder Associates Inc.

Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: **Florida Power**	
2. Site Name: **Intercession City Facility**	
3. Facility Identification Number: **0970014**	[ ] Unknown
4. Facility Location: Street Address or Other Locator: **6525 Osceola Polk County Line Road** City: **Intercession City** County: **Osceola** Zip Code: **33848**	
5. Relocatable Facility? [ ] Yes [**X**] No	6. Existing Permitted Facility? [**X**] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: **Jaime Hunter, Lead Environmental Analyst**			
2. Application Contact Mailing Address: Organization/Firm: **Florida Power / Progress Energy** Street Address: **P.O. Box 14042** City: **St. Petersburg**	State: **FL**	Zip Code: **33733**	
3. Application Contact Telephone Numbers: Telephone: **(727) 826 - 4363**	Fax: **(727) 826 - 4216**		

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	0970014 - 007 - AV
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Initial Title V air operation permit for an existing facility which is classified as a Title V source.

[ ] Initial Title V air operation permit 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: _____

[ ] Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit number to be revised: _____

[ ] Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected: _____

[X] Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised: **0970014-004-AV**

Reason for revision: **Title V Renewal, Current Permit Expires December 31, 2002.**

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Air construction permit to construct or modify one or more emissions units.

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

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

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:
   Martin J. Drango, P.E., Plant Manager
2. Owner/Authorized Representative or Responsible Official Mailing Address:
   Organization/Firm: **Florida Power / Progress Energy**
   Street Address: **6525 Osceola Polk County Line Road**
   City: **Intercession City** State: **FL** Zip Code: **33848**
3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
   Telephone: (**863**) **679 - 3020** Fax: (**863**) **679 - 3055**
4. Owner/Authorized Representative or Responsible Official Statement:

   I, the undersigned, am the owner or authorized representative(check here [ ], if so) or the responsible official (check here [ ], if so) 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 unit.*

   Martin J. Drango — Signature

   6/27/02 — Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: **Kennard F. Kosky**
   Registration Number: **14996**
2. Professional Engineer Mailing Address:
   Organization/Firm: **Golder Associates Inc.**
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653-1500**
3. Professional Engineer Telephone Numbers:
   Telephone: (**352**) **336 - 5600** Fax: (**352**) **336 - 6603**

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 pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

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

If the purpose of this application is to obtain a Title V source air operation permit (check here [X], 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 unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Howard T. Fahs — Signature

6/26/02 — Date

(seal) FG

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
001 - 006	Combustion Turbine Peaking Units CTP 1, CTP 2, CTP 3, CTP 4, CTP 5, & CTP 6		
007 - 010	Combustion Turbine Units CT 7, CT 8, CT 9, & CT 10		
011	Combustion Turbine CT 11		
012 - 014	Peaking Units P12, P13, and P14		
--	Facility-Wide Fugitive Emissions		

Application Processing Fee

Check one: [ ] Attached - Amount: $: _____ [X] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:
2. Projected or Actual Date of Commencement of Construction:
3. Projected Date of Completion of Construction:

Application Comment

This application is a renewal of the current Title V Air Operating Permit No. 0970014-004-AV. The facility contains 6 combustion turbine peaking units (pre-NSPS) that can fire new No. 2 fuel oil having a maximum sulfur content of 0.5 percent sulfur by weight. The facility also contains 5 combustion turbine units that can fire natural gas or new No. 2 fuel oil having a maximum sulfur content of 0.2 percent by weight. The facility also contains 3 newly constructed peaking units that are primarily fired with natural gas and new No. 2 fuel oil having a maximum sulfur content of 0.05 percent by weight as a backup. Facility wide fugitive/de minimis emissions are addressed as a separate emission unit section.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: **17** East (km): **446.3** North (km): **3126**			
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): **4911**
7. Facility Comment (limit to 500 characters): **The Intercession City facility consists of 14 combustion turbine peaking units described as:** **Six CTs fired with No. 2 distillate fuel oil with a maximum sulfur content of 0.5%.** **Five CTs fired with No. 2 fuel oil with a maximum sulfur content of 0.2% and also natural gas. These five CTs are limited to an average capacity factor of 33% at peak load and based on a weighted 12-month rolling average at fuel maximum sulfur content. The maximum average capacity factor may be increased to 38.7%.** **Three CTs fired primarily with natural gas and No. 2 distillate oil having a maximum of 0.05% sulfur by weight as a backup.**			

Facility Contact

1. Name and Title of Facility Contact: **Jaime Hunter, Lead Environmental Analyst**
2. Facility Contact Mailing Address: Organization/Firm: **Florida Power / Progress Energy** Street Address: **P.O. Box 14042** City: **St. Petersburg** State: **FL** Zip Code: **33733**
3. Facility Contact Telephone Numbers: Telephone: **(727) 826 - 4363** Fax: **(727) 826 - 4216**

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source?	[ ] Unknown
2. [X] Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. [ ] Synthetic Minor Source of Pollutants Other than HAPs?	
4. [ ] Major Source of Hazardous Air Pollutants (HAPs)?	
5. [ ] Synthetic Minor Source of HAPs?	
6. [X] One or More Emissions Units Subject to NSPS?	
7. [ ] One or More Emission Units Subject to NESHAP?	
8. [ ] Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters): **The combustion turbines No. 1, 2, 3, 4, 5, and 6 are not subject to NSPS – 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines or Acid Rain.** **The combustion turbines No. 7, 8, 9, 10, 11, 12, 13, and 14 are subject to NSPS – 40 CFR 60, Standards of Performance for Stationary Gas Turbines.**	

List of Applicable Regulations

See Attachment IC-FI-A	

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	tons/year	4. Basis for Emissions Cap	5. Pollutant Comment
VOC	A				Volatile Organic Compounds
SAM	A				Sulfuric Acid Mist
SO_2	A				Sulfur Dioxide
PM	A				Particulate Matter-Total
PM_{10}	A				Particulate Matter-PM_{10}
NO_x	A				Nitrogen Oxides
CO	A				Carbon Monoxides

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: [X] Attached, Document ID: IC-FI-C1 [ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [X] Attached, Document ID: IC-FI-C2 [ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): [X] Attached, Document ID: IC-FI-C3 [ ] Not Applicable [ ] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [X] Attached, Document ID: IC-FI-C4 [ ] Not Applicable [ ] Waiver Requested
5. Fugitive Emissions Identification: [X] Attached, Document ID: IC-FI-C5 [ ] Not Applicable [ ] Waiver Requested
6. Supplemental Information for Construction Permit Application: [ ] Attached, Document ID: _____ [X] Not Applicable
7. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities:
   [X] Attached, Document ID: IC-FI-C12 Appendix I-1 and IC-FI-C8 [ ] Not Applicable

9. List of Equipment/Activities Regulated under Title VI:
   [X] Attached, Document ID: IC-FI-C9
   [ ] Equipment/Activities On site but Not Required to be Individually Listed
   [ ] Not Applicable

10. Alternative Methods of Operation:
    [X] Attached, Document ID: IC-FI-C10 [ ] Not Applicable

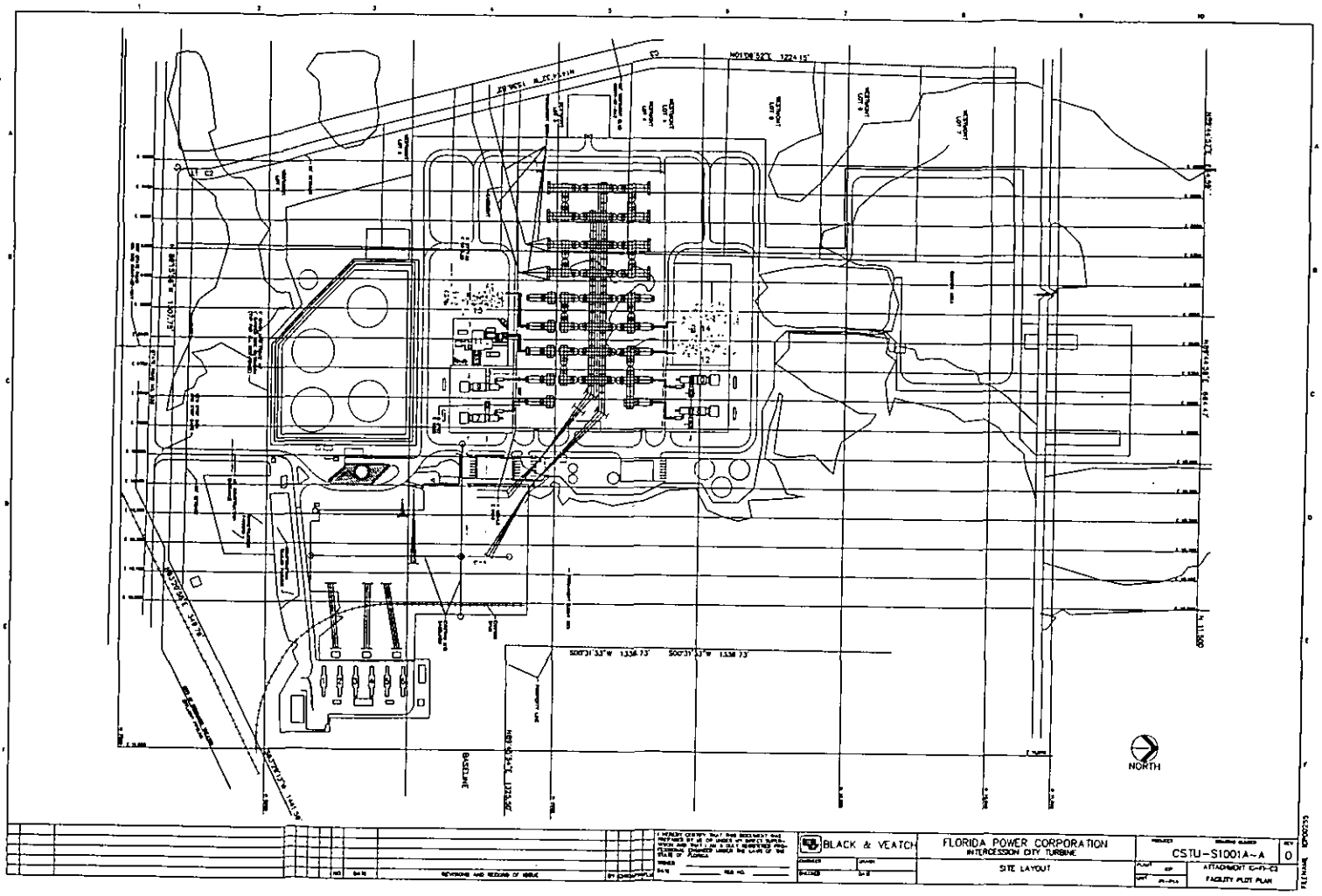
11. Alternative Modes of Operation (Emissions Trading):
    [ ] Attached, Document ID: _____ [X] Not Applicable

12. Identification of Additional Applicable Requirements:
    [X] Attached, Document ID: IC-FI-C12 [ ] Not Applicable

13. Risk Management Plan Verification:
    [ ] Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID: _____) or previously submitted to DEP (Date and DEP Office: _____)
    [ ] Plan to be submitted to CEPPO (Date required: _____)
    [X] Not Applicable

14. Compliance Report and Plan:
    [X] Attached, Document ID: IC-FI-C14 [ ] Not Applicable

15. Compliance Certification (Hard-copy Required):
    [X] Attached, Document ID: IC-FI-C15 [ ] Not Applicable


NORTH
BLACK & VEATCH
FLORIDA POWER CORPORATION
INTERCESSION CITY TURBINE
SITE LAYOUT
CSTU-S1001A-A
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ATTACHMENT C-F1-C2
FACILITY PLOT PLAN

ATTACHMENT IC-FI-A

LIST OF APPLICABLE REGULATIONS

Attachment IC-FI-A Title V Core List Effective: 03/01/02

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

Federal: ***(description)***

40 CFR 61, Subpart M: NESHAP for Asbestos.

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

State: ***(description)***

CHAPTER 62-4, F.A.C.: PERMITS, effective 06-01-01

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

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 06-21-01

62-210.300, F.A.C.: Permits Required.
62-210.300(1), F.A.C.: Air Construction Permits.
62-210.300(2), F.A.C.: Air Operation Permits.
62-210.300(3), F.A.C.: Exemptions.
62-210.300(5), F.A.C.: Notification of Startup.
62-210.300(6), F.A.C.: Emissions Unit Reclassification.
62-210.300(7), F.A.C.: Transfer of Air Permits.

62-210.350, F.A.C.: Public Notice and Comment.
62-210.350(1), F.A.C.: Public Notice of Proposed Agency Action.
62-210.350(2), F.A.C.: Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment-Area Preconstruction Review.
62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.

62-210.360, F.A.C.: Administrative Permit Corrections.
62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.
62-210.400, F.A.C.: Emission Estimates.
62-210.650, F.A.C.: Circumvention.
62-210.700, F.A.C.: Excess Emissions.

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

Chapter 62-212, F.A.C.: STATIONARY SOURCES - PRECONSTRUCTION REVIEW, effective 08-17-00

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 04-16-01

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

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

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 03-02-99

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

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

CHAPTER 62-297, F.A.C.: STATIONARY SOURCES - EMISSIONS MONITORING, effective 03-02-99

62-297.310, F.A.C.: General Test Requirements.
62-297.330, F.A.C.: Applicable Test Procedures.
62-297.340, F.A.C.: Frequency of Compliance Tests.
62-297.345, F.A.C.: Stack Sampling Facilities Provided by the Owner of an Emissions Unit.
62-297.350, F.A.C.: Determination of Process Variables.
62-297.570, F.A.C.: Test Report.
62-297.620, F.A.C.: Exceptions and Approval of Alternate Procedures and Requirements.

Miscellaneous:

CHAPTER 28-106, F.A.C.: Decisions Determining Substantial Interests
CHAPTER 62-110, F.A.C.: Exception to the Uniform Rules of Procedure, effective 07-01-98
CHAPTER 62-256, F.A.C.: Open Burning and Frost Protection Fires, effective 11-30-94
CHAPTER 62-257, F.A.C.: Asbestos Notification and Fee, effective 02-09-99
CHAPTER 62-281, F.A.C.: Motor Vehicle Air Conditioning Refrigerant Recovery and Recycling, effective 09-10-96

ATTACHMENT IC-FI-C1

AREA MAP SHOWING FACILITY LOCATION

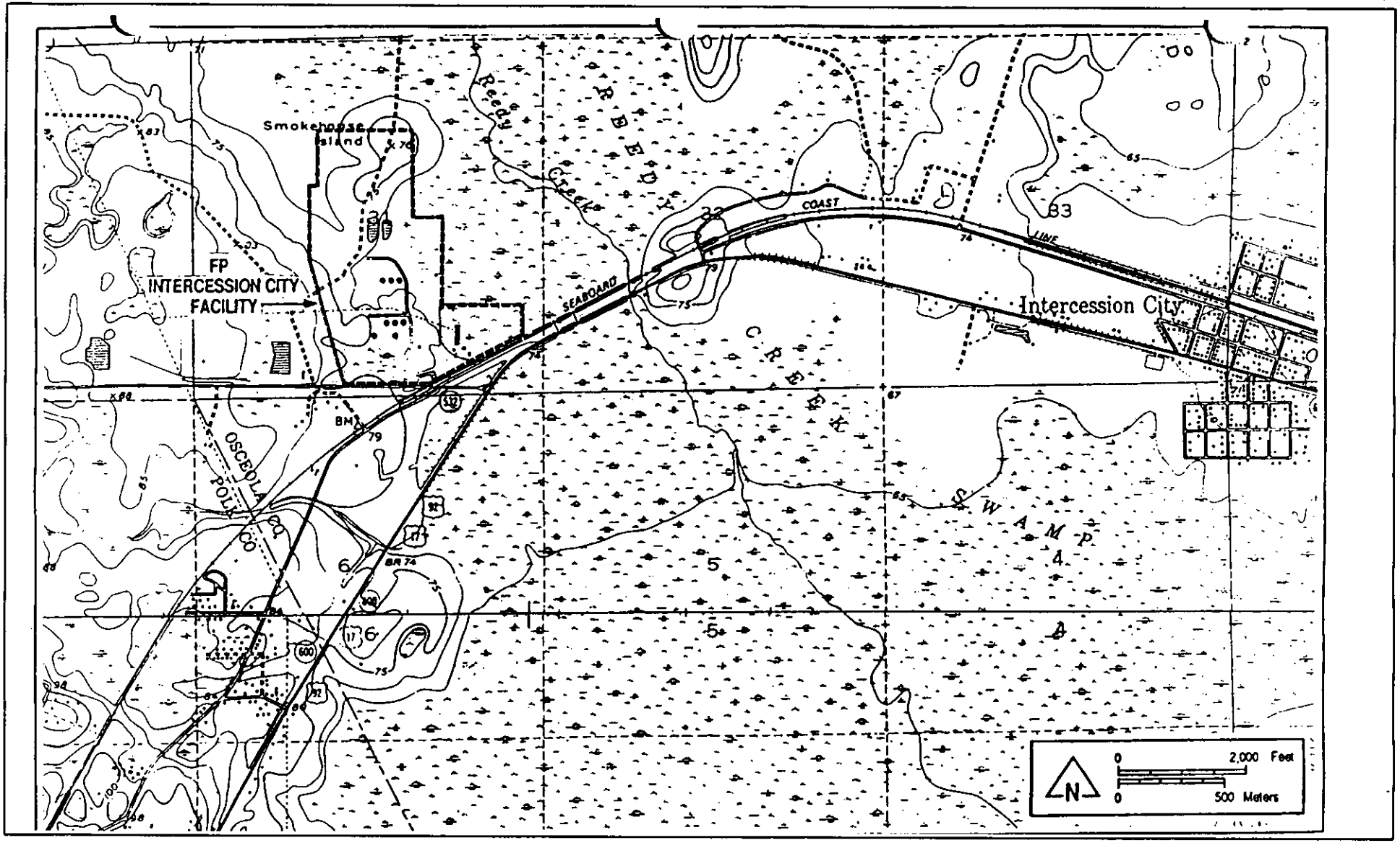


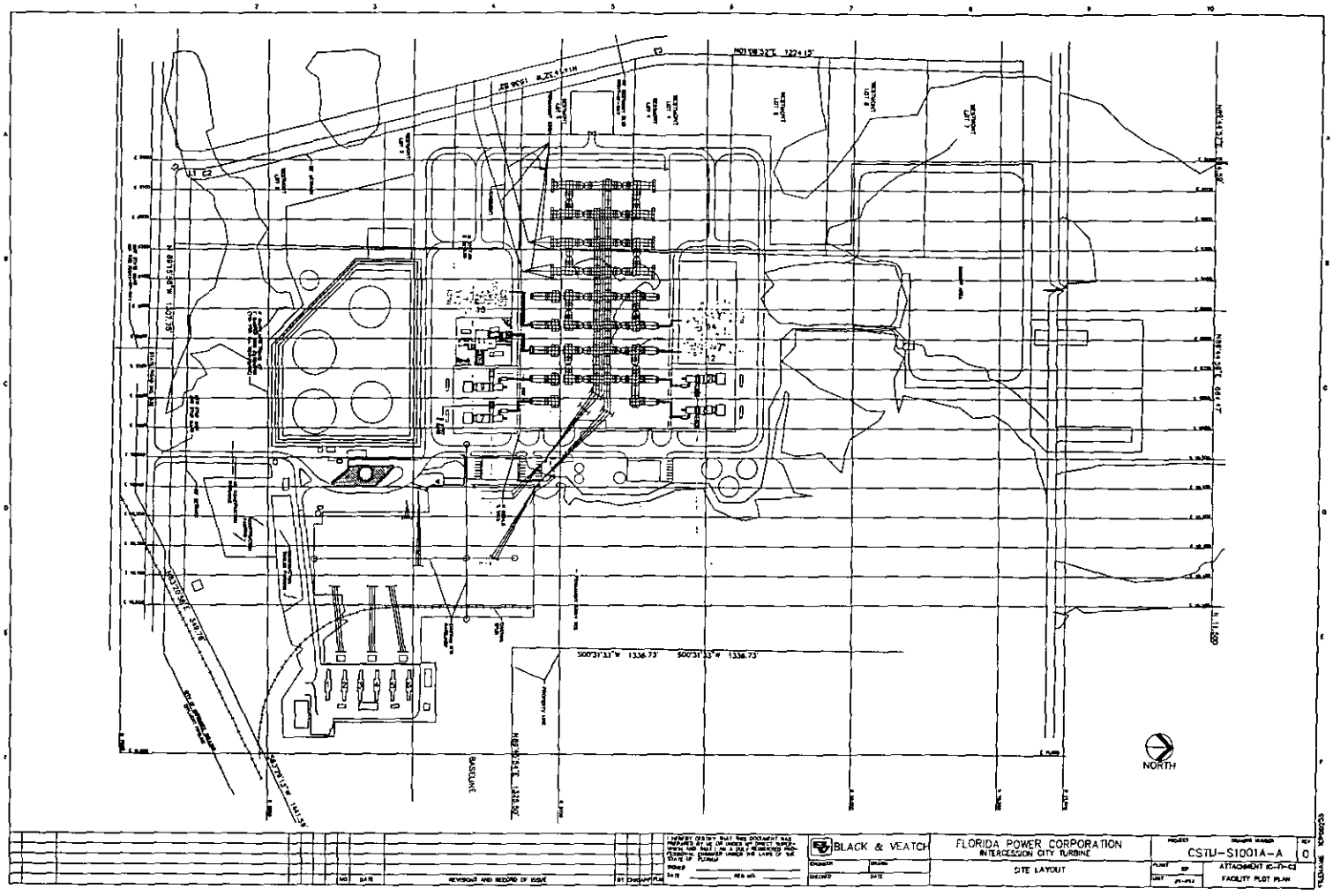
Figure IC-FI-C1. Area Map Showing Facility Location
Process Flow Diagram

Source: Golder, 2001.

Golder Associates

ATTACHMENT IC-FI-C2

FACILITY PLOT PLAN



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FLORIDA POWER CORPORATION
INTERCESSION CITY TURBINE

SITE LAYOUT

CSTU-S1001A-A

ATTACHMENT IC-11-C2
FACILITY PLOT PLAN

ATTACHMENT IC-FI-C3

PROCESS FLOW DIAGRAM

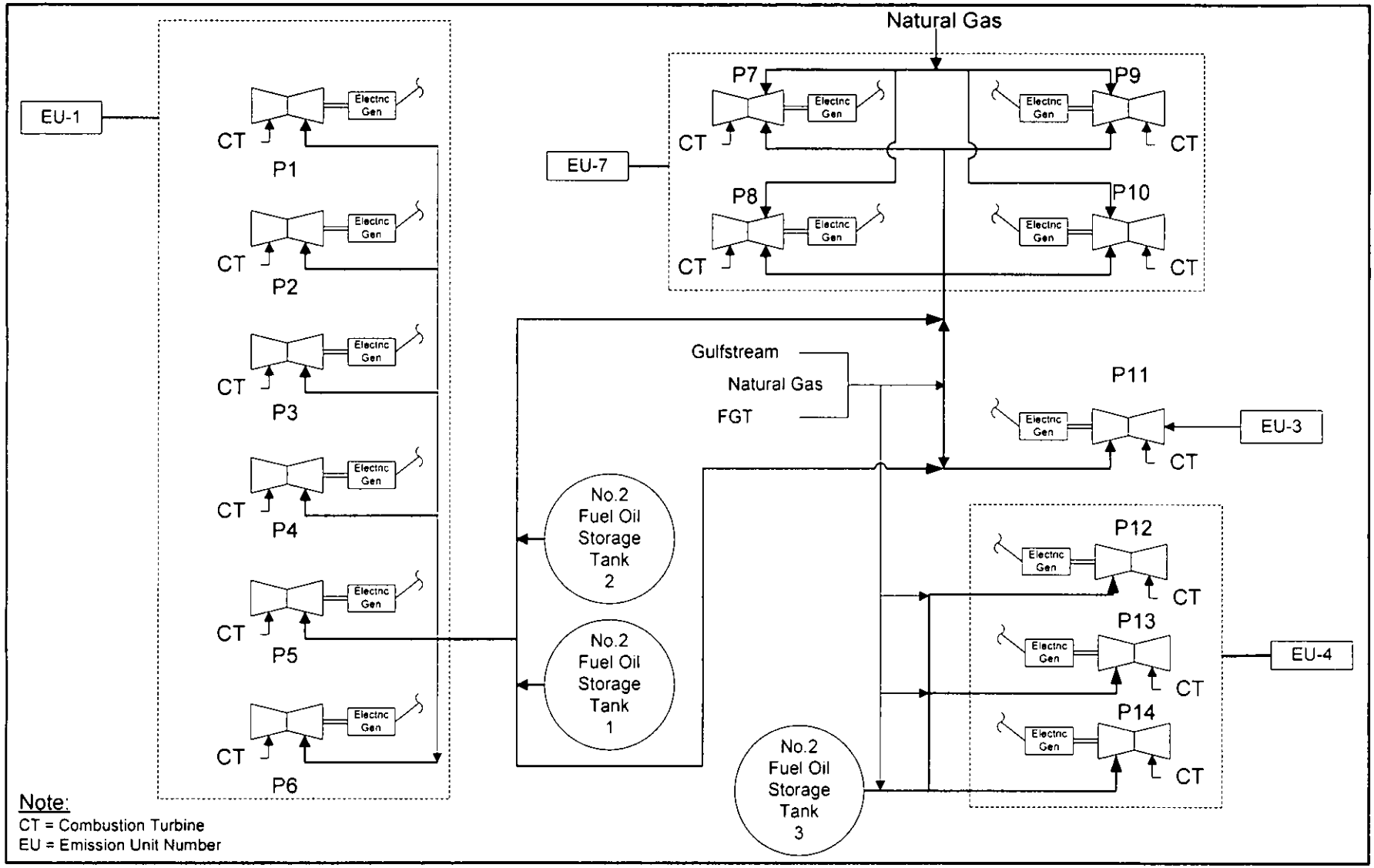

Figure IC-FI-C3. Facility Process Flow Diagram
Florida Power - Intercession City

Process Flow Legend
Solid/Liquid
Gas
Steam

Golder Associates

ATTACHMENT IC-FI-C4

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

ATTACHMENT IC-FI-C4

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

The facility has negligible amounts of unconfined particulate matter as a result of the operation of the facility. Potential examples of particulate matter include:

- Fugitive dust from paved and unpaved roads, and
- Fugitive particulates from the use of bagged chemical products.

Operational measures are undertaken at the facility which also minimize particulate emissions, in accordance with **Rule 62-296.310(3), F.A.C.**:

- Maintenance of paved areas as needed,
- Regular mowing of grass and care of vegetation, and
- Limiting access to plant property by unnecessary vehicles.

ATTACHMENT IC-FI-C5

FUGITIVE EMISSIONS IDENTIFICATION

ATTACHMENT IC-FI-C5
FUGITIVE EMISSIONS IDENTIFICATION

Many fugitive emissions at the plant site have been classified as "trivial activities". As a result, these activities are not included as part of this permit application. For example, emissions from general plant maintenance and upkeep activities at the facility would be considered fugitive emissions, but have been judged to be trivial since these activities are not conducted as part of the electricity generation process, not related to the source's primary business activity, and do not otherwise trigger a permit modification.

Fugitive emissions that may result from the operation of activities that are not trivial at the facility are addressed in Emission Unit 5. This emission unit section contains information on fugitive emissions that occur on a facility-wide basis. A summary of potential fugitive/*de minimis* emission sources at the facility is presented in the following sections.

Criteria and Precursor Air Pollutants

Florida Power has not identified fugitive emission of sulfur dioxide, nitrogen oxides, carbon monoxide, or lead compounds which would exceed the thresholds defined in the permit application instructions.

Volatile Organic Compounds (VOCs)

Fugitive/*de minimis* emissions of VOCs include those resulting from the use of cleaners and solvents for maintenance and operation. VOCs are also emitted by the various fuel oil storage tanks on the plant property, and generator and turbine lube oil vents.

Fugitive HAPs Emissions

The following hazardous air pollutants are or may be present on the facility property and are potential sources of fugitive HAPs emissions:

- asbestos
- benzene
- chlorine
- hydrochloric acid
- mercury compounds
- methyl ethyl ketone (MEK)
- toluene
- xylene

Asbestos – Present in gasket material, pipe insulation, and various other locations. The facility complies with the federal NESHAPS (40 CFR 61 Subpart M) and state rules (62-257, F.A.C.) governing the abatement of asbestos-containing materials. No releases of asbestos expected for the facility.

Benzene – Present in unleaded gasoline. The facility maintains a storage tank for unleaded gasoline. These emissions have been calculated to be significantly less than 1 TPY.

Chlorine – Used for water treatment at the facility.

Hydrochloric Acid – The facility may utilize hydrochloric acid in the chemistry laboratory for use in analytical procedures.

Mercury Compounds – The facility uses mercury-containing compounds in the chemistry laboratory for use in analytical procedures and flow-measuring equipment.

Methyl Ethyl Ketone, Toluene, Xylene – The facility uses paint thinners and solvents (which may contain MEK, toluene, or xylene) for use in plant maintenance activities. These containers are kept closed and are stored in weather-tight buildings. These emissions as a whole are addressed in the VOC section described above.

Regulated Toxic or Flammable Substances

The following regulated toxic or flammable substances are or may be present at the Florida Power facility:

- chlorine
- hydrazine
- hydrochloric acid
- nitric acid
- acetylene

Chlorine, Hydrazine, and Hydrochloric Acid – Considered above.

Nitric Acid – May be used in the chemistry laboratory for use in analytical procedures.

Acetylene – Present on the facility property in 250-lb cylinders which are used for plant maintenance (welding and cutting).

ATTACHMENT IC-FI-C8

LIST OF PROPOSED EXEMPT EMISSION UNITS

ATTACHMENT VP-FI-C8
LIST OF PROPOSED EXEMPT EMISSION UNITS

Exempt emission units at the Florida Power Intercession City include but are not limited to the following:

- Surface Coating and Solvent Cleaning < 6.0 gallons per day
- General Purpose Engines
- Helper Cooling Towers
- Emergency Generator

These units are exempt emission units pursuant to 62-210.300, F.A.C. Emissions of criteria pollutants from these sources are below 5 tons per year per pollutant.

The fuel oil storage tanks are unregulated units and are addressed in the Emission Unit 5 section. See Attachment IC-EU5-A9 for a description of all unregulated, trivial, and exempt emission units at the site.

ATTACHMENT IC-FI-C9

LIST OF EQUIPMENT / ACTIVITIES
REGULATED – TITLE VI

ATTACHMENT IC-FI-C9
LIST OF EQUIPMENT / ACTIVITIES REGULATED - TITLE VI

The Florida Power Intercession City Facility currently has several refrigeration and air-conditioning units on the plant site. Of these, 2 air-conditioning units currently meet the 50-pound threshold established by the Department:

Model Name	Unit Number	Serial Number	General Area	Amount
TRA	A1	WCH240B400BA	New Administrative Office	60
TRA	A1	WCH240B400BA	New Administrative Office	60

ATTACHMENT IC-FI-C10

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT IC-FI-C10
ALTERNATIVE METHODS OF OPERATION

The facility consists of 14 combustion turbines. Six combustion turbines (CTP1 through CTP6; EU1) are rated at 56.4 MW and operate on distillate oil and may operate 8,760 hours per year continuously. Four combustion turbines (CT 7, CT 8, CT 9, and CT 10; EU2), each rated at 96.3 megawatts (MW) (GE PG7111EA) and one combustion turbine (CT 11; EU3) rated at 171 MW (Siemens V84.3) were limited in the air construction permit to an average maximum capacity factor of 38.7% (3,390 hours per year operating time). The total hours of operation for CT 7, CT 8, CT 9, CT 10, and CT 11 (EU 2 and EU 3) 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% based on a weighted 12 month rolling maximum sulfur content of 0.2%. However, if the weighted rolling average sulfur content of the fuel oil is less than 0.2%, 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 (EU 2) were also limited in fuel oil consumption on a per unit basis, per aggregate units, or prorated consumption based on the table as described above. Similar limits were placed on the other combustion turbine (Siemens V84.3).

Therefore, any combination of the five combustion turbines (EU2 and EU3) 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.

The three combustion turbines (EU 4) are limited to a total of 10,170 hours during any consecutive 12 months. Each turbine is limited to no more than 1,000 turbine operating hours of oil firing during any consecutive 12 months. In addition, the group of 3 turbines is limited to no more than 2,500 turbine operating hours of oil firing during any consecutive 12 months. Maximum potential and allowable

emissions in this application reflect the maximum permitted emissions based on 2,390 hours per year operation on natural gas and 1,000 hours per year operation on fuel oil for a single CT.

ATTACHMENT IC-FI-C12

IDENTIFICATION OF ADDITIONAL APPLICABLE REQUIREMENTS

Florida Power Corporation
Intercession City Facility
Facility ID No.: 0970014
Osceola County

Title V Air Operation Permit Revision
FINAL Permit No.: 0970014-004-AV

Permitting Authority:
State of Florida
Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
Title V Section

Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Telephone: 850/488-1344
Fax: 850/922-6979

Title V Air Operation Permit Revision
FINAL Permit No.: 0970014-004-AV

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Permittee:
Florida Power Corporation
3201 34th Street South
St. Petersburg, Florida 33711

FINAL Permit No.: 0970014-004-AV
Facility ID No.: 0970014
SIC Nos.: 49
Project: Title V Air Operation Permit Revision

This permit is for the operation of the Intercession City Plant. This facility is located at 6525 Osceola Polk County Line Road, Intercession City, Osceola County; UTM Coordinates: Zone 17, 446.3 km East and 3126 km North; Latitude: 28° 15' 38" North and Longitude: 81° 32' 51" West.

STATEMENT OF BASIS: This Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:
Appendix U-1, List of Unregulated Emissions Units and/or Activities
Appendix I-1, List of Insignificant Emissions Units and/or Activities
APPENDIX TV-3, TITLE V CONDITIONS (version dated 04/30/99)
APPENDIX SS-1, STACK SAMPLING FACILITIES (version dated 10/07/96)
FIGURE 1 - SUMMARY REPORT-GASEOUS AND OPACITY EXCESS
EMISSION AND MONITORING SYSTEM PERFORMANCE REPORT (40 CFR 60; July, 1996)
Phase II Acid Rain Application/Compliance Plan received December 14, 1995.

Effective Date: January 1, 1998
Permit Revision Effective Date: June 13, 2000
Renewal Application Due Date: July 5, 2002
Expiration Date: December 31, 2002

Howard L. Rhodes, Director
Division of Air Resources
Management

HLR/sms/jh

Section I. Facility Information.

Subsection A. Facility Description.

This facility consists of eleven simple cycle combustion turbines (CT), 6 are pre-NSPS and 5 are NSPS Subpart GG sources. Each CT exhausts through a separate stack. Also included in this permit are miscellaneous unregulated and insignificant emissions units and/or activities.

Based on the initial Title V permit application received June 14, 1996, this facility is not a major source of hazardous air pollutants (HAPs).

Subsection B. Summary of Emissions Unit ID No(s). and Brief Description(s).

E.U. ID No.	Brief Description
-001 to -006	6 - Combustion Turbine Peaking Units (Pre-NSPS)
-007 to -011	5 - Combustion Turbines (NSPS)

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents.

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are provided to the permittee for information purposes only:
Table 1-1, Summary of Air Pollutant Standards and Terms
Table 2-1, Summary of Compliance Requirements
Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers
Appendix H-1, Permit History/ID Number Changes

These documents are on file with the permitting authority:
Initial Title V Air Operation Permit issued January 5, 1998.
Construction Permit (0970014-002-AC) To Install Inlet Foggers on Units 007–010, issued May 17, 1999.
Title V Permit Revision Application received December 27, 1999.

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. APPENDIX TV-3, TITLE V CONDITIONS, is a part of this permit.
{Permitting note: APPENDIX TV-3, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided a copy when requested or otherwise appropriate.}

2. Not federally enforceable. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
[Rule 62-296.320(2), F.A.C.]

3. General Particulate Emission Limiting Standards. General Visible Emissions Standard. Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.
[Rule 62-296.320(4)(b)1. & 4., F.A.C.]

4. Prevention of Accidental Releases (Section 112(r) of CAA).
a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable ; and
b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.
[40 CFR 68]

5. Unregulated Emissions Units and/or Activities. Appendix U-1, List of Unregulated Emissions Units and/or Activities, is a part of this permit.
[Rule 62-213.440(1), F.A.C.]

6. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit.
[Rules 62-213.440(1), 62-213.430(6) and 62-4.040(1)(b), F.A.C.]

7. General Pollutant Emission Limiting Standards. Volatile Organic Compounds Emissions or Organic Solvents Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.
[Rule 62-296.320(1)(a), F.A.C.]

8. Not federally enforceable. Reasonable precautions should be taken to prevent emissions of unconfined particulate matter at this facility. Steps presently taken at the facility to minimize particulate emissions are as follows:

- Maintenance of paved areas as needed,
- Regular mowing of grass and care of vegetation,
- Limiting access to plant property by unnecessary vehicles, and
- Additional or alternative activities may be utilized to minimize unconfined particulate emissions.

[Rule 62-296.320(4)(c)2., F.A.C.; and, proposed by applicant in the initial Title V permit application received June 14, 1996.]

9. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.
[Rule 62-213.440, F.A.C.]

10. The permittee shall submit all compliance related notifications and reports required of this permit to the Department's Central District office:

Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767
Telephone: 407/894-7555
Fax: 407/897-2966

11. Any reports, data, notifications, certifications and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency, Region 4
Air, Pesticides & Toxics Management Division
Air & EPCRA Enforcement Branch
Air Enforcement Section
61 Forsyth Street
Atlanta, GA 30303
Phone: 404/562-9155
Fax: 404/562-9163 or 404/562-9164

12. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3), F.A.C., shall be submitted within 60 (sixty) days after the end of the calendar year.
{See condition No. 51., Appendix TV-3, Title V Conditions}
[Rule 62-214.420(11), F.A.C.]

{Permitting Note: The annual statement of compliance must reflect the facility's operation and compliance prior to a "Permit Revision's effective date" and the facility's operation and compliance including and after a "Permit Revision's effective date".}

Section III. Emissions Unit(s) and Conditions.

Subsection A. This section addresses the following emissions unit(s).

E. U. ID No.	Brief Description
-001 to -006	Combustion Turbine Peaking Units CTP 1, CTP 2, CTP 3, CTP 4, CTP 5, & CTP 6

The above referenced turbines may fire new No. 2 fuel oil having a maximum sulfur content of 0.5 percent, by weight. Each turbine has a maximum heat input of 708 MMBtu/hour and power a generator rated at 56.7 MW (megawatts of electricity). Emissions are not controlled and each turbine exhausts through a separate stack. These units are not subject to the following federal requirements, NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines or Acid Rain. The above units began commercial service in 1974.

{Permitting Note: The emissions units are regulated under Rule 62-210.300, F.A.C., Permits Required.}

The following specific conditions apply to the above referenced emissions units:

Essential Potential to Emit (PTE) Parameters

A.1. Permitted Capacity. The maximum heat input rate shall not exceed 708 MMBtu/hour/CT while firing new No. 2 fuel oil.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

A.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition A.13.

A.3. Methods of Operation - Fuels. Only new No. 2 fuel oil having a maximum sulfur content of 0.5 percent, by weight, shall be fired in the turbines at a maximum consumption rate of 123 bbls/hr/turbine.
[Rules 62-4.160(2) and 62-213.440(1), F.A.C.; and, AO 49-176549.]

A.4. Hours of Operation. Each emissions unit may operate continuously, i.e., 8,760 hours/year/CT.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

A.5. Visible Emissions. Visible emissions from each turbine shall not be equal to or greater than 20 percent opacity.
[Rule 62-296.320(4)(b)1., F.A.C.; and, AO 49-176549.]

A.6. Sulfur Content. The sulfur content of the new No. 2 fuel oil shall not exceed 0.5 percent, by weight.
[Requested in initial Title V permit application received on June 14, 1996.]

Excess Emissions

{Permitting note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of an NSPS or NESHAP provision.}

A.7. Excess emissions from these emissions units resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.
[Rule 62-210.700(1), F.A.C.]

A.8. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.
[Rule 62-210.700(4), F.A.C.]

Monitoring of Operations

A.9. The permittee shall demonstrate compliance with the sulfur content limit with a fuel analysis provided by the vendor upon each fuel delivery. See specific condition A.12.
[Rule 62-213.440, F.A.C.; and, AO 49-176549.]

A.10. Determination of Process Variables.
(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.
[Rule 62-297.310(5), F.A.C.]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

A.11. The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C.
[Rules 62-204.800, 62-296.320(4)(b)4.a. and 62-297.401, F.A.C.]

A.12. The fuel sulfur content, percent by weight, provided by the vendor for each delivery of liquid fuels shall be evaluated using either ASTM D2622-94, ASTM D4294-90(95), both ASTM D4057-88 and ASTM D129-91(95), or the latest edition(s).
[Rules 62-213.440 and 62-297.440, F.A.C.]

A.13. Operating Rate During Testing.
Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity (i.e., at less than 90 percent of the maximum operation rate allowed by the permit); in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted, provided however, operations do not exceed 100 percent of the maximum operation rate allowed by the permit. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.
[Rule 62-297.310(2), F.A.C.]

A.14. Applicable Test Procedures.
(a) Required Sampling Time.
2. Opacity Compliance Tests. The required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.
[Rule 62-297.310(4)(a)2.c., F.A.C.]

A.15. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.
(a) General Compliance Testing.
3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300 (2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
a. Did not operate; or
b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours.

4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
   a. Visible emissions;
8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.
9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

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

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; SIP approved]

A.16. Visible Emissions Testing - Annual. By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units while burning only liquid fuels for less than 400 hours per year.

[Rules 62-297.310(7)(a)4. and 8., F.A.C.]

Record keeping and Reporting Requirements

A.17. Malfunction Reporting. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.

[Rule 62-210.700(6), F.A.C.]

A.18. Test Reports.

(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.

(b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.

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

Subsection B. This section addresses the following emissions unit.

E.U. ID No.	BRIEF DESCRIPTION
-007 to -010	Combustion Turbine Units CT 7, CT 8, CT 9, & CT 10
-011	Combustion Turbine CT 11

CT's. 7 through 10 are GE PG7111(EA) units and CT 11 is a Siemens V84.3 unit with generator ratings of 96.3 megawatts/CT and 171 megawatts/CT, respectively. The GE CT's and the Siemens CT have a maximum heat input rating at 59° Fahrenheit (F) of 1048 and 1477 MMBtu/hour, respectively. NO_x and SO_2 emissions are controlled with water injection and burning new No. 2 low sulfur fuel oil, respectively. The combustion turbines exhaust through individual stacks. The GE units began commercial service in 1993 and the Siemens unit began commercial service in 1996.

{Permitting note: CT's. 7 through 10 are regulated under Acid Rain, Phase II. All of the above CT's are regulated under NSPS - 40 CFR 60, Subpart GG (Standards of Performance for Stationary Gas Turbines), which is adopted and incorporated by reference in Rule 62-204.800(7)(b), F.A.C. and a BACT determination (PSD-FL-180), dated August 17, 1992; and, Air Construction Permit No. 0970014-002-AC, issued May 17, 1999.}

The following specific conditions apply to the emissions units listed above:

Essential Potential to Emit (PTE) Parameters

B.1. Permitted Capacity. The GE and Siemens turbines have generator nameplate ratings of 96.3 and 171 megawatts, respectively. The heat input to the GE and Siemens turbines at 59° F are 1048 and 1477 MMBtu/hr, respectively. A maximum heat input of 1144 MMBtu/hr/GE CT at 20° F during peak loading and 2032 MMBtu/ hr/Siemens CT at 20° F during peak loading shall not be exceeded. The heat input will be corrected in accordance with specific condition B.28.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, AC 49-203114/PSD-FL-180(A)]

B.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition B.28.

B.3. Methods of Operation.

a. Fuels. Only natural gas or new No. 2 fuel oil having a maximum sulfur content of 1 grain per 100 dscf and 0.2% or less, by weight, respectively, shall be fired in these turbines at all times. To comply with the SO_2 allowable emissions of 222 lbs/hr/GE CT and 407 lbs/hr/Siemens CT, the fuel oil consumption is 150,770,250 gal./yr. (based on an average 7826 gal/hr/GE CT and an average 13,171 gal/hr/Siemens CT, a capacity factor of 38.7%, 59° F, a 7.1 lbs/gal density, a maximum 0.2% S content by wt., and peak load).

b. Inlet Foggers. The inlet foggers installed at the compressor inlet to each of the four simple cycle combustion turbines may operate up to 7,000 hours per year in aggregate (average 1,750 hours per unit per year).

[Rule 62-213.410, F.A.C.; AC 49-203114/PSD-FL-180(A); 0970014-001-AV; and, 0970014-002-AC.]

B.4. Hours of Operation. The cumulative hours of operation for any CT combination, while firing fuel oil with 0.2% S by weight, is 14,455 hours/ calendar year (based on an average 2891 hours/year/CT, an average capacity factor of 33%, 59° F, and at peak load). A maximum capacity factor of 38.7% is allowed if the weighted 12-month rolling average sulfur content, by weight, of the fuels burned are 0.16% or less. See specific condition No. B.5.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, AC 49-203114/PSD-FL-180(A)]

B.5. Capacity Factors. The permitted capacity factors for these emissions units are the ratio of average permitted hours of operation for each turbine to the total available hours of operation per year at peak load. The average capacity factor for these turbines shall be limited to 33% ($^{2891\ hrs}/_{8760\ hrs}$) at peak load and based on a weighted 12-month rolling average maximum sulfur content of 0.2%, by weight. If the weighted 12-month rolling average sulfur content is less than 0.2%, by weight, the capacity factor and operating hours may be adjusted to a maximum average of 38.7% using the following table:

Weighted 12-Month Rolling Sulfur Content (% by wt.)	% Capacity Factor	Cumulative Hours per Calendar Year (for any CT combination)
0.2 - 0.195	33.0	14,455 (based on an average 2891 hr/CT/yr)
0.19 - 0.185	34.4	15,070 (based on an average 3014 hr/CT/yr)
0.18 - 0.175	35.8	15,680 (based on an average 3136 hr/CT/yr)
0.17 - 0.165	37.2	16,295 (based on an average 3259 hr/CT/yr)
0.16 - or less	38.7	16,950 (based on an average 3390 hr/CT/yr)

[AC 49-303114/PSD-FL-180(A)]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

B.6. Particulate Matter. Particulate matter emissions shall be controlled by the firing of natural gas or low sulfur content No. 2 fuel oil.
[Rule 62-296.406(2), F.A.C.; and, BACT dated August 17, 1992]

B.7. Emissions from CT 7, 8, 9, and 10, while firing natural gas or new No. 2 fuel oil and based on a capacity factor of 38.7%, shall not exceed the following allowables:

		CT 7, 8, 9, & 10 Allowables		
Pollutant	**Fuel**	**Standard**	**lbs/hr./CT**	**TPY**
NO_X	Gas	25 ppmvd @ 15% O_2- dry basis	107.00	725.46
	Oil	42 ppmvd @ 15% O_2- dry basis	182.00	1,233.96

		CT 7, 8, 9, & 10 Allowables (continued)		
Pollutant	**Fuel**	**Standard**	**lbs/hr./CT**	**TPY**
SO_2	Gas	1 grain/100 dscf	2.99	20.27
	Oil	New No. 2 F.O.- max. 0.2% S by wt.	222.00	1,505.16
PM/PM_{10}	Gas		7.50	50.85
	Oil	0.01 lb/MMBtu	15.00	101.70
VOC	Gas		3.00	20.34
	Oil		5.00	33.90
CO	Gas		21.30	144.41
	Oil	25 ppmvd	54.00	366.12
H_2SO_4	Gas		0.44	2.98
	Oil	New No. 2 F.O.- max. 0.2% S by wt.	18.00	122.04
Fluorides (FR)	Oil	New No. 2 F.O.- max. 0.2% S by wt.		
Mercury (Hg)	Oil	New No. 2 F.O.- max. 0.2% S by wt.		
Lead (Pb)	Oil	New No. 2 F.O.- max. 0.2% S by wt.		
Inorganic Arsenic	Oil	New No. 2 F.O.- max. 0.2% S by wt.		
Beryllium (Be)	Oil	New No. 2 F.O.- max. 0.2% S by wt.		
VE	Gas or Oil	10% - Normal conditions at full load 20% - Exceptional conditions		

Note: These allowables, terms, and relevant information are compiled in Table 1-2, Air Pollutant Emission Allowables and Terms.

[BACT dated August 10, 1995, and accepted by applicant in AC 49-203114/PSD-FL-180(A)]

B.8. Emissions from CT 11, while firing natural gas or new No. 2 fuel oil and based on a capacity factor of 38.7%, shall not exceed the following allowables:

		CT 11 Allowables		
Pollutant	**Fuel**	**Standard**	**lbs/hr.**	**TPY**
NO_X	Gas	25 ppmvd @ 15% O_2- dry basis	149.00	252.55
	Oil	42 ppmvd @ 15% O_2- dry basis	334.00	566.13
SO_2	Gas	1 grain of S per 100 dscf	4.22	7.15
	Oil	New No. 2 F.O.- max. 0.2% S by weight	407.00	689.87
PM/PM_{10}	Gas		7.50	12.71
	Oil	0.01 lb/MMBtu	17.00	28.82
VOC	Gas		5.30	8.98
	Oil		9.00	15.26
CO	Gas		30.90	52.38
	Oil	25 ppmvd	79.00	133.91
H_2SO_4	Gas		0.64	1.08
	Oil	New No. 2 F.O.- max. 0.2% S by weight	28.00	47.47

		CT 11 Allowables (continued)		
Pollutant	**Fuel**	**Standard**	**lbs/hr.**	**TPY**
Fluorides (FR)	Oil	New No. 2 F.O.- max. 0.2% S by weight		
Mercury (Hg)	Oil	New No. 2 F.O.- max. 0.2% S by weight		
Lead (Pb)	Oil	New No. 2 F.O.- max. 0.2% S by weight		
Inorganic Arsenic	Oil	New No. 2 F.O.- max. 0.2% S by weight		
Beryllium (Be)	Oil	New No. 2 F.O.- max. 0.2% S by weight		
VE	Gas or Oil	10% - Normal conditions at full load 20% - Exceptional conditions		

Note: These allowables, terms, and relevant information are compiled in Table 1-3, Air Pollutant Emission Allowables and Terms.
[BACT dated August 10, 1995, and accepted by applicant in AC 49-203114/PSD-FL-180(A)]

Excess Emissions

{Permitting note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of an NSPS or NESHAP provision.}

B.9. Excess emissions resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for a longer duration.
[Rule 62-210.700(1), F.A.C.]

B.10. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.
[Rule 62-210.700(4), F.A.C.]

Monitoring of Operations

B.11. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
[40 CFR 60.11(d)]

B.12. Determination of Process Variables.
(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.
[Rule 62-297.310(5), F.A.C.]

B.13. The permittee shall operate a continuous monitoring system (CMS) to monitor and record the fuel consumption and the ratio of water to fuel being fired in each turbine. This system shall be accurate to within ± 5.0 percent and shall be approved by the Administrator.
[40 CFR 60. 334(a)]

B.14. The permittee shall monitor sulfur content and nitrogen content of the new No. 2 fuel oil and sulfur content of natural gas. These values may be provided by the vendor and the frequency of determinations of these values shall be as follows:

A. New No. 2 Fuel Oil
The values, sulfur and nitrogen content, shall be determined on each occasion that fuel is transferred to the storage tanks from any other source. Records of these values shall be kept by the facility for a five year period for regulatory agency inspection purposes. For sulfur dioxide, periods of excess emissions shall be reported if the fuel being fired in the gas turbine exceeds 0.2 percent.

B. Natural Gas
Pursuant to 40 CFR 60.334(b)(2), a custom fuel monitoring schedule for the determination of these values shall be followed for the natural gas fired at this facility and shall be as follows:

Custom Fuel Monitoring Schedule for Natural Gas (NG)

1. Monitoring of fuel nitrogen content shall not be required if NG is the only fuel being fired in the gas turbines.

2. Sulfur Monitoring
   a. Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are ASTM D1072-80, ASTM D3031-81, ASTM D3246-81, and ASTM D4084-82 as referenced in 40 CFR 60.335(b)(2), or the latest edition(s).

   b. This custom fuel monitoring schedule shall become effective on the date this permit becomes valid. Effective the date of this custom schedule, sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content,

and indicates consistent compliance with 40 CFR 60.333 and the conditions of this permit, then sulfur monitoring shall be conducted once per quarter for six quarters. If monitoring data is provided by the applicant which demonstrates consistent compliance with the requirements herein the applicant may begin monitoring as per the requirements of 2.c.

c. If after the monitoring required in item 2.b. above, or herein, the sulfur content of the fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333 and the conditions of this permit, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.

d. Should any sulfur analysis as required in items 2.b. or 2.c. above indicate noncompliance with 40 CFR 60.333 and the conditions of this permit, the owner or operator shall notify the Department of such excess emissions and the custom schedule shall be re-examined by the Environmental Protection Agency. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.

3. If there is a change in fuel supply, the owner or operator must notify the Department of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.

4. Records of sample analysis and fuel supply pertinent to this custom schedule shall be retained for a period of five years, and be available for inspection by personnel of federal, state, and local air pollution control agencies.

[40 CFR 60.334(b)(1) and (2); and, PSD-FL-180(A) amended December 15, 1997]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

B.15. The surrogate for particulate matter (PM/PM_{10}) emissions testing shall be EPA Method 9, incorporated and adopted by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C. If 10% opacity is exceeded at peak load, EPA Method 5, incorporated and adopted by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C., shall be used for particulate matter testing.

[Rules 62-204.800, 62-296.320(4)(b)4.a. and 62-297.401, F.A.C.; and AC 49-203114/PSD-FL-180(A)]

B.16. The test method for sulfuric acid mist (H_2SO_4) emissions shall be EPA Method 8, incorporated and adopted by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C. No. 2 fuel oil analysis using ASTM D4294-90, or the latest edition, may be used in lieu of EPA Method 8 for

the determination of H_2SO_4 mist, only if compliance with the permit allowable for the sulfur content in the No. 2 fuel oil fired at the facility has been demonstrated.
[Rules 62-204.800 and 62-297.401, F.A.C.; and, AC 49-203114/PSD-FL-180(A)]

B.17. The test method for visible emissions (VE) shall be EPA Method 9, incorporated and adopted by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C.
[Rules 62-204.800, 62-296.320(4)(b)4.a. and 62-297.401, F.A.C.; and, AC 49- 203114/PSD-FL-180(A)]

B.18. The test method for carbon monoxide (CO) emissions shall be EPA Method 10, incorporated and adopted by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C.
[Rules 62-204.800 and 62-297.401, F.A.C.; and, AC 49- 203114/PSD-FL-180(A)]

B.19. The test method for nitrogen oxide (NO_X), sulfur dioxide (SO_2), and diluent shall be EPA Method 20, incorporated and adopted by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C.
[Rules 62-204.800 and 62-297.401, F.A.C.; and, AC 49- 203114/PSD-FL-180(A)]

B.20. The test method for volatile organic compound (VOC) emissions shall be EPA Method 25A, incorporated and adopted by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C. If compliance with the CO allowables in this permit are demonstrated, testing for VOCs using EPA Method 25A is not required.
[Rules 62-204.800 and 62-297.401, F.A.C.; and, AC 49- 203114/PSD-FL-180(A)]

B.21. A compliance test for Fluorides, Mercury, Lead, Inorganic Arsenic, and Beryllium, is not required as long as new No. 2 fuel oil is fired.
[AC 49-203114/PSD-FL-180(A)]

B.22. The permittee shall comply with the stack sampling requirements contained in Appendix SS-1, Stack Sampling Facilities (attached).
[Rule 62-297.310(6), F.A.C.]

B.23. To compute the nitrogen oxide emissions, the permittee shall use analytical methods and procedures that are accurate to within ±5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.
[40 CFR 60.335(a)]

B.24. The following shall only be used by the permittee to demonstrate compliance with the nitrogen oxides and sulfur dioxide standards in 40 CFR 60.332 and 40 CFR 60.333:

a. The nitrogen oxides emission rate (NO_X) shall be computed for each run using the following equation:

$$NO_X = (NO_{xo})\ (P_r/P_o)^{0.5}\ e^{19(Ho - 0.00633)}\ (288°K/T_a)^{1.53}$$

where:

NO_X = emission rate of NO_x at 15 percent O_2 and ISO standard ambient conditions, volume percent.

NO_{xo} = observed NO_x concentration, ppm by volume.

P_r = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.
P_o= observed combustor inlet absolute pressure at test, mmHg.
H_o= observed humidity of ambient air, g H_2O/g air.
e= transcendental constant, 2.718.
T_a= ambient temperature, °K.

b. Testing to establish compliance with the NO_X limit shall be done at capacity, as defined in condition B.28. If testing demonstrates NO_X emissions in excess of the allowable, set forth in this permit when operating at capacity, the following shall apply:
   1. The monitoring device of 40 CFR 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with 40 CFR 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacture.
c. EPA Method 20 (40 CFR 60, Appendix A) shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NO_x emissions shall be determined at each of the load conditions specified in specific condition b. above.

[40 CFR 60.335(c)(1),(2) and (3)]

{Permitting Note: The above requirements are applicable when demonstrating compliance with the NSPS limits. Proper maintenance and use of the Acid Rain NO_X CEMs is an acceptable alternative for monitoring compliance with the BACT limits specified in condition B.7.}

B.25. The permittee shall determine compliance with the sulfur content standard in 40 CFR 60.333(b) as follows: ASTM D2880-96 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-90(94)E-1, D 3031-81(86), D 4084-94, or D 3246-92 shall be used for the sulfur content of gaseous fuels [incorporated by reference in 40 CFR 60.17 or the latest edition(s)]. The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the Dilution ratio) may be used, subject to approval of the Administrator.
[40 CFR 60.335(d)]

B.26. To meet the requirements of 40 CFR 60.334(b), the permittee shall use the methods specified in 40 CFR 60.335(a) and (d) to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the permittee, a service contractor retained by the permittee, the fuel vendor, or any other qualified agency.
[40 CFR 60.335(e)]

B.27. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed

within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.
[Rule 62-297.310(1), F.A.C.]

Operating Rate During Testing

B.28. Testing of emissions shall be conducted with the emissions unit operating at permitted capacity as defined below. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity, in which case subsequent emissions unit operations are limited to 105 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. The permitted capacity shall at no time be exceeded. Capacity is defined as 95 to 100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test. If it is impracticable to test at capacity, an emissions unit may be tested at less than capacity. In such cases, the entire heat input vs. inlet temperature curve will be adjusted by the increment equal to the difference between the design heat input value and 105 percent of the value reached during the test. Data, average ambient temperature during the test, capacity vs. ambient temperature curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report. In no case shall a maximum heat input of 1144 MMBtu/ hr/GE CT at 20° F during peak loading and 2032 MMBtu/ hr/Siemens CT at 20° F during peak loading be exceeded.
[Rule 62.297.310(2), F.A.C.; and, AC 49-203114/PSD-FL-180(A)]

B.29. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.
(a) General Compliance Testing.
3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300 (2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
a. Did not operate; or
b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.
4. During each federal fiscal year (October 1 -- September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
a. Visible emissions;

b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; or 100 tons per year or more of any other regulated air pollutant.

8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operating permit.

9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

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

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; SIP approved]

{Permitting Note: The annual NO_X and SO_2 tests that are required by Rule 62-297.310(7), F.A.C., can be done during the annual RATA as satisfaction of this requirement, provided all other testing requirements specified in the permit are met.}

B.30. Applicable Test Procedures.

(a) Required Sampling Time.

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

2. Opacity Compliance Tests. The required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year (TPY) or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 TPY of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

a. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.

b. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

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

(c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

(d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, CALIBRATION SCHEDULE (attached).

(e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.] {Table 297.310-1, Calibration Schedule is attached}

B.31. Test Reports.

(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.

(b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.

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

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.

9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rules 62-213.440 and 62-297.310(8), F.A.C.]

Recordkeeping and Reporting Requirements

B.32. The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
[40 CFR 60.7(b)]

B.33. Each owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form [see 40 CFR 60.7(d)] to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or, the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or, the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each calendar half (or quarter, as appropriate). Written reports of excess emissions shall include the following information:

(1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
[40 CFR 60.7(c)(1), (2), (3), and (4)]

B.34. The summary report form shall contain the information and be in the format shown in Figure 1 (attached) unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.
(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.
(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

{See attached Figure 1: Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance} (electronic file name: figure1.doc)
[40 CFR 60.7(d)(1) and (2)]

B.35. Frequency of Reporting: (1) Notwithstanding the frequency of reporting requirements specified in 40 CFR 60.7(c), an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;

(ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in 40 CFR 60, Subpart A, and the applicable standard; and

(iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in 40 CFR 60.7(e)(2).

(2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review

information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in 40 CFR 60.7(e)(1) and (e)(2).
[40 CFR 60.7(e)(1)]

B.36. The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports, and records.
[Rule 62-213.440(1)(b), F.A.C.; and, 40 CFR 60.7(f)]

B.37. In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.
[Rule 62-210.700(6), F.A.C.]

B.38. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions that shall be reported are defined as follows:
a. Nitrogen oxides. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the applicable requirements in 40 CFR 60.332 by the performance test required in 40 CFR 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in 40 CFR 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under 40 CFR 60.335(a).

{Permitting Note: A properly installed and maintained NO_X CEMS may be used as an acceptable alternative to measure periods of excess emissions.}

b. Sulfur dioxide. Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.2 percent, by weight, pursuant to the BACT.
[40 CFR 60.334(c)(1) & (2); Rule 212.400(6), F.A.C.; and, BACT dated December 14, 1992]

NSPS Common Condition

B.39. No owner or operator subject to the provisions of 40 CFR 60 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.
[40 CFR 60.12]

Section IV. This section is the Acid Rain Part.

Operated by: Florida Power Corporation
ORIS code: 8049

Subsection A. This subsection addresses Acid Rain, Phase II.

The emissions units listed below are regulated under Acid Rain Part, Phase II.

E.U. ID No.	Description
-007	GE PG 7111EA Combustion Turbine - CT 7
-008	GE PG 7111EA Combustion Turbine - CT 8
-009	GE PG 7111EA Combustion Turbine - CT 9
-010	GE PG 7111EA Combustion Turbine - CT 10

1. The Acid Rain Part application submitted for this facility, as approved by the Department, is a part of this permit. The owners and operators of these acid rain units must comply with the standard requirements and special provisions set forth in the application listed below:
   a. DEP Form No. 62-210.900(1)(a), dated 07/01/95.
[Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

2. Sulfur dioxide (SO2) allowance allocations for each Acid Rain unit:

E.U. ID No.	EPA I.D.	Year	2000	2001	2002
-007	7	SO2 allowances, under Table 2 or 3 of 40 CFR 73	699*	699*	699*
-008	8	SO2 allowances, under Table 2 or 3 of 40 CFR 73	699*	699*	699*
-009	9	SO2 allowances, under Table 2 or 3 of 40 CFR 73	699*	699*	699*
-010	10	SO2 allowances, under Table 2 or 3 of 40 CFR 73	699*	699*	699*

*The number of allowances held by an Acid Rain source in a unit account may differ from the number allocated by the USEPA under Table 2 or 3 of 40 CFR 73.

3. Emission Allowances. Emissions from sources subject to the Federal Acid Rain Program (Title IV) shall not exceed any allowances that the source lawfully holds under the Federal Acid Rain Program. Allowances shall not be used to demonstrate compliance with a non-Title IV applicable requirement of the Act.
   a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.440(3), F.A.C.

b. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain program.

c. Allowances shall be accounted for under the Federal Acid Rain Program.

[Rule 62-213.440(1)(c), F.A.C.]

4. Comments, notes, and justifications: None.

Table 1-1, Air Pollutant Emission Allowables and Terms

Florida Power Corporation
Intercession City Facility

FINAL Title V Permit Revision No.: 0970014-004-AV

Emissions Unit & No.			Allowables per each Combustion Turbine			Equivalent Emissions[1]			
Pollutant	Fuel(s)	Hrs/Yr /CT	Standards(s)	lbs/hr /CT[1]	TPY	lbs/hr /CT[2]	TPY[2]	Regulation(s)	Permit Specific Condition(s)
E.U.-001 to -006 (CTP 1, CTP 2, CTP 3, CTP 4, CTP 5, & CTP 6)									
SO_2	Oil	8760	New No. 2 F.O.- max. 0.5% S by wt.			364.23	9,571.96	Rule 62-4.070, F.A.C.	A.6
VE	Oil	8760	20% opacity					Rule 62-296.320(4)(b)1., F.A.C.	A.5

1 - Emissions rates based on 59° F and 15% O_2 at peak load.
2 - Equivalent to 8760 hours per year at peak load.

Table 1-2, Air Pollutant Emission Allowables and Terms

Florida Power Corporation
Intercession City Facility

FINAL Title V Permit Revision No.: 0970014-004-AV

Emissions Unit & No.			Allowables per each Combustion Turbine				
Pollutant	Fuel(s)	Hrs/Yr /CT	Standards(s)	lbs/hr /CT	TPY	Regulation(s)	Permit Specific Condition(s)
E.U.-007 to -010 (CT 7, CT 8, CT 9, & CT 10)							
NO_X	Gas	3390	25 ppmvd @ 15% O_2- dry basis	107.00	725.46 [a]	Rule 62-212.400(6), F.A.C.	B.6
	Oil	3390	42 ppmvd @ 15% O_2- dry basis	182.00	1233.96 [a]	Rule 62-212.400(6), F.A.C.	B.6
SO_2	Gas	3390	1 grain of S per 100 dscf	2.99	20.27 [c]	BACT	B.6
	Oil	2891	New No. 2 F.O.- max. 0.2% S by wt.	222.00	1283.60 [b]	Rule 62-212.400(6), F.A.C.	B.6
PM/PM_{10}	Gas	3390		7.50	50.85 [c]	BACT	B.6
	Oil	3390	0.01 lb/MMBtu	15.00	101.70 [c]	BACT	B.6
VOC	Gas	3390		3.00	20.34 [c]	BACT	B.6
	Oil	3390		5.00	33.90 [c]	BACT	B.6
CO	Gas	3390		21.30	144.41 [c]	Rule 62-212.400(6), F.A.C.	B.6
	Oil	3390	25 ppmvd	54.00	366.12 [c]	Rule 62-212.400(6), F.A.C.	B.6
H_2SO_4	Gas	3390	New No. 2 F.O.- max. 0.2% S by wt.	0.44	2.98 [c]	BACT	B.6
	Oil	2891		18.00	104.08 [b]	BACT	B.6
Fluorines (Fl)	Oil	3390	New No. 2 F.O.- max. 0.2% S by wt.		[d]	BACT	B.6
Mercury (Hg)	Oil	3390	New No. 2 F.O.- max. 0.2% S by wt.		[d]	BACT	B.6
Lead (Pb)	Oil	3390	New No. 2 F.O.- max. 0.2% S by wt.		[d]	BACT	B.6
Inorganic Arsenic (As)	Oil	3390	New No. 2 F.O.- max. 0.2% S by wt.		[d]	BACT	B.6
Beryllium (Be)	Oil	3390	New No. 2 F.O.- max. 0.2% S by wt.		[d]	BACT	B.6
VE	Gas or Oil	3390	10% - Normal conditions at full load 20% - Exceptional conditions			Rule 62-212.400(6), F.A.C.	B.6

a - Emissions rates based on 59° F and 15% O_2 at peak load.
b - Total TPY for SO_2 assumes 33% capacity factor, 2891 hours/CT/yr at peak load, and fuel with a maximum sulfur content of 0.2%, by weight. Refer to Specific Condition No. B.5 for listed capacity factors vs. sulfur content in fuel oil and specific condition No. B.3 for the fuel consumption based on the permitted TPY of SO_2 emissions.
c - Equivalent to 3390 hours per year at peak load (38.7% capacity factor) and 59° F.
d - Emissions controlled by standards.

Table 1-3, Air Pollutant Emission Allowables and Terms

Florida Power Corporation
Intercession City Facility

FINAL Title V Permit Revision No.: 0970014-004-AV

Emissions Unit & No.			Allowables per each Combustion Turbine				
Pollutant	Fuel(s)	Hrs/Yr /CT	Standards(s)	lbs/hr /CT	TPY	Regulation(s)	Permit Specific Condition(s)
E.U.-011 (CT 1.1)							
NO_X	Gas	3390	25 ppmvd @ 15% O_2- dry basis	149.00	252.55 [a]	Rule 62-212.400(6), F.A.C.	B.7
	Oil	3390	42 ppmvd @ 15% O_2- dry basis	334.00	566.13 [a]	Rule 62-212.400(6), F.A.C.	B.7
SO_2	Gas	3390	1 grain of S per 100 dscf	4.22	7.15 [c]	BACT	B.7
	Oil	2891	New No. 2 F.O.- max. 0.2% S by wt.	407.00	588.32 [b]	Rule 62-212.400(6), F.A.C.	B.7
PM/PM_{10}	Gas	3390		7.50	12.71 [c]	BACT	B.7
	Oil	3390	0.01 lb/MMBtu	17.00	28.82 [c]	BACT	B.7
VOC	Gas	3390		5.30	8.98 [c]	BACT	B.7
	Oil	3390		9.00	15.26 [c]	BACT	B.7
CO	Gas	3390		30.90	52.38 [c]	Rule 62-212.400(6), F.A.C.	B.7
	Oil	3390	25 ppmvd	79.00	133.91 [c]	Rule 62-212.400(6), F.A.C.	B.7
H_2SO_4	Gas	3390	New No. 2 F.O.- max. 0.2% S by wt.	0.64	1.08 [c]	BACT	B.7
	Oil	2891		28.00	40.47 [b]	BACT	B.7
Florins (Fl)	Oil	3390	New No. 2 F.O.- max. 0.2% S by wt.		[d]	BACT	B.7
Mercury (Hg)	Oil	3390	New No. 2 F.O.- max. 0.2% S by wt.		[d]	BACT	B.7
Lead (Pb)	Oil	3390	New No. 2 F.O.- max. 0.2% S by wt.		[d]	BACT	B.7
Inorganic Arsenic	Oil	3390	New No. 2 F.O.- max. 0.2% S by wt.		[d]	BACT	B.7
Beryllium (Be)	Oil	3390	New No. 2 F.O.- max. 0.2% S by wt.		[d]	BACT	B.7
VE	Gas or Oil	3390	10% - Normal conditions at full load 20% - Exceptional conditions			Rule 62-212.400(6), F.A.C.	B.7

a - Emissions rates based on 59° F and 15% O_2 at peak load.
b - Total TPY for SO_2 assumes 33% capacity factor, 2891 hours/CT/yr at peak load, and fuel with a maximum sulfur content of 0.2%, by weight. Refer to Specific Condition No. B.5 for listed capacity factors vs. sulfur content in fuel oil and specific condition No. B.3 for the fuel consumption based on the permitted TPY of SO_2 emissions.
c - Equivalent to 3390 hours per year at peak load (38.7% capacity factor) and 59° F.
d - Emissions controlled by standards.

Table 2-1, Compliance Testing Requirements

Florida Power Corporation
Intercession City Facility

FINAL Title V Permit Revision No.: 0970014-004-AV

Pollutant Name or parameter	Fuel(s)	EPA/Reference Method	Testing Time or Frequency	Frequency Base Date[2]	Min. Compl. Test Time	CMS	Permit Condition(s)
E.U. ID							
E.U. CTP 1, 2, 3, 4, 5, & 6							
SO_2	Oil	F.O. Analysis[1]	Per Delivery[2]		NA		A.14, 18, 19,20
VE	Oil	EPA Method 9	Annual		1 Hour		A.15
E.U. CT 7, 8, 9, 10, & 11							
NO_X	Gas	EPA Method 20	Annual		3 Hour		B.7
	Oil	EPA Method 20	Annual				
SO_2	Gas		Continuous			yes	
	Oil	F.O. Analysis[1]	Per Delivery[2]				
PM/PM_{10}	Gas						
	Oil	EPA Method 5	Annual				
VOC[3]	Gas	EPA Method 25A	Annual				
	Oil	EPA Method 25A	Annual				
CO	Gas	EPA Method 10	Annual				
	Oil	EPA Method 10	Annual				
H_2SO_4[4]	Gas	EPA Method 8	Annual				
	Oil	EPA Method 8	Annual				
Fl, Hg, Pb, Be, & As(Inorganic)	Oil	New No.2 F.O.- max. 0.2% by wt.	Per Delivery[2]	Per Delivery[2]	NA		
VE	Gas	EPA Method 9	Annual		1 Hour		B.4
							B.4

1- Sulfur content of the fuel oil shall be provided by the supplier for every delivery.
2- The custom fuel monitoring schedule in condition No. 3 through 8.
3- Testing with Method 25A not necessary if compliance with CO allowable is demonstrated (ref. to cond. B.20.).
4- Fuel Oil analysis using ASTM may be used in lieu of Method 8 if compliance with sulfur content in fuel oil is demonstrated (ref. to cond. B.16.)

Appendix I-1. List of Insignificant Emissions Units and/or Activities.

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, are exempt from the permitting requirements of Chapters 62-210 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rule 62-210.300(3)(a), F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rule 62.210.300(3)(a), F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

1	Lube Oil System Vents
2	Lube Oil Reservoir Tank
3	Oil Water Separators
4	Hazardous Waste Building
5	Parts Washers/Degreasers
6	Waste Oil Storage Tanks
7	Lube Oil Storage Building
8	Portable Unleaded Gasoline Tank
9	No. 2 Diesel Fuel Tank

Appendix U-1. List of Unregulated Emissions Units and/or Activities.

Unregulated Emissions Units and/or Activities. An emissions unit which emits no "emissions-limited pollutant" and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards.

The below listed emissions units and/or activities are neither 'regulated emissions units' nor 'insignificant emissions units'.

Emissions Unit	Description
-013	Surface Coating and Solvent Cleaning
-014	General Purpose Engines
-015	Fuel Storage Tanks
-016	Helper Cooling Towers
-017	Emergency Generator

APPENDIX SS-1, STACK SAMPLING FACILITIES

APPENDIX TV-3, TITLE V CONDITIONS

Appendix H-1, Permit History/ID Number Changes

Florida Power Corporation
Intercession City Facility

Facility ID No.: 0970014-001-AV

Permit History (for tracking purposes):

E.U. ID No	Description	Permit No.	Issue Date	Expiration Date	Extended Date	Revised Date(s)
-001	Combustion Turbine Peaking Unit #1	AO49-176549	07/20/90	01/15/96		
-001	Combustion Turbine Peaking Unit #2	AO49-176549	07/20/90	01/15/96		
-001	Combustion Turbine Peaking Unit #3	AO49-176549	07/20/90	01/15/96		
-001	Combustion Turbine Peaking Unit #4	AO49-176549	07/20/90	01/15/96		
-001	Combustion Turbine Peaking Unit #5	AO49-176549	07/20/90	01/15/96		
-001	Combustion Turbine Peaking Unit #6	AO49-176549	07/20/90	01/15/96		
-002	92.9 MW Simple Cycle Gas CT	AC49-203114/	08/17/92	12/31/95		10/06/93
-002	92.9 MW Simple Cycle Gas CT	PSD-FL-180				11/15/93
-002	92.9 MW Simple Cycle Gas CT					07/15/94
-002	185.5 MW Simple Cycle Gas CT					01/20/95
-003	185.5 MW Simple Cycle Gas CT					
-001 to -017	Initial Title V Permit	0970014-001-AV	12/31/97	12/31/02		
-007 to -010	Addition of Inlet Foggers	0970014-002-AC	5/17/99	12/31/99		
-001 to –017	Title V Permit Revision to Include Inlet Foggers, NO_X CEMs for Monitoring, and Minor Administrative Corrections.	0970014-004-AV	6/13/00	12/31/02		

(if applicable) ID Number Changes (for tracking purposes):
From: **Facility ID No.**: 30ORL4900014
To: **Facility ID No.**: 0970014

Notes:
1 - AO permit(s) automatic extension(s) in Rule 62-210.300(2)(a)3.a., F.A.C., effective 03/21/96.
2 - AC permit(s) automatic extension(s) in Rule 62-213.420(1)(a)4., F.A.C., effective 03/20/96.
{Rule 62-213.420(1)(b)2., F.A.C., effective 03/20/96, allows Title V Sources to operate under existing valid permits}

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

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

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

Reporting period dates: From _____ to _____

Company: _____

Emission Limitation: _____

Address: _____

Monitor Manufacturer: _____

Model No.: _____

Date of Latest CMS Certification or Audit: _____

Process Unit(s) Description: _____

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

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

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

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

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

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

Name: _____

Signature: _____ *Date*: _____

Title: _____

ATTACHMENT IC-FI-C14

COMPLIANCE REPORT AND PLAN

ATTACHMENT IC-FI-C14

COMPLIANCE REPORT AND PLAN

On the date specified in Attachment IC-FI-C15, the facility and emission units identified in this application are in compliance with the Applicable Regulations identified in this application form. Compliance with the conditions set forth in this operation permit will be certified on an annual basis by the submittal of the Statement of Compliance – Title V Source DEP Form No. 62-213.900(7). This report will be submitted by March 1 of each year for the prior calendar year.

Compliance with the allowable emission limiting standards shall be determined within 60 days after achieving the maximum production rate, but not later than 180 days of initial operation of the facility, and annually thereafter as indicated in the air construction permit. Compliance testing for Emission Units P13 and P14 occurred on May 29 and May 30, 2002 respectively. Permit No, PSD-FL-268A states that a report indicating the results of the required emissions performance tests shall be submitted to the Compliance Authority no later than 45 days after completion of the last test run. These test reports will be submitted to the appropriate agency on or before July 13 (P13) and July 14 (P14) which is within 45 days of the initial tests.

[Rules 62-212.400(7)(b), 62-213.440(2), and 62-213.420(1)(a)5, F.A.C.]

ATTACHMENT IC-FI-C15

COMPLIANCE CERTIFICATION

ATTACHMENT IC-FI-C15

COMPLIANCE CERTIFICATION

The facility and emission units identified in this application are in compliance with the Applicable Regulations identified in the application form and attachments referenced in the section. The compliance report for this facility will be submitted by March 1 of each year for the prior calendar year. The compliance statement is as follows:

> I, the undersigned, am the responsible official as defined in Chapter 62-210.200, F.A.C., of the Title V source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.

Martin J. Drango

Signature, Responsible Official

6/27/02

Date

Martin J. Drango, P.E., Plant Manager

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[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.

2. 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.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Combustion Turbine Peaking Units CTP 1, CTP 2, CTP 3, CTP 4, CTP 5, & CTP 6

4. Emissions Unit Identification Number:
ID: **001 – 006**
[ ] No ID
[ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**MAY 1974**	**49**	[ ]

9. Emissions Unit Comment: (Limit to 500 Characters)

Two turbines per generating unit.

See Attachment IC-EU1-A9.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

2. Control Device or Method Code(s):

Emissions Unit Details

1. Package Unit:
   Manufacturer: **Pratt & Whitney** Model Number: **FT-4C-1DLF**
2. Generator Nameplate Rating: **57** MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		708	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr		tons/day
3. Maximum Process or Throughput Rate:			
4. Maximum Production Rate:			
5. Requested Maximum Operating Schedule:			
	24 hours/day	7	days/week
	52 weeks/year	8,760	hours/year

6. Operating Capacity/Schedule Comment (limit to 200 characters):

Maximum heat input based on permit limit firing No. 2 fuel oil at 123 barrels/hour.

See Permit 0970014-004-AV Condition III.A.3.

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

See Attachment IC-EU1-D	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **See Attachment IC-FI-C2**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Combustion turbine's gases exhaust through two stacks.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **45** feet	7. Exit Diameter: **14.6** feet
8. Exit Temperature: **760** °F	9. Actual Volumetric Flow Rate: **1,764,000** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: **17** East (km): **446.3** North (km): **3126**		
14. Emission Point Comment (limit to 200 characters): **Data for a single generating unit.** **Exit Diameter: 14.63 ft.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Internal Combustion Engines – Electric Generation - Distillate Oil (Diesel) - Turbine**		
2. Source Classification Code (SCC): **2-01-001-01**	3. SCC Units: **1,000 Gallons Burned**	
4. Maximum Hourly Rate: **5.17**	5. Maximum Annual Rate: **45,254**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.5**	8. Maximum % Ash: **0.1**	9. Million Btu per SCC Unit: **138**
10. Segment Comment (limit to 200 characters): **Maximum Hourly Rate based on Permit No. 0970014-004-AV Condition III.A.3 where:** **Maximum Consumption Rate = 123 bbls/hr x 42 gal/bbl x 1/1,000 gal = 5.166 gal/hr** **Maximum Annual Rate based on 8,760 hr/yr.** **Heat Content – HHV.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2			NS
NO_x			NS
PM			NS
PM_{10}			NS
CO			NS
VOC			NS

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual VE Test EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Rule 62-296.310(2)(a). No VE test < 400 hr/yr except for period of one year preceding permit renewal date. [Rule 62-297.310(7)(a)8]** **See Permit No. 0970014-004-AV Conditions III.A.5, III.A.15, and III.A.16.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE99**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **Best Operational Practices**	
5. Visible Emissions Comment (limit to 200 characters): **FDEP Rule 62-210.700(1); Allowed for 2 hours (120 minutes) per 24 hours for start up, shutdown and malfunction.** **See Permit No. 0970014-004-AV Condition III.A.7.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID: IC-EU1-J1[ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [X] Attached, Document ID: IC-EU1-J2[ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID: _____ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID: _____ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [X] Attached, Document ID: IC-EU1-J5 [ ] Previously submitted, Date: _____ [ ] Not Applicable
6. Procedures for Startup and Shutdown [X] Attached, Document ID: IC-EU1-J6[ ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID: _____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID: _____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [X] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable **See Attachment IC-EU1-J14**

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[X] Not Applicable

ATTACHMENT IC-EU1-A9

EMISSIONS UNIT COMMENT

Attachment IC-EU1-A9
CombustionTurbine Peaking Units 1-6
Florida Power, Intercession City

Source: Golder, 2002.

Golder Associates

ATTACHMENT IC-EU1-D

APPLICABLE REQUIREMENTS

ATTACHMENT IC-EU1-D

Applicable Requirements Listing

APPLICATION EMISSION UNIT ID: EU1 – Combustion Turbine Peaking Units CTP 1, CTP 2, CTP 3, CTP 4, CTP 5, and CTP 6

FDEP Rules:

Stationary Sources-General:

62-210.700(1)	Excess Emissions;
62-210.700(4)	Excess Emissions; poor maintenance
62-210.700(6)	Excess Emissions; notification

Stationary Sources-Emission Standards:

62-296.320(4)(b)(State Only)	CTs/Diesel Units

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

62-297.310(2)	All Units (Operating Rate)
62-297.310(4)	All Units (Applicable Test Procedures)
62-297.310(5)	All Units (Determination of Process Variables)
62-297.310(7)(a)3.	Permit Renewal Test Required
62-297.310(7)(a)4.	Annual Test
62-297.310(7)(a)8.	VE Compliance Test if > 400 hrs/yr
62-297.310(7)(a)9.	FDEP Notification - 15 days
62-297.310(8)	Test Reports

ATTACHMENT IC-EU1-J1

PROCESS FLOW DIAGRAM

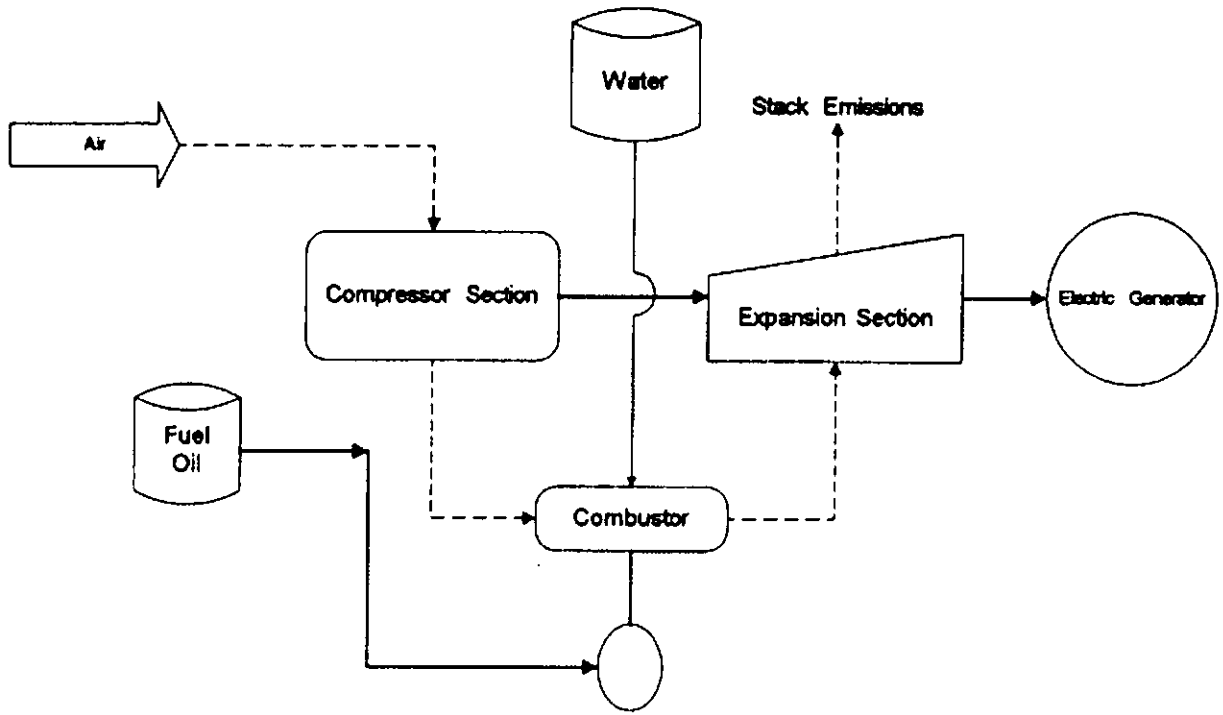


Figure IC-EU1-J1. Process Flow Diagram
Emission Units 1,2,3,4,5, and 6
Florida Power - Intercession City

Source: Golder Associates Inc., 2002.

Process Flow Legend
Solid/Liquid
Gas
Steam

Golder Associates

ATTACHMENT IC-EU1-J2

FUEL ANALYSIS
FUEL OIL

FLORIDA POWER CORPORATION
CENTRAL CHEMICAL LABORATORY
15760 WEST POWERLINE STREET
CRYSTAL RIVER, FL 34428
TEL: 352-563-4463; EXT: 5239
MICROWAVE: 240-5239 MAC CN77

Intercession City Unit (s):

Sample Date: 5/14/2002 **Sample Number:** FO-8738

Type of Fuel: No. 2 oil

Enter the type of Sample: CEMS Required

RESULTS*

API Gravity @	34.4
%S:	0.19
Density (@ 60° F):	0.8525
Density (lb/gal):	7.1022

HHV, BTU/lb:	19,530	**% ASH:**	
HHV, BTU/gal:	138,702	**% Carbon:**	87.3
HHV, BTU/bbl:	5,825,484	**% Hydrogen:**	12.8
LHV, BTU/lb:	18,362	**% Nitrogen:**	0.1
LHV, BTU/gal:	130,407	**% Water:**	
LHV, BTU/bbl:	5,477,094		

Sample

TANK 1. Nitrogen vaule actually < 0.10 (MDL)

* Analysis performed by: TECO Labs

Jeff Smith
Chemist, Central Chem Lab

ATTACHMENT IC-EU1-J5

COMPLIANCE TEST REPORT

Florida Power

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE/PROCESS INFORMATION

FACILITY NAME: Florida Power - Intercession City Peakers
SOURCE NAME: Peaking Unit #1
PERMIT NUMBER: 0970014-004-AV
LOCATION ADDRESS: 6525 Osceola Polk County Line Rd.
CITY: Intercession City
STATE: FL
ZIP:
UNIT LOAD: 45 MW
HEAT INPUT:
CONTROL EQUIPMENT: NONE
OPERATING MODE: Auto
FUEL TYPE/RATE: #2 fuel oil
PERMITTED RATE: 708 MMBtu/hr. @ 567 MW
DESCRIBE EMISSION POINT: top of stack
HEIGHT ABOVE GROUND LEVEL: FT
HEIGHT OF OBSERVATION POINT: 6 FT

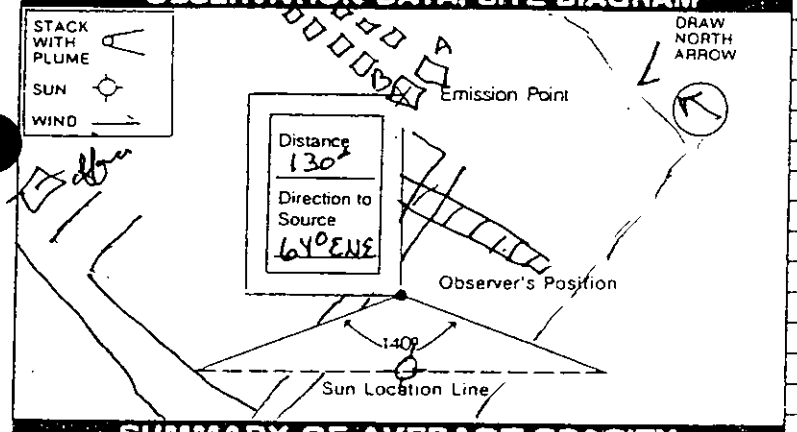
EMISSIONS DESCRIPTION

DESCRIBE EMISSIONS
START: CONTINUOUS
END: CONTINUOUS
PLUME COLOR: black
PLUME TYPE: Rolling
WATER DROPLETS PRESENT: ☐ Yes ☑ No
IF YES, IS PLUME: ☐ Attached ☐ Detached

METEOROLOGICAL INFORMATION

BACKGROUND
START: sky
END: sky
BACKGROUND COLOR
START: white
END: white
SKY CONDITIONS – CLOUD COVER
START: cloudy
END: cloudy
AMBIENT TEMPERATURE
START: 86°F
END: 87°F
WIND SPEED
START: 0-3
END: 0-3
WIND DIRECTION
START: E
END: E

OBSERVATION DATA, SITE DIAGRAM



SUMMARY OF AVERAGE OPACITY

	SET NUMBER	TIME START	TIME END	OPACITY SUM	OPACITY AVERAGE
A	49-55	1639	1645	335 ~~525~~	~~21.875~~
B	33-39	1623	1629	280	11.667

COMPLIANCE INFORMATION

RANGE OF OPACITY READINGS
MAXIMUM: 15
MINIMUM: 10
HIGHEST 6 MINUTE AVERAGE
A = ~~21.8~~ 13.958
B = 11.667
COMMENTS

		Dry	Wet
BL = 4°	Begin	78°F	86°F
AL = 4°	End	76°F	87°F

OBSERVER: Debbie Telemeco-Anders
DATE: 6-4-02
OBSERVER'S SIGNATURE: Debbie Telemeco-Anders
OBSERVER CERTIFICATION NUMBER: 292625
EXPIRATION DATE: 8-21-02

OBSERVATION RECORD

DATE: 6-4-02

HOUR	MINUTE	STACK ~~A~~ B A 0	15	30	45	STACK ~~A~~ A B 0	15	30	45
15 50	0	10	10	15	15	10	10	15	15
	1	10	15	15	15	15	15	15	15
	2	10	15	10	10	10	15	10	10
	3	10	10	10	10	10	10	10	10
	4	10	10	10	10	10	10	10	10
	5	10	10	10	10	10	10	10	10
	6	10	10	10	10	10	10	10	10
	7	10	10	10	10	10	10	10	10
	8	10	10	10	10	10	10	10	10
	9	10	10	10	10	10	10	10	10
1600	10	10	10	10	10	10	10	10	10
	11	10	10	10	10	10	10	10	10
	12	10	15	15	10	10	15	15	10
	13	10	10	10	10	10	10	10	10
	14	10	10	10	10	10	10	10	10
	15	10	10	10	10	10	10	10	10
	16	10	10	10	10	10	10	10	10
	17	10	10	10	10	10	10	10	10
	18	10	10	10	10	10	10	10	10
	19	10	10	10	10	10	10	10	10
1610	20	10	10	10	10	10	10	10	10
	21	10	10	10	10	10	10	10	10
	22	10	10	10	10	10	10	10	10
	23	10	15	15	15	10	10	10	15
	24	15	15	15	10	10	10	10	10
	25	10	10	10	10	10	10	10	10
	26	10	10	15	15	10	10	15	15
	27	10	15	15	15	10	15	15	15
	28	10	10	10	15	10	10	10	15
	29	10	10	10	15	10	10	10	15
1620	30	10	10	10	10	10	10	10	10
	31	10	10	10	10	10	10	10	10
	32	10	10	15	15	10	10	15	10
	33	15	10	10	15	10	10	10	15
	34	15	15	15	15	15	10	10	10
	35	10	10	10	15	10	10	10	15
	36	15	15	10	10	10	15	10	10
	37	10	10	15	15	10	10	10	15
	38	15	15	15	15	15	15	10	15
	39	10	10	10	10	10	10	10	10
1630	40	10	15	15	10	10	10	15	10
	41	10	10	10	10	10	10	10	10
	42	10	15	10	10	10	15	10	10
	43	10	10	10	15	10	10	10	10
	44	15	10	15	10	15	10	10	10
	45	10	15	15	15	10	15	15	15
	46	15	15	15	10	15	15	10	10
	47	15	15	10	15	10	10	10	10
	48	10	15	10	10	10	15	10	10
	49	10	15	15	15	10	10	10	10
1640	50	15	15	15	15	10	10	10	10
	51	15	15	15	15	10	10	10	10
	52	15	10	10	15	10	10	10	15
	53	15	15	15	15	10	15	15	10
	54	15	15	10	10	10	15	10	10
	55	10	10	10	10	10	10	10	10
	56	10	10	15	10	10	10	10	10
	57	15	15	10	10	15	15	10	10
	58	10	10	10	10	10	10	10	10
	59	10	10	10	10	10	10	10	10

Rev. 5/93

RET: 8 Yrs. RESP: Environmental Services 911 946

Florida Power

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE/PROCESS INFORMATION

FACILITY NAME: Florida Power - Intercession City Peakers
SOURCE NAME: P-2
PERMIT NUMBER:
LOCATION ADDRESS:
CITY:
STATE: Fl
ZIP:
UNIT LOAD: 43 MW
HEAT INPUT:
CONTROL EQUIPMENT: None
OPERATING MODE: Auto
FUEL TYPE/RATE: #2 fuel oil
PERMITTED RATE:
DESCRIBE EMISSION POINT: Top of stack
HEIGHT ABOVE GROUND LEVEL: FT
HEIGHT OF OBSERVATION POINT: 6 FT

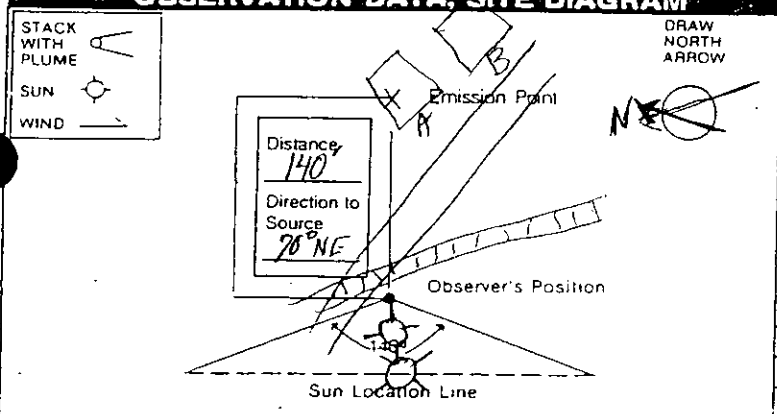
EMISSIONS DESCRIPTION

DESCRIBE EMISSIONS
START: END:
PLUME COLOR: PLUME TYPE:
WATER DROPLETS PRESENT: ☐ Yes ☑ No
IF YES, IS PLUME: ☐ Attached ☐ Detached

METEOROLOGICAL INFORMATION

BACKGROUND — START: SKY END: SKY
BACKGROUND COLOR — START: White END: White
SKY CONDITIONS – CLOUD COVER — START: cloudy END: cloudy
AMBIENT TEMPERATURE — START: 90 END: 90
WIND SPEED — START: 3-5 mph END: 0-3 mph
WIND DIRECTION — START: E END: E

OBSERVATION DATA, SITE DIAGRAM



SUMMARY OF AVERAGE OPACITY

SET NUMBER	TIME START	TIME END	OPACITY SUM	OPACITY AVERAGE
"A"	1417	1423	480	10
"B"	1417	1423	480	10

COMPLIANCE INFORMATION

RANGE OF OPACITY READINGS — MAXIMUM: 10 MINIMUM: 5
HIGHEST 6 MINUTE AVERAGE: 10
COMMENTS: S-78/90 F-78/90

70° NE 3-5 mph E 6°

OBSERVER: Loyde Fay DATE: 06-04-02
OBSERVER'S SIGNATURE: Loyde Fay
OBSERVER CERTIFICATION NUMBER: 292624 EXPIRATION DATE: 8-21-02

OBSERVATION RECORD

DATE: 6-04-02

HOUR	MINUTE	STACK A 0	STACK A 15	STACK A 30	STACK A 45	STACK B 0	STACK B 15	STACK B 30	STACK B 45
1400	0	5	5	5	5	5	5	5	5
	1	5	5	5	5	5	5	5	5
	2	5	5	5	5	5	5	5	5
	3	5	5	5	5	5	5	5	5
	4	5	5	5	5	5	5	5	5
	5	5	5	5	5	5	5	5	5
	6	5	5	5	5	5	5	5	5
	7	5	10	5	5	5	10	5	5
	8	10	10	5	5	10	10	5	5
	9	10	10	10	10	10	10	10	10
	10	10	5	10	10	10	5	10	10
	11	5	10	10	10	5	10	10	10
	12	10	10	10	10	10	10	10	10
	13	10	10	10	10	10	10	10	10
	14	10	10	10	10	10	10	10	10
	15	10	5	5	10	10	5	5	10
	16	10	5	5	5	10	5	5	5
	17	10	10	10	10	10	10	10	10
	18	10	10	10	10	10	10	10	10
	19	10	10	10	10	10	10	10	10
	20	10	10	10	10	10	10	10	10
	21	10	10	10	10	10	10	10	10
	22	10	10	10	10	10	10	10	10
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	28	10	10	10	10	10	10	10	10
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	38	10	10	10	10	10	10	10	10
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	45	10	10	10	10	10	10	10	10
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	55	10	10	10	10	10	10	10	10
	56	5	5	10	10	5	5	10	10
	57	10	10	10	10	10	10	10	10
	58	10	10	10	10	10	10	10	10
	59	10	10	10	10	10	10	10	10

RET: 8 Yrs. RESP: Environmental Services 911 946

Florida Power

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE/PROCESS INFORMATION

FACILITY NAME: Florida Power Intercession City Peaker
SOURCE NAME: P3
PERMIT NUMBER:
LOCATION ADDRESS:
CITY:
STATE: FL
ZIP:
UNIT LOAD: 45 MW
HEAT INPUT:
CONTROL EQUIPMENT: None
OPERATING MODE: Data
FUEL TYPE/RATE: #2 fuel oil
PERMITTED RATE:
DESCRIBE EMISSION POINT: Top of stack
HEIGHT ABOVE GROUND LEVEL: FT
HEIGHT OF OBSERVATION POINT: 6 FT

EMISSIONS DESCRIPTION

DESCRIBE EMISSIONS
START:
END:
PLUME COLOR:
PLUME TYPE:
WATER DROPLETS PRESENT: ☐ Yes ☑ No
IF YES, IS PLUME: ☐ Attached ☐ Detached

METEOROLOGICAL INFORMATION

BACKGROUND START: SKY END: SKY
BACKGROUND COLOR START: White END: white
SKY CONDITIONS – CLOUD COVER START: cloudy END: cloudy
AMBIENT TEMPERATURE START: 86 END: 87
WIND SPEED START: 0-3 END: 0-3
WIND DIRECTION START: E END: E

OBSERVATION DATA, SITE DIAGRAM

STACK WITH PLUME
SUN
WIND
DRAW NORTH ARROW
Emission Point
Distance 200
Direction to Source 54° N NE
Observer's Position
140°
Sun Location Line

SUMMARY OF AVERAGE OPACITY

SET NUMBER	TIME START	TIME END	OPACITY SUM	OPACITY AVERAGE
"A"	1600	1616	480	10
"B"	1600	1616	480	10

COMPLIANCE INFORMATION

RANGE OF OPACITY READINGS MAXIMUM: 10 MINIMUM: 10
HIGHEST 6 MINUTE AVERAGE: 10
COMMENTS: S- 78/86 F- 76/87

5° 0-3 mph 54° N-NE

OBSERVER: Layde Fry DATE: 06-04-02
OBSERVER'S SIGNATURE: Layde Fry
OBSERVER CERTIFICATION NUMBER: 292624 EXPIRATION DATE: 8-21-02

OBSERVATION RECORD

DATE: 6-04-02

HOUR	MINUTE	STACK A 0	STACK A 15	STACK A 30	STACK A 45	STACK B 0	STACK B 15	STACK B 30	STACK B 45
1550	0	10	10	10	10	10	10	10	10
	1	10	10	10	10	10	10	10	10
	2	10	10	10	10	10	10	10	10
	3	10	10	10	10	10	10	10	10
	4	10	10	10	10	10	10	10	10
	5	10	10	10	10	10	10	10	10
	6	10	10	10	10	10	10	10	10
	7	10	10	10	10	10	10	10	10
	8	10	10	10	10	10	10	10	10
	9	10	10	10	10	10	10	10	10
1600	10	10	10	10	10	10	10	10	10
	11	10	10	10	10	10	10	10	10
	12	10	10	10	10	10	10	10	10
	13	10	10	10	10	10	10	10	10
	14	10	10	10	10	10	10	10	10
	15	10	10	10	10	10	10	10	10
	16	10	10	10	10	10	10	10	10
	17	10	10	10	10	10	10	10	10
	18	10	10	10	10	10	10	10	10
	19	10	10	10	10	10	10	10	10
	20	10	10	10	10	10	10	10	10
	21	10	10	10	10	10	10	10	10
	22	10	10	10	10	10	10	10	10
	23	10	10	10	10	10	10	10	10
	24	10	10	10	10	10	10	10	10
	25	10	10	10	10	10	10	10	10
	26	10	10	10	10	10	10	10	10
	27	10	10	10	10	10	10	10	10
	28	10	10	10	10	10	10	10	10
	29	10	10	10	10	10	10	10	10
	30	10	10	10	10	10	10	10	10
	31	10	10	10	10	10	10	10	10
	32	10	10	10	10	10	10	10	10
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	41	10	10	10	10	10	10	10	10
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	43	10	10	10	10	10	10	10	10
	44	10	10	10	10	10	10	10	10
	45	10	10	10	10	10	10	10	10
	46	10	10	10	10	10	10	10	10
	47	10	10	10	10	10	10	10	10
	48	10	10	10	10	10	10	10	10
	49	10	10	10	10	10	10	10	10
	50	10	10	10	10	10	10	10	10
	51	10	10	10	10	10	10	10	10
	52	10	10	10	10	10	10	10	10
	53	10	10	10	10	10	10	10	10
	54	10	10	10	10	10	10	10	10
	55	10	10	10	10	10	10	10	10
	56	10	10	10	10	10	10	10	10
	57	10	10	10	10	10	10	10	10
	58	10	10	10	10	10	10	10	10
	59	10	10	10	10	10	10	10	10

Florida Power

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE/PROCESS INFORMATION

FACILITY NAME: Florida Power - Intercession City Peakers
SOURCE NAME: Peaking unit 4
PERMIT NUMBER: 0970014-004-AV
LOCATION ADDRESS: 6525 Osceola Blk County Line Rd.
CITY: Intercession City
STATE: FL
ZIP:
UNIT LOAD: 45 MW
HEAT INPUT:
CONTROL EQUIPMENT: NONE
OPERATING MODE: Auto
FUEL TYPE/RATE: #2 fuel oil
PERMITTED RATE: 708 MMBtu/hr. @ 567 MW
DESCRIBE EMISSION POINT: Top of stack
HEIGHT ABOVE GROUND LEVEL: FT
HEIGHT OF OBSERVATION POINT: 6 FT

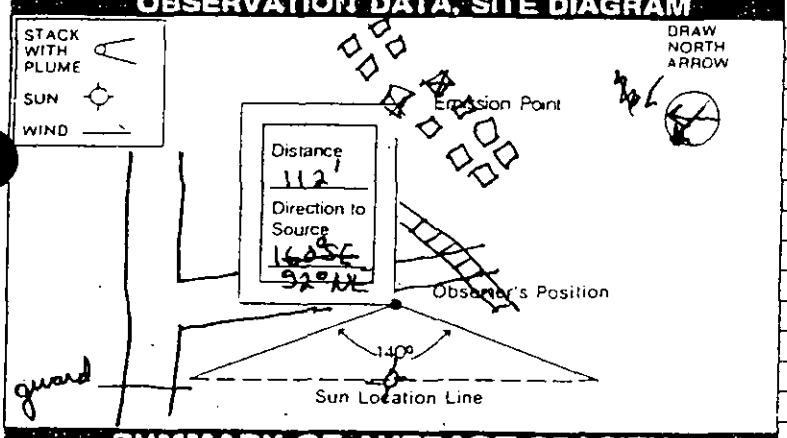
EMISSIONS DESCRIPTION

DESCRIBE EMISSIONS
START: CONTINUOUS
END: CONTINUOUS
PLUME COLOR: black
PLUME TYPE: lofting
WATER DROPLETS PRESENT: ☐ Yes ☑ No
IF YES, IS PLUME: ☐ Attached ☐ Detached

METEOROLOGICAL INFORMATION

BACKGROUND
START: Sky
END: Sky
BACKGROUND COLOR
START: white
END: white
SKY CONDITIONS / CLOUD COVER
START: cloudy
END: cloudy
AMBIENT TEMPERATURE
START: 90°F
END: 90°F
WIND SPEED
START: 3-5mph
END: 0-3mph
WIND DIRECTION
START: E
END: E

OBSERVATION DATA, SITE DIAGRAM



SUMMARY OF AVERAGE OPACITY

SET NUMBER	TIME START	TIME END	OPACITY SUM	OPACITY AVERAGE
A ALL			240	10
B ALL			240	10

COMPLIANCE INFORMATION

RANGE OF OPACITY READINGS
MAXIMUM: 10
MINIMUM: 10
HIGHEST 6 MINUTE AVERAGE: 10

COMMENTS
AL = 5°
BL = 5°

	Wet	Dry
Begin	78°F	90°F
End	78°F	90°F

OBSERVER: Debbie Telemeco-Anders
DATE: 6-4-02
OBSERVER'S SIGNATURE: Debbie Telemeco-Anders
OBSERVER CERTIFICATION NUMBER: 292625
EXPIRATION DATE: 8-21-02

OBSERVATION RECORD

DATE: 6-4-02

HOUR	MINUTE	STACK A 0	STACK A 15	STACK A 30	STACK A 45	STACK B 0	STACK B 15	STACK B 30	STACK B 45
14:03	0	10	10	10	10	10	10	10	10
4	1	10	10	10	10	10	10	10	10
5	2	10	10	10	10	10	10	10	10
6	3	10	10	10	10	10	10	10	10
7	4	10	10	10	10	10	10	10	10
8	5	10	10	10	10	10	10	10	10
9	6	10	10	10	10	10	10	10	10
1410	7	10	10	10	10	10	10	10	10
1	8	10	10	10	10	10	10	10	10
2	9	10	10	10	10	10	10	10	10
3	10	10	10	10	10	10	10	10	10
4	11	10	10	10	10	10	10	10	10
5	12	10	10	10	10	10	10	10	10
6	13	10	10	10	10	10	10	10	10
7	14	10	10	10	10	10	10	10	10
8	15	10	10	10	10	10	10	10	10
9	16	10	10	10	10	10	10	10	10
1420	17	10	10	10	10	10	10	10	10
1	18	10	10	10	10	10	10	10	10
2	19	10	10	10	10	10	10	10	10
3	20	10	10	10	10	10	10	10	10
4	21	10	10	10	10	10	10	10	10
5	22	10	10	10	10	10	10	10	10
6	23	10	10	10	10	10	10	10	10
7	24	10	10	10	10	10	10	10	10
8	25	10	10	10	10	10	10	10	10
9	26	10	10	10	10	10	10	10	10
1430	27	10	10	10	10	10	10	10	10
1	28	10	10	10	10	10	10	10	10
2	29	10	10	10	10	10	10	10	10
3	30	10	10	10	10	10	10	10	10
4	31	10	10	10	10	10	10	10	10
5	32	10	10	10	10	10	10	10	10
6	33	10	10	10	10	10	10	10	10
7	34	10	10	10	10	10	10	10	10
8	35	10	10	10	10	10	10	10	10
9	36	10	10	10	10	10	10	10	10
1440	37	10	10	10	10	10	10	10	10
1	38	10	10	10	10	10	10	10	10
2	39	10	10	10	10	10	10	10	10
3	40	10	10	10	10	10	10	10	10
4	41	10	10	10	10	10	10	10	10
5	42	10	10	10	10	10	10	10	10
6	43	10	10	10	10	10	10	10	10
7	44	10	10	10	10	10	10	10	10
8	45	10	10	10	10	10	10	10	10
9	46	10	10	10	10	10	10	10	10
1450	47	10	10	10	10	10	10	10	10
1	48	10	10	10	10	10	10	10	10
2	49	10	10	10	10	10	10	10	10
3	50	10	10	10	10	10	10	10	10
4	51	10	10	10	10	10	10	10	10
5	52	10	10	10	10	10	10	10	10
6	53	10	10	10	10	10	10	10	10
7	54	10	10	10	10	10	10	10	10
8	55	10	10	10	10	10	10	10	10
9	56	10	10	10	10	10	10	10	10
1500	57	10	10	10	10	10	10	10	10
1	58	10	10	10	10	10	10	10	10
2	59	10	10	10	10	10	10	10	10

Florida Power

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE/PROCESS INFORMATION

FACILITY NAME: Florida Power Corp - Intercession City Peakers
SOURCE NAME: Peaking Unit 5
PERMIT NUMBER: 0970014-004-AV
LOCATION ADDRESS: 6525 Osceola Polk County Line Rd.
CITY: Intercession City
STATE: FL
ZIP: 33848
UNIT LOAD: 42 MW
HEAT INPUT:
CONTROL EQUIPMENT: NONE
OPERATING MODE: AUTO
FUEL TYPE/RATE: #2 Fuel oil
PERMITTED RATE: 708 MM btu/hr @ 562 MW
DESCRIBE EMISSION POINT: Top of stack
HEIGHT ABOVE GROUND LEVEL: 30 FT
HEIGHT OF OBSERVATION POINT: 0 FT

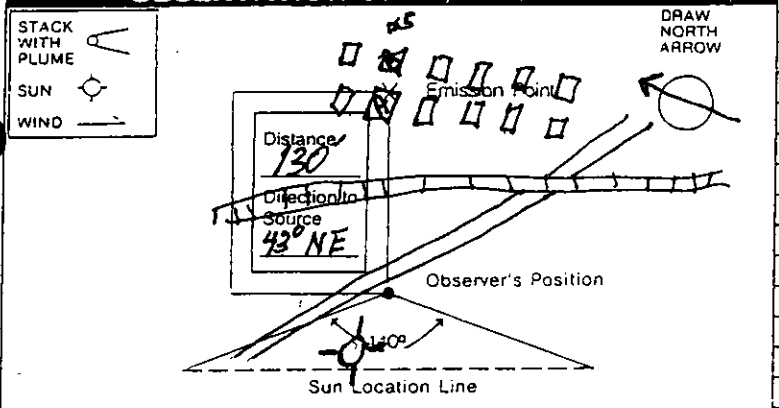
EMISSIONS DESCRIPTION

DESCRIBE EMISSIONS
START: CONTINUOUS / heat
END: CONTINUOUS / heat
PLUME COLOR: black
PLUME TYPE: rolling
WATER DROPLETS PRESENT: ☐ Yes ☑ No
IF YES, IS PLUME: ☐ Attached ☐ Detached

METEOROLOGICAL INFORMATION

BACKGROUND
START: Trees
END: Trees
BACKGROUND COLOR
START: grn
END: grn
SKY CONDITIONS – CLOUD COVER
START: cloudy
END: cloudy
AMBIENT TEMPERATURE
START: 85°
END: 83°
WIND SPEED
START: 0-3 mph
END: 0-3 mph
WIND DIRECTION
START: VR
END: VR

OBSERVATION DATA, SITE DIAGRAM



SUMMARY OF AVERAGE OPACITY

	SET NUMBER	TIME START	TIME END	OPACITY SUM	OPACITY AVERAGE
A	All			0	0
B	All			0	0

COMPLIANCE INFORMATION

RANGE OF OPACITY READINGS
MAXIMUM:
MINIMUM:
HIGHEST 6 MINUTE AVERAGE:

COMMENTS
A L = 5°
B L = 5°

	START	STOP
	79	78
	85	85
	78	78
		83

OBSERVER: Lonnie Fry
DATE: 6-26-02
OBSERVER'S SIGNATURE: Lonnie Fry
OBSERVER CERTIFICATION NUMBER: 292624
EXPIRATION DATE: 8-21-2002

OBSERVATION RECORD

DATE: 6-26-02

HOUR	MINUTE	STACK A 0	STACK A 15	STACK A 30	STACK A 45	STACK B 0	STACK B 15	STACK B 30	STACK B 45
1404	0	0	0	0	0	0	0	0	0
5	1	0	0	0	0	0	0	0	0
6	2	0	0	0	0	0	0	0	0
7	3	0	0	0	0	0	0	0	0
8	4	0	0	0	0	0	0	0	0
9	5	0	0	0	0	0	0	0	0
10	6	0	0	0	0	0	0	0	0
11	7	0	0	0	0	0	0	0	0
12	8	0	0	0	0	0	0	0	0
13	9	0	0	0	0	0	0	0	0
1414	10	0	0	0	0	0	0	0	0
15	11	0	0	0	0	0	0	0	0
16	12	0	0	0	0	0	0	0	0
17	13	0	0	0	0	0	0	0	0
18	14	0	0	0	0	0	0	0	0
19	15	0	0	0	0	0	0	0	0
20	16	0	0	0	0	0	0	0	0
21	17	0	0	0	0	0	0	0	0
22	18	0	0	0	0	0	0	0	0
23	19	0	0	0	0	0	0	0	0
1424	20	0	0	0	0	0	0	0	0
25	21	0	0	0	0	0	0	0	0
26	22	0	0	0	0	0	0	0	0
27	23	0	0	0	0	0	0	0	0
28	24	0	0	0	0	0	0	0	0
29	25	0	0	0	0	0	0	0	0
30	26	0	0	0	0	0	0	0	0
31	27	0	0	0	0	0	0	0	0
32	28	0	0	0	0	0	0	0	0
33	29	0	0	0	0	0	0	0	0
1434	30	0	0	0	0	0	0	0	0
35	31	0	0	0	0	0	0	0	0
36	32	0	0	0	0	0	0	0	0
37	33	0	0	0	0	0	0	0	0
38	34	0	0	0	0	0	0	0	0
39	35	0	0	0	0	0	0	0	0
40	36	0	0	0	0	0	0	0	0
41	37	0	0	0	0	0	0	0	0
42	38	0	0	0	0	0	0	0	0
43	39	0	0	0	0	0	0	0	0
1444	40	0	0	0	0	0	0	0	0
45	41	0	0	0	0	0	0	0	0
46	42	0	0	0	0	0	0	0	0
47	43	0	0	0	0	0	0	0	0
48	44	0	0	0	0	0	0	0	0
49	45	0	0	0	0	0	0	0	0
50	46	0	0	0	0	0	0	0	0
51	47	0	0	0	0	0	0	0	0
52	48	0	0	0	0	0	0	0	0
53	49	0	0	0	0	0	0	0	0
1454	50	0	0	0	0	0	0	0	0
55	51	0	0	0	0	0	0	0	0
56	52	0	0	0	0	0	0	0	0
57	53	0	0	0	0	0	0	0	0
58	54	0	0	0	0	0	1	0	0
59	55	0	0	0	0	0	0	0	0
00	56	0	0	0	0	0	0	0	0
01	57	0	0	0	0	0	0	0	0
02	58	0	0	0	0	0	0	0	0
1503	59	0	0	0	0	0	0	0	0

RET: 5 Yrs. RESP: Environmental Services 911 946

Florida Power

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE/PROCESS INFORMATION

FACILITY NAME: Florida Power - Intercession City Peakers
SOURCE NAME: Peaking Unit 6
PERMIT NUMBER: 0970014-004-AV
LOCATION ADDRESS: 6525 Osceola Polk County Line Rd.
CITY: Intercession City
STATE: FL
ZIP:
UNIT LOAD: 45 MW
HEAT INPUT:
CONTROL EQUIPMENT: NONE
OPERATING MODE: Auto
FUEL TYPE/RATE: #2 fuel oil
PERMITTED RATE: 708 MMBtu/hr. @ 567MW
DESCRIBE EMISSION POINT: Top of stack
HEIGHT ABOVE GROUND LEVEL: FT
HEIGHT OF OBSERVATION POINT: 6 FT

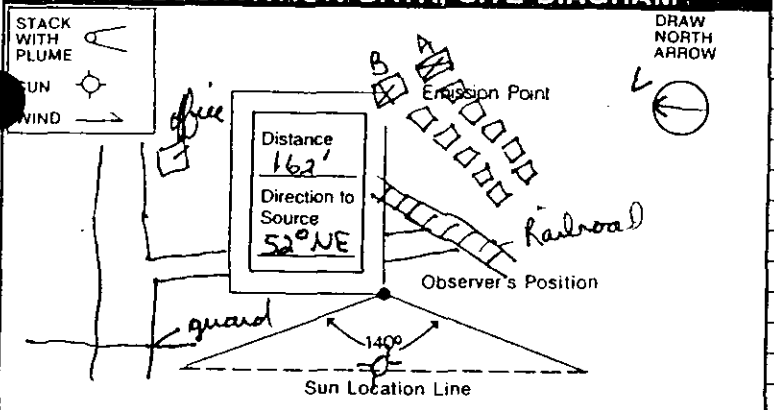
EMISSIONS DESCRIPTION

DESCRIBE EMISSIONS
START: CONTINUOUS END: CONTINUOUS
PLUME COLOR: black
PLUME TYPE: lofting
WATER DROPLETS PRESENT: ☐ Yes ☑ No
IF YES, IS PLUME: ☐ Attached ☐ Detached

METEOROLOGICAL INFORMATION

BACKGROUND
START: sky Trees END: Trees
BACKGROUND COLOR
START: green END: green
SKY CONDITIONS – CLOUD COVER
START: cloudy END: cloudy
AMBIENT TEMPERATURE
START: 90°F END: 90°F
WIND SPEED
START: 3-5 mph END: 3-5 mph
WIND DIRECTION
START: E END: E

OBSERVATION DATA, SITE DIAGRAM



SUMMARY OF AVERAGE OPACITY

	SET NUMBER	TIME START	TIME END	OPACITY SUM	OPACITY AVERAGE
A	ALL			120	5
B	ALL			120	5

COMPLIANCE INFORMATION

RANGE OF OPACITY READINGS
MAXIMUM: 5 MINIMUM: 5
HIGHEST 6 MINUTE AVERAGE: 5

COMMENTS

		Wet	Dry
AL = 4°	Begin	78°F	90°F
BL = 4°	End	78°F	90°F

OBSERVER: Debbie Telemeco - Anders
DATE: 6-4-02
OBSERVER'S SIGNATURE: Debbie Telemeco - Anders
OBSERVER CERTIFICATION NUMBER: 292625
EXPIRATION DATE: 8-21-02

OBSERVATION RECORD

DATE: 6-4-02

HOUR	MINUTE	STACK A 0	STACK A 15	STACK A 30	STACK A 45	STACK B 0	STACK B 15	STACK B 30	STACK B 45
1403	0	5	5	5	5	5	5	5	5
	1	5	5	5	5	5	5	5	5
	2	5	5	5	5	5	5	5	5
	3	5	5	5	5	5	5	5	5
	4	5	5	5	5	5	5	5	5
	5	5	5	5	5	5	5	5	5
	6	5	5	5	5	5	5	5	5
	7	5	5	5	5	5	5	5	5
1410	7	5	5	5	5	5	5	5	5
1	8	5	5	5	5	5	5	5	5
2	9	5	5	5	5	5	5	5	5
3	10	5	5	5	5	5	5	5	5
4	11	5	5	5	5	5	5	5	5
5	12	5	5	5	5	5	5	5	5
6	13	5	5	5	5	5	5	5	5
7	14	5	5	5	5	5	5	5	5
8	15	5	5	5	5	5	5	5	5
9	16	5	5	5	5	5	5	5	5
1420	17	5	5	5	5	5	5	5	5
1	18	5	5	5	5	5	5	5	5
2	19	5	5	5	5	5	5	5	5
3	20	5	5	5	5	5	5	5	5
4	21	5	5	5	5	5	5	5	5
5	22	5	5	5	5	5	5	5	5
6	23	5	5	5	5	5	5	5	5
7	24	5	5	5	5	5	5	5	5
8	25	5	5	5	5	5	5	5	5
9	26	5	5	5	5	5	5	5	5
1430	27	5	5	5	5	5	5	5	5
1	28	5	5	5	5	5	5	5	5
2	29	5	5	5	5	5	5	5	5
3	30	5	5	5	5	5	5	5	5
4	31	5	5	5	5	5	5	5	5
5	32	5	5	5	5	5	5	5	5
6	33	5	5	5	5	5	5	5	5
7	34	5	5	5	5	5	5	5	5
8	35	5	5	5	5	5	5	5	5
9	36	5	5	5	5	5	5	5	5
1440	37	5	5	5	5	5	5	5	5
1	38	5	5	5	5	5	5	5	5
2	39	5	5	5	5	5	5	5	5
3	40	5	5	5	5	5	5	5	5
4	41	5	5	5	5	5	5	5	5
5	42	5	5	5	5	5	5	5	5
6	43	5	5	5	5	5	5	5	5
7	44	5	5	5	5	5	5	5	5
8	45	5	5	5	5	5	5	5	5
9	46	5	5	5	5	5	5	5	5
1450	47	5	5	5	5	5	5	5	5
1	48	5	5	5	5	5	5	5	5
2	49	5	5	5	5	5	5	5	5
3	50	5	5	5	5	5	5	5	5
4	51	5	5	5	5	5	5	5	5
5	52	5	5	5	5	5	5	5	5
6	53	5	5	5	5	5	5	5	5
7	54	5	5	5	5	5	5	5	5
8	55	5	5	5	5	5	5	5	5
9	56	5	5	5	5	5	5	5	5
1500	57	5	5	5	5	5	5	5	5
1	58	5	5	5	5	5	5	5	5
2	59	5	5	5	5	5	5	5	5

ATTACHMENT IC-EU1-J6

PROCEDURES FOR STARTUP/SHUTDOWN

ATTACHMENT IC-EU1-J6
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. 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-EU1-J14

COMPLIANCE ASSURANCE MONITORING PLAN

ATTACHMENT IC-EU1-J14

COMPLIANCE ASSURANCE MONITORING PLAN

There are no control devices for the six CTs, therefore no compliance assurance monitoring plan is required.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION (All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[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.

2. 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.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Combustion Turbine Units CT 7, CT 8, CT 9, & CT 10

4. Emissions Unit Identification Number: [ ] No ID [ ] ID Unknown
ID: **007 – 010**

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**AUGUST 1993**	**49**	[X]

9. Emissions Unit Comment: (Limit to 500 Characters)
Startup dates for each CT are as follows:
CT 7 – AUGUST 1993
CT 8 – JULY 1993
CT 9 – SEPTEMBER 1993
CT 10 – JULY 1993
See Attachment IC-EU2-A9.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Water Injection – Oil Firing

2. Control Device or Method Code(s): **28**

Emissions Unit Details

1. Package Unit:
   Manufacturer: **General Electric** Model Number: **PG7111EA**
2. Generator Nameplate Rating: **96** MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		**1,144**	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr		tons/day
3. Maximum Process or Throughput Rate:			
4. Maximum Production Rate:			
5. Requested Maximum Operating Schedule:			
	24 hours/day	**7**	days/week
	52 weeks/year	**3,390**	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):			
See Attachment IC-EU2-B6			

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

See Attachment IC-EU2-D	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **See Attachment IC-FI-C2**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Gas turbine gases exhaust through a single stack per turbine unit.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **50** feet	7. Exit Diameter: **13.8** feet
8. Exit Temperature: **1,043** °F	9. Actual Volumetric Flow Rate: **1,551,317** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: **17** East (km): **446.3** North (km): **3126**		
14. Emission Point Comment (limit to 200 characters): **Exit temperature and flow rate given for a single CT at an ambient temperature of 59 °F (oil-firing).** **Exit Diameter: 13.75 ft.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Internal Combustion Engines – Electric Generation - Distillate Oil (Diesel) - Turbine**		
2. Source Classification Code (SCC): **2-01-001-01**	3. SCC Units: **1,000 Gallons Burned**	
4. Maximum Hourly Rate: **8.698**	5. Maximum Annual Rate: **26,530**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.2**	8. Maximum % Ash: **0.1**	9. Million Btu per SCC Unit: **132**
10. Segment Comment (limit to 200 characters): **Max. Hourly Rate per CT based on Peak Load Max. Heat Input at 20 °F = 1,144 MMBtu/hr / 131.52 MMBtu / SCC** **See Permit No. 0970014-004-AV Condition III.B.1.** **Max. Annual Rate per CT based on 38.7% Cap. Factor for Peak Load at 59 °F, 3,390 hr / yr = 7,826 gal / hr x 3,390 hr / yr / 1,000 gal** **See Permit No. 0970014-004-AV Condition III.B.3(a).**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Internal Combustion Engines – Electric Generation – Natural Gas – Turbine**		
2. Source Classification Code (SCC): **2-01-002-01**	3. SCC Units: **Million Cubic Feet Burned**	
4. Maximum Hourly Rate: **1.144**	5. Maximum Annual Rate: **3,553**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,000**
10. Segment Comment (limit to 200 characters): **Max. Hourly Rate per CT based on Peak Load Max. Heat Input at 20 °F = 1,144 MMBtu/hr / 1,000 MMBtu / SCC** **See Permit No. 0970014-004-AV Condition III.B.1.** **Max. Annual Rate per CT based on Operation at 59 °F and 3,390 hr / yr = 1.048 MMCF / hr x 3,390 hr / yr** **See Permit No. 0970014-004-AV Condition III.B.1.**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2			EL
NO_x	028		EL
PM			EL
PM_{10}			EL
CO			EL
VOC			EL
SAM			EL

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **222** lb/hour **1,283.6** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.2% Sulfur** Reference: **Permit No. 0970014-004-AV Condition III.B.3**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing per CT. Tons per year for 4 CTs per Permit No. 0970014-004-AV Condition III.B.7 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.2% Sulfur Oil**	4. Equivalent Allowable Emissions: **222** lb/hour **1,283.6** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel oil analysis**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Lb/hr; oil firing per CT at 59 °F. TPY based on 321 TPY/CT. TPY = 376.29 per CT if sulfur content 0.16% or less; capacity factor = 38.7% Permit No. 0970014-004-AV Conditions III.B.5, III.B.25, and III.B.26.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **222** lb/hour **1,283.6** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.2% Sulfur** Reference: **Permit No. 0970014-004-AV Condition III.B.3**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing per CT. Tons per year for 4 CTs per Permit No. 0970014-004-AV Condition III.B.7 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **1 grain S / 100 CF**	4. Equivalent Allowable Emissions: **2.99** lb/hour **20.27** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel analysis**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Natural Gas Firing per CT at 59 °F TPY based on 5.07 TPY/CT. Permit No. 0970014-004-AV Condition III.B.7**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NO_x**	2. Total Percent Efficiency of Control: **80** %
3. Potential Emissions: **182** lb/hour **1,233.96** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **42 ppmvd @ 15% O_2** Reference: **Permit No. 0970014-004-AV Condition III.B.7**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing per CT. Tons per year for 4 CTs per Permit No. 0970014-004-AV Condition III.B.7 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **42 ppmvd @ 15% O_2**	4. Equivalent Allowable Emissions: **182** lb/hour **1,233.96** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 20**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Lb/hr; oil firing per CT at 59 °F. TPY based on 308.5 TPY/CT.** **Permit No. 0970014-004-AV Conditions III.B.19, III.B.23 and III.B.24.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NO_x**	2. Total Percent Efficiency of Control: **80** %
3. Potential Emissions: **182** lb/hour **1,233.96** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **42 ppmvd @ 15% O_2** Reference: **Permit No. 0970014-004-AV Condition III.B.7**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing per CT. Tons per year for 4 CTs per Permit No. 0970014-004-AV Condition III.B.7 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **25 ppmvd @ 15% O_2**	4. Equivalent Allowable Emissions: **107** lb/hour **725.46** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 20**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Natural Gas Firing per CT at 59 °F TPY based on 181.4 TPY/CT. Permit No. 0970014-004-AV Conditions III.B.19, III.B.23 and III.B.24.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **15** lb/hour **101.7** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.01 lb/MMBtu** Reference: **Permit No. 0970014-004-AV Condition III.B.7**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing per CT. Tons per year for 4 CTs per Permit No. 0970014-004-AV Condition III.B.7 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.01 lb/MMBtu**	4. Equivalent Allowable Emissions: **15** lb/hour **101.7** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Lb/hr; oil firing per CT at 59 °F. TPY based on 25.4 TPY/CT. If VE < 10% Opacity, PM compliance test (EPA Method 5) not required Permit No. 0970014-004-AV Conditions III.B.15 and III.B.17.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **15** lb/hour **101.7** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.01 lb/MMBtu** Reference: **Permit No. 0970014-004-AV Condition III.B.7**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing per CT. Tons per year for 4 CTs per Permit No. 0970014-004-AV Condition III.B.7 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **7.5 lb/hr**	4. Equivalent Allowable Emissions: **7.5** lb/hour **50.85** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Natural Gas Firing per CT at 59 °F** **TPY based on 12.71 TPY/CT.** **If VE < 10% Opacity, PM compliance test (EPA Method 5) not required** **Permit No. 0970014-004-AV Conditions III.B.15 and III.B.17.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **15** lb/hour **101.7** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.01 lb/MMBtu** Reference: **Permit No. 0970014-004-AV Condition III.B.7**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing per CT. Tons per year for 4 CTs per Permit No. 0970014-004-AV Condition III.B.7 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.01 lb/MMBtu**	4. Equivalent Allowable Emissions: **15** lb/hour **101.7** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 20**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Lb/hr; oil firing per CT at 59 °F. TPY based on 25.4 TPY/CT. If VE < 10% Opacity, PM compliance test (EPA Method 5) not required Permit No. 0970014-004-AV Conditions III.B.15 and III.B.17.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **15** lb/hour **101.7** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.01 lb/MMBtu** Reference: **Permit No. 0970014-004-AV Condition III.B.7**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing per CT. Tons per year for 4 CTs per Permit No. 0970014-004-AV Condition III.B.7 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **7.5 lb/hr**	4. Equivalent Allowable Emissions: **7.5** lb/hour **50.85** tons/year
5. Method of Compliance (limit to 60 characters): **VE – EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Natural Gas Firing per CT at 59 °F** **TPY based on 12.71 TPY/CT.** **If VE < 10% Opacity, PM compliance test (EPA Method 5) not required** **Permit No. 0970014-004-AV Conditions III.B.15 and III.B.17.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **54** lb/hour **366.12** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **25 ppmvd** Reference: **Permit No. 0970014-004-AV Condition III.B.7**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing per CT. Tons per year for 4 CTs per Permit No. 0970014-004-AV Condition III.B.7 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **25 ppmvd**	4. Equivalent Allowable Emissions: **54** lb/hour **366.12** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 10**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Lb/hr; oil firing per CT at 59 °F. TPY based on 91.5 TPY/CT.** **Permit No. 0970014-004-AV Condition III.B.18.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **54** lb/hour **366.12** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **25 ppmvd** Reference: **Permit No. 0970014-004-AV Condition III.B.7**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing per CT. Tons per year for 4 CTs per Permit No. 0970014-004-AV Condition III.B.7 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **21.3 lb/hr**	4. Equivalent Allowable Emissions: **21.3** lb/hour **144.41** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 10**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Natural Gas Firing per CT at 59 °F TPY based on 36.1 TPY/CT. Permit No. 0970014-004-AV Condition III.B.18.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **5** lb/hour **33.9** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **5 lb/hr** Reference: **Permit No. 0970014-004-AV Condition III.B.7**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing per CT. Tons per year for 4 CTs per Permit No. 0970014-004-AV Condition III.B.7 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions **1** of **2**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **5 lb/hr**	4. Equivalent Allowable Emissions: **5** lb/hour **33.9** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 25A**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Lb/hr; oil firing per CT at 59 °F. TPY based on 8.5 TPY/CT. If CO limits met, VOC test not required. Permit No. 0970014-004-AV Condition III.B.12.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **5** lb/hour **33.9** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **5 lb/hr** Reference: **Permit No. 0970014-004-AV Condition III.B.7**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing per CT. Tons per year for 4 CTs per Permit No. 0970014-004-AV Condition III.B.7 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **3 lb/hr**	4. Equivalent Allowable Emissions: **3** lb/hour **20.34** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 25A**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Natural Gas Firing per CT at 59 °F. TPY based on 5.1 TPY/CT. If CO limits met, VOC test not required. Four turbines have a limit of 20.34 TPY Permit No. 0970014-004-AV Condition III.B.12.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **18** lb/hour **122.04** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.2% Sulfur Oil** Reference: **Permit No. 0970014-004-AV Condition III.B.3/7**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing per CT. Tons per year for 4 CTs per Permit No. 0970014-004-AV Condition III.B.7 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.2% Sulfur Oil**	4. Equivalent Allowable Emissions: **18** lb/hour **122.04** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 8**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Lb/hr; oil firing per CT at 59 °F. TPY based on 26 TPY/CT. If fuel oil sulfur limits met, SAM test not required. Permit No. 0970014-004-AV Condition III.B.16.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **18** lb/hour **122.04** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.2% Sulfur Oil** Reference: **Permit No. 0970014-004-AV Condition III.B.3/7**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing per CT. Tons per year for 4 CTs per Permit No. 0970014-004-AV Condition III.B.7 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 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 **2.98** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 8**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Natural Gas Firing per CT at 59 °F. TPY based on 0.75 TPY/CT. If fuel oil sulfur limits met, SAM test not required. Permit No. 0970014-004-AV Condition III.B.16.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: [ ] Rule [X] Other
3. Requested Allowable Opacity: Normal Conditions: **10 %** Exceptional Conditions: **20 %** Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual VE Test EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Normal Conditions at full load. Exceptional conditions are specified for other loads.** **Rule 62-296.310(2)(a). No VE test < 400 hr/yr except for period of one year preceding permit renewal date. [Rule 62-297.310(7)(a)8]**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 1 of 2

1. Parameter Code: **EM**	2. Pollutant(s): **NO_x**
3. CMS Requirement:	[X] Rule [ ] Other
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 (limit to 200 characters): **CEM data may be used in lieu of water-to-fuel ratio. Above dates for CT 7 Other;** **CT 8 – 7/13/93** **CT 9 – 9/2/93** **CT 10 – 7/19/93**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE99**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **Best Operational Practices**	
5. Visible Emissions Comment (limit to 200 characters): **FDEP Rule 62-210.700(1); Allowed for 2 hours (120 minutes) per 24 hours for start up, shutdown and malfunction.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 2 of 2

1. Parameter Code: **EM**	2. Pollutant(s): **NO_x**
3. CMS Requirement:	[X] Rule [ ] Other
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 (limit to 200 characters): **Monitor complies with 40 CFR 75, Appendix E. Above dates for CT 7 Other;** **CT 8 – 7/13/93** **CT 9 – 9/2/93** **CT 10 – 7/19/93**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID: IC-EU2-J1 [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [X] Attached, Document ID: IC-EU2-J2 [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID: IC-EU2-J3 [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [X] Attached, Document ID: IC-EU2-J5 [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [X] Attached, Document ID: IC-EU2-J5 [ ] Previously submitted, Date: _____ [ ] Not Applicable
6. Procedures for Startup and Shutdown [X] Attached, Document ID: IC-EU2-J6 [ ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID: _____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID: _____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[X] Attached, Document ID: **IC-EU2-J11** [ ] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [X] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable **See Attachment IC-EU2-J14**

15. Acid Rain Part Application (Hard-copy Required)

[X] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: **IC-EU2-J15**

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[ ] Not Applicable

ATTACHMENT IC-EU2-A9

EMISSIONS UNIT COMMENT

Photo 1. Combustion Turbine Units 7 and 9

Photo 2. Combustion Turbine Units 8 and 10

Attachment IC-EU2-A9
Combustion Turbine Units 7, 8, 9, and 10
Florida Power, Intercession City

Source: Golder, 2002.

Golder Associates

ATTACHMENT IC-EU2-B6

OPERATING CAPACITY COMMENT

ATTACHMENT IC-EU2-B6
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

APPLICABLE REQUIREMENTS

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

Federal Rules:

NSPS General Requirements:

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

NSPS Subpart GG:

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

Acid Rain-Permits:

40 CFR 72.9(a)	- Permit Requirements
40 CFR 72.9(b)	- Monitoring Requirements
40 CFR 72.9(c)(1)	- SO2 Allowances-hold allowances
40 CFR 72.9(c)(2)	- SO2 Allowances-violation
40 CFR 72.9(c)(1)(iv)	- SO2 Allowances- other utility units
40 CFR 72.9(c)(4)	- SO2 Allowances-allowances held in ATS
40 CFR 72.9(c)(5)	- SO2 Allowances-no deduction for 72.9(c)(1)(i)
40 CFR 72.9(e)	- Excess Emission Requirements
40 CFR 72.9(f)	- Recordkeeping and Reporting
40 CFR 72.9(g)	- Liability
40 CFR 72.20(a)	- Designated Representative; required
40 CFR 72.20(b)	- Designated Representative; legally binding
40 CFR 72.20(c)	- Designated Representative; certification requirements
40 CFR 72.21	- Submissions
40 CFR 72.22	- Alternate Designated Representative
40 CFR 72.23	- Changing representatives; owners
40 CFR 72.30(a)	- Requirements to Apply (operate)
40 CFR 72.30(c)	- Requirements to Apply (reapply before expiration)
40 CFR 72.30(d)	- Requirements to Apply (submittal requirements)
40 CFR 72.32	- Permit Application Shield
40 CFR 72.33(b)	- Dispatch System ID;unit/system ID
40 CFR 72.33(c)	- Dispatch System ID;ID requirements
40 CFR 72.33(d)	- Dispatch System ID;ID change
40 CFR 72.40(a)	- General; compliance plan
40 CFR 72.40(b)	- General; multi-unit compliance options
40 CFR 72.40(c)	- 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.	- Determination of CO2; from combustion sources
Appendix H	- Traceability Protocol

40 CFR Part 77.3	- Offset Plans (future)
40 CFR Part 77.5(b)	- Deductions of Allowances (future)
40 CFR Part 77.6	- Excess Emissions Penalties SO2 and NOx

ATTACHMENT IC-EU2-J1

PROCESS FLOW DIAGRAM

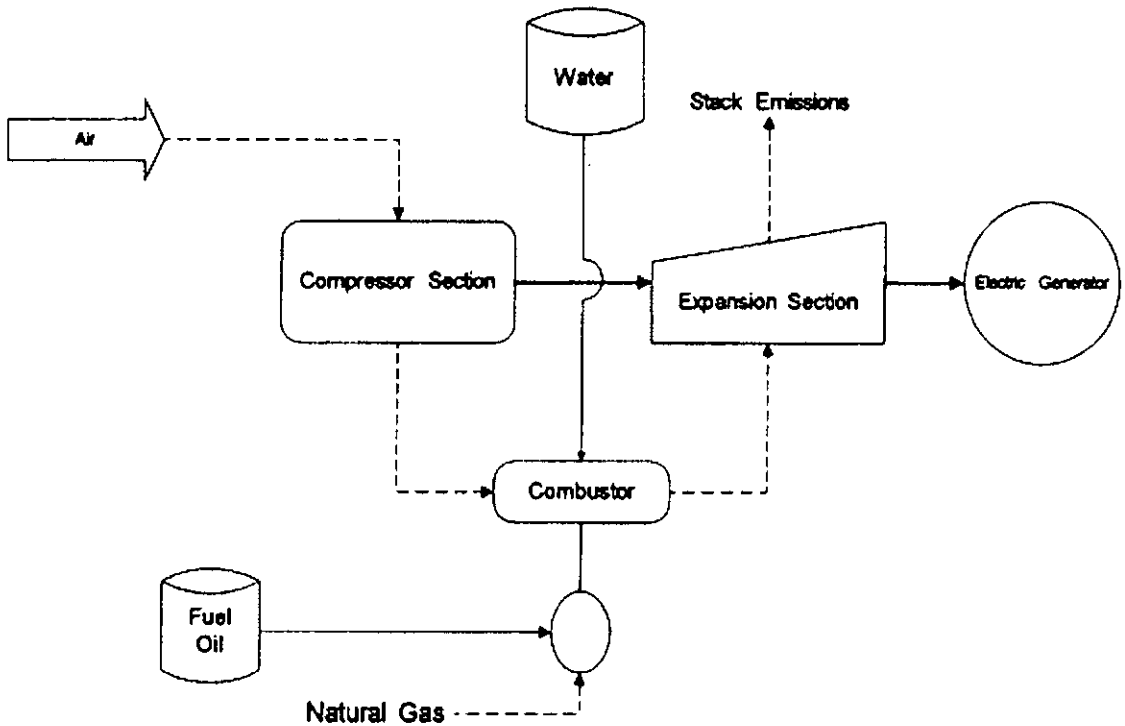


Figure IC-EU2-J1. Process Flow Diagram
Emission Units 7,8,9,10, and 11
Florida Power - Intercession City

Source: Golder Associates Inc., 2002.

Process Flow Legend
Solid/Liquid
Gas
Steam

Golder Associates

ATTACHMENT IC-EU2-J2

FUEL ANALYSIS
FUEL OIL

Intertek Testing Services
Caleb Brett

Report of Analysis

Lab Number 01-01059 ***Customer Reference***
Job Number T108009 ***Our Reference***
Date Sampled 07/26/01 ***Submitted On*** 08/03/01 ***Date Tested*** 08/03/01
Product No. 2 Fuel Oil ***To*** Florida Power Corporation
Taken From Unit P7 ***By*** Florida Power Corporation
Location FPC, Intercession City
Sample Tested Submitted Sample

Sulfur Content	***ASTM D-4294***	0.200	***wt%***
Upper Heating Value	***ASTM D-240***	19,419	***BTU/lb***
		138,166	***BTU/gal***
Lower Heating Value	***ASTM D-240***	18,269	***BTU/lb***
		129,984	***BTU/gal***

Respectfully Submitted,

Daniel L. Thompson
Laboratory Technician

Intertek Testing Services
Caleb Brett

Report of Analysis

Lab Number 01-01060
Job Number T108009
Date Sampled 07/11/01
Product No. 2 Fuel Oil
Taken From Unit P8
Location FPC, Intercession City
Sample Tested Submitted Sample

Customer Reference
Our Reference
Submitted On 08/03/01 **Date Tested** 08/03/01
To Florida Power Corporation
By Florida Power Corporation

Sulfur Content	**ASTM D-4294**	0.200	**wt%**
Upper Heating Value	**ASTM D-240**	19,689	**BTU/lb**
		140,087	**BTU/gal**
Lower Heating Value	**ASTM D-240**	18,533	**BTU/lb**
		131,862	**BTU/gal**

Respectfully Submitted,

Daniel L. Thompson
Laboratory Technician

Intertek Testing Services
Caleb Brett

Report of Analysis

Lab Number 01-01061
Job Number T108009
Date Sampled 07/24/01
Product No. 2 Fuel Oil
Taken From Unit P9
Location FPC, Intercession City
Sample Tested Submitted Sample

Customer Reference
Our Reference
Submitted On 08/03/01 **Date Tested** 08/03/01
To Florida Power Corporation
By Florida Power Corporation

Sulfur Content	**ASTM D-4294**	0.195	**wt%**
Upper Heating Value	**ASTM D-240**	19,498	**BTU/lb**
		138,728	**BTU/gal**
Lower Heating Value	**ASTM D-240**	18,354	**BTU/lb**
		130,589	**BTU/gal**

Respectfully Submitted,

Daniel L. Thompson
Laboratory Technician

Intertek Testing Services
Caleb Brett

Report of Analysis

Lab Number 01-01062 *Customer Reference*
Job Number T108009 *Our Reference*
Date Sampled 07/13/01 *Submitted On* 08/03/01 *Date Tested* 08/03/01
Product No. 2 Fuel Oil *To* Florida Power Corporation
Taken From Unit P10 *By* Florida Power Corporation
Location FPC, Intercession City
Sample Tested Submitted Sample

Sulfur Content	*ASTM D-4294*	0.182	*wt%*
Upper Heating Value	*ASTM D-240*	19,501	*BTU/lb*
		138,165	*BTU/gal*
Lower Heating Value	*ASTM D-240*	18,337	*BTU/lb*
		129,918	*BTU/gal*

Respectfully Submitted,

Daniel L. Thompson
Laboratory Technician

ATTACHMENT IC-EU2-J3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT IC-EU2-J3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

The GE Mark IV NO_x 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 NO_x control. The 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-J5

COMPLIANCE TEST REPORT

Florida Power
A Progress Energy Company

August 13, 2001

Mr. Garry Kuberski
Central District
Florida Department of Environmental Protection
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803-3767

Dear Mr. Kuberski:

Re: Intercession City Facility Annual Compliance Test Results

I have enclosed a copy of the test report for the annual combustion turbine compliance testing for Florida Power's Intercession City Units P7 through P10 and P12 through P14. The testing was conducted from July 10 through August 2, 2001. The testing was performed while burning distillate fuel oil and natural gas on all units.

The test results for all units demonstrate compliance. Please contact Mike Kennedy at (727) 826-4334 or Jennifer Stenger at (727) 826-4132 if you have any questions.

I hereby certify that, based on the information and belief formed after reasonable inquiry, the statements and information in the attached documents are true, accurate and complete.

Sincerely,

Martin J. Drango
Plant Manager
Responsible Official

ONE POWER PLAZA, 263 - 13th Avenue South, BB1A, St. Petersburg, FL 33701-5511 •
P.O. Box 14042, IC44 • St. Petersburg • Florida 33733-4042 • (727) 820-5151
A Progress Energy Company

TEST REPORT

on

EXHAUST EMISSIONS
from seven
GENERAL ELECTRIC COMBUSTION TURBINES
at

FLORIDA POWER CORPORATION
Intercession City Facility
Units P7, P8, P9, P10, P12, P13, & P14
100% Load, Distillate Oil, & Natural Gas

Intercession City, Florida

July - August 2001

Prepared by
Florida Power Environmental Test Team

Florida Power
A Progress Energy Company

263 13th Avenue South, MAC BB1A
St. Petersburg, FL 33701-5511
(727) 826-4132 FAX (727) 826-4216

To the best of my knowledge, all applicable field procedures and calculations comply with Florida Department of Environmental Protection requirements, and all test data and plant operating data are true and correct.

Martin Drango
Plant Manager

8/14/01
Date

TABLE OF CONTENTS

INTRODUCTION

Exhaust emissions from seven General Electric (GE) turbines were tested to determine the quantity of emissions being released to the atmosphere. These units are in service at the Intercession City Facility located near Intercession City, Florida. The purpose of these tests was to verify that the turbines met the allowable emission limits required by 40 CFR Part 60, Subpart GG, the Florida Department of Environmental Protection (FDEP), Air Quality Permit #0970014-001-AV. Florida Power Corporation's Environmental Test Team using a mobile emission test trailer conducted the testing.

Four of these units are identical General Electric Frame 7EA, multi-nozzle, quiet combustor, simple cycle, single shaft combustion turbines (designated as Units P7, P8, P9 and P10). Each unit has a base load rating of 82.1 MW. These base load ratings are based on site conditions of 59°F inlet air temperature, 60% relative humidity, and 14.64 psia atmospheric pressure. Water injection is utilized to control NO_x emissions.

Three of these units are identical General Electric Frame 7EA simple-cycle. Single shaft combustion turbines (designated as Units P12, P13, and P14). Each unit has a base load rating of 87 MW. These base load ratings are based on site conditions of 59° F inlet temperature, 60% relative humidity, and 14.7 psia atmospheric pressure. Dry Low NO_x Burners are used to control NO_x when firing natural gas and water injection is used when firing distillate oil.

Quantities of nitrogen oxides (NO_x), carbon monoxide (CO) and other combustion parameters were measured in the exhaust stack of each unit while firing distillate oil and natural gas. Three test runs at 100% load conditions were performed on each of the turbines. The NO_x water injection rate, fuel flow, turbine load, and other key operational parameters were monitored and recorded during each test run. The tests followed the procedures set forth in the Code of Federal Regulations, Title 40, Part 60, Appendix A, Methods 1, 9, 10, 19, and 20. American Society of Testing and Materials (ASTM) test methods were utilized for analyses of fuel samples and are listed in Table 1.

Table 1
Background Data

Sources:	Four GE Frame 7EA, multi-nozzle, quiet combustor, simple cycle, single shaft combustion turbines (designated as Units P7, P8, P9 and P10). All units are fired on distillate oil or natural gas and utilize water injection for NO_x control. Also, three GE Frame 7EA, simple cycle, single shaft combustion turbines (designated as P12, P13, and P14). These units are fired on distillate oil and natural gas and utilize water injection when firing distillate oil and low NOx burners when firing natural gas.
Location:	Florida Power Corporation Intercession City Facility 6525 Osceola-Polk Line Road Intercession City, FL 33848
Applicable Permits and Regulations:	State of Florida, Department of Environmental Protection (FDEP) Air Quality Permit No. 0970014-001-AV and 40 CFR 60 Subpart GG and Air Permit No. 0970014-003-AC.
Owner/Operator:	Florida Power Corporation Intercession City Facility 6525 Osceola Polk County Line Road Intercession City, FL 33848 Attn: Martin Drango (863) 678-4520
Emissions Test Coordinator:	Florida Power Corporation 263 13th Avenue South St. Petersburg, FL 33701 Attn: Jennifer A. Stenger, PE (727) 826-4132 (727) 826-4216 FAX
Test Dates:	July 10 - August 2, 2001
Sampling Locations:	Rectangular stack of each unit. Stack dimensions are 8.75 feet deep and 17 feet wide. Seven ports are equally spaced on the long side of the exhaust stack (See Appendix A, EPA Method 1 - Traverse Point Layout).

Test Methods:

- EPA Method 1 to establish O_2 traverse point locations for EPA Method 20
- EPA Method 3 (Section 4.4) F_o calculation for verification of O_2/ CO_2 concentrations
- EPA Method 9 for opacity observations
- EPA Method 10 for CO concentrations
- EPA Method 19 for mass emission, and stack flow rate calculations

- EPA Method 20 for NO_x and O_2 concentrations
- ASTM D 240 - for heating value of distillate fuel oil
- ASTM D 4629 - for fuel bound nitrogen content of distillate fuel oil
- ASTM D 4294 - for total sulfur content of distillate fuel oil

SUMMARY OF RESULTS

Emission testing was conducted on seven General Electric turbines at Florida Power Corporation's Intercession City Facility in Intercession City, FL in Osceola County. Testing was conducted on these seven units while firing distillate fuel oil and natural gas. During all of the test runs, the water injection curve (when applicable) was maintained. Tests were conducted at peak load conditions: 100%.

The basic test matrix consisted of first conducting an O_2 traverse. The unit was set to 100% of load. O_2 concentrations were measured at 49 traverse points (as determined in EPA Method 1) within the stack to determine the eight points of lowest O_2 concentration. No stratification was found on any of the units; therefore, all subsequent tests were conducted at the eight most convenient traverse points.

Following the initial O_2 traverse, the test matrix for each unit consisted of three test runs each at the peak load conditions (100%). NO_x and O_2 concentrations were measured at all load conditions. Additionally, CO concentrations were measured at the 100% load conditions. One hour each of opacity observations were made at the 100% load conditions. SO_2 emission rates and concentrations were also determined during each test run using the sulfur content of the fuel and the fuel flow rate.

An executive summary of the test results for both oil and natural gas is included in Table 2. This table provides the average emission measurements for each unit at 100% load condition. Table 2 also lists the applicable permit limit for each emission measurement. Limits from both the FDEP permit and Subpart GG (as applicable) are provided.

Tables 3, 5, 7, 9, 11, 12 and 13 summarize the results of the 100% load tests for Units P7, P8, P9, P10, P12, P13 and P14 at 100% load while firing distillate oil. Likewise tables 4, 6, 8, 10, 12, 14, and 16 summarize the results of P7, P8, P9, P10, P12, P13, and P14 at 100% load while firing on natural gas. These tables contain all pertinent operational parameters, ambient conditions, emission measurements, and the calculated emission rates and corrected concentrations. NO_x is reported in ppmvd, ppmvd at 15% O_2, and lbs/hr. SO_2 emissions are reported in lbs/hr and volume percentage at 15% O_2. CO emissions are reported in ppmvd, and lbs/hr.

The mass emission rate measurements for all test runs were based on the published F-factors in EPA Method 19. Both O_2 and CO_2 F-Factors were utilized and the technique that resulted in the highest volumetric flow rate was used for the emission rate calculation (i.e. worst case scenario).

Fuel samples were taken daily throughout the tests and analyzed at a later date for heating value, fuel bound nitrogen, and total sulfur content. The vendor provided fuel analysis for natural gas. The results of those analyses are contained in Appendix C.

Appendix A contains the EPA Method 1 traverse point determinations. Appendix B contains examples of all calculations necessary for the reduction of the data presented in this report. Due to the volume of raw data and operational test data collected during these

tests, this report contains only data from one unit, P7, to illustrate the format of the data. All of the data collected from the other units will be kept at Florida Power Corporation for your review if necessary. Appendix G contains the operational data during each test run for unit P7. The operational data was recorded in the unit's control cab on computer printouts at regular intervals. The operational data reported is an average of the several readings recorded during each test run. Appendix H contains data summary sheets for Units P7, P9, and P10, and all of the computer printouts collected from the emission test trailer during the preliminary O_2 traverse and the test runs at 100% load conditions for unit P7.

Table 2
Executive Summary

Plant: Florida Power - Intercession City Facility
Location: Intercession City, Florida
Test Date: July, 2000
Test Engineer: JTL
Technicians: LRF
Source: GE Frame 7 EA Turbine Nos. P7, P8, P9, P10, P12, P13 and P14 (oil)

	FDER Permit Limit	Subpart GG Limit	Unit P7 Emissions	Unit P8 Emissions	Unit P9 Emissions	Unit P10 Emissions	Unit P12 Emissions	Unit P13 Emissions	Unit P14 Emissions
NOx (lb/hr)	182 / 167	n.a.	117.02	134.28	125.62	141.08	111.72	114.75	120.65
CO (ppmvd)	25	n.a.	0.47	0.04	0.38	0.02	5.67	5.21	5.88
CO (lb/hr)	54 / 44	n.a.	0.93	0.09	0.77	0.04	10.06	9.65	10.80
Opacity (%)	10	n.a.	0.0	5.0	0.0	5.0	0.0	5.0	5.0
Fuel Sulfur Content (wt %)	0.2 / 0.05	n.a.	0.20	0.20	0.20	0.18	0.02	0.03	0.02
SO2 (lb/hr)	222	n.a.	208.56	214.85	201.01	183.15	15.97	21.57	17.37
NOx at 100% Load (ppmvd @ 15% O2)	42	n.a.**	29.72	32.65	32.15	35.06	35.74	35.24	37.26
CO at 100% Load (ppmvd @ 15% O2	20	n.a.	n.a.	n.a.	n.a.	n.a.	5.29	4.87	10.80
SO2 at 100% Load (vol % @ 15% O2)	n.a.	0.015	3.81E-03	3.76E-03	3.70E-03	3.45E-03	3.67E-04	4.76E-04	3.86E-04

Source: GE Frame 7 EA Turbine Nos. P7, P8, P9, P10, P12, P13 and P14 (gas)

	FDER Permit Limit	Subpart GG Limit	Unit P7 Emissions	Unit P8 Emissions	Unit P9 Emissions	Unit P10 Emissions	Unit P12 Emissions	Unit P13 Emissions	Unit P14 Emissions
NOx (lb/hr)	107 / 32	n.a.	62.90	71.86	69.76	89.06	19.78	16.67	23.69
CO (ppmvd)	n.a.	n.a.	4.47	2.32	0.98	1.43	5.76	6.63	5.78
CO (lb/hr)	21.3 / 54	n.a.	8.24	4.44	1.82	2.76	12.37	14.17	12.48
Opacity (%)	10	n.a.	0.0	5.0	0.0	5.0	0.0	0.0	5.0
Fuel Sulfur Content (/ 100scf)	n.a. / 1	n.a.	8.80E-02	5.90E-02	6.80E-02	8.90E-02	2.35E-06	3.05E-06	2.29E-06
SO2 (lb/hr)	2.99	n.a.	2.54E-03	1.71E-03	1.97E-03	2.52E-03	1.97E-03	2.57E-03	1.92E-03
NOx at 100% Load (ppmvd @ 15% O2)	25 / 32	n.a.**	17.03	19.23	18.70	23.97	5.65	4.82	6.73
CO at 100% Load (ppmvd @ 15% O2	25	n.a.	n.a.	n.a.	n.a.	n.a.	5.81	6.73	1.63
SO2 at 100% Load (vol % @ 15% O2)	n.a.	0.015	4.94E-08	3.29E-08	3.80E-08	4.88E-08	4.06E-08	5.33E-08	3.92E-08

**EPA Subpart GG NOx emission limits are not applicable because the Florida DER permits are more stringent than the NSPS regulations.

Table 3
Unit P7
100% Load Emissions Summary

Plant	Florida Power, Intercession City Facility
Location	Intercession City, Florida
Technicians	JTL, DTA, LRF
Source	GE Frame 7EA Turbine No. P7

Date	7/26/01	7/26/01	7/26/01
Start Time	11:05 AM	11:41 AM	12:16 PM
End Time	11:33 AM	12:07 PM	12:43 PM
Mean Turbine Exhaust Plenum Temperature (°F)	1078	1077	1079
De NOx Water Flow (lb/sec)	15.54	15.62	15.61
Fuel Flow (lb/sec)	14.50	14.51	14.44
Water/Fuel Ratio (lb H2O/lb fuel)	1.078	1.078	1.075
Compressor Inlet Temperature (°F)	88.7	89.0	90.0
Specific Humidity (lb H2O/lb air)	0.01080	0.01080	0.01070
Inlet Guide Vane Angle (°)	86.0	86.0	86.0
Generator Output (MW)	81.9	81.7	81.6
% of Dry Iso Base Load (82.1 MW)*	99.78	99.54	99.33
Compressor Discharge Pressure (psig) Observed	158.0	157.8	157.5
Compressor Discharge Pressure (psig) Reference	182.51	182.40	182.31
Published M-19 O2 F-Factor (DSCF/MBtu)	9190	9190	9190
Published M-19 CO2 F-Factor (DSCF/MBtu)	1420	1420	1420
Fuel Heating Value (Gross Btu/lb) - Higher [HHV]	19419	19419	19419
Fuel Heating Value (Gross Btu/lb) - Lower [LHV]	18269	18269	18269
Heat Input (MBtu/hr)	1013.672	1014.371	1009.477
Total Sulfur in Fuel (wt %)	0.200	0.200	0.200
Barometer (in. Hg)	30.05	30.03	30.06
Temperature (°F dry)	88	89	91
Temperature (°F wet)	80	80	81
Humidity (lbs/lb of dry air)	0.01958	0.01936	0.01981
NOx (ppmvd)	35.32	35.70	35.77
CO (ppmvd)	0.51	0.50	0.39
O2 (%)	13.83	13.85	13.82
CO2 (%)	5.37	5.34	5.33
Fo	1.317	1.320	1.328
Stack Flow via O2 F-Factor (SCFH)	27638466	27635635	27385779
Stack Flow via CO2 F-Factor (SCFH)	26804729	26973907	26894142
Stack Flow Rate (Worst Case Scenario)	27638466	27635635	27385779
NOx (ppmvd @ 15% O2)	29.47	29.88	29.81
NOx (lbs/hr)	116.194	117.858	117.022
CO (lbs/hr)	1.021	1.005	0.777
SO2 (vol % @ 15% O2)	0.00381	0.00381	0.00381
SO2 (lbs/hr)	208.80	208.94	207.94

* Used to determine the Reference CPD Pressure (Pref) for ISO Day Correction

Table 4
Unit P7
100% Load Emissions Summary

Plant	Florida Power, Intercession City Facility
Location	Intercession City, Florida
Technicians	JTL, DTA, LRF
Source	GE Frame 7EA Turbine No. P7

Date	7/26/01	7/26/01	7/26/01
Start Time	10:43 AM	11:21 AM	11:57 AM
End Time	11:12 AM	11:49 AM	12:26 PM
Mean Turbine Exhaust Plenum Temperature (°F)	1075	1075	1075
De NOx Water Flow (lb/sec)	13.21	13.21	13.17
Fuel Flow (lb/sec)	12.60	12.62	12.59
Fuel Flow (SCF/hr)	965106	966638	964340
Water/Fuel Ratio (lb H2O/lb fuel)	1.047	1.046	1.045
Compressor Inlet Temperature (°F)	89.3	89.8	90.0
Specific Humidity (lb H2O/lb air)	0.01000	0.01000	0.01000
Inlet Guide Vane Angle (°)	86.0	86.0	86.0
Generator Output (MW)	82.7	82.7	82.1
% of Dry Iso Base Load (82.1 MW)*	100.68	100.69	100.05
Compressor Discharge Pressure (psig) Observed	157.6	157.5	156.9
Compressor Discharge Pressure (psig) Reference	182.89	182.90	182.82
Published M-19 O2 F-Factor (DSCF/MBtu)	8710	8710	8710
Published M-19 CO2 F-Factor (DSCF/MBtu)	1040	1040	1040
Fuel Heating Value (Gross Btu/SCF)	1038	1038	1038
Heat Input (MBtu/hr)	1001.8	1003.4	1001.0
Total Sulfur in Fuel (gr/Ccf)	0.088	0.088	0.088
Total Sulfur in Fuel (wt %)	2.80E-06	2.80E-06	2.80E-06
Barometer (in. Hg)	30.03	30.03	30.04
Temperature (°F dry)	90	92	92
Temperature (°F wet)	78	79	80
Humidity (lbs/lb of dry air)	0.01729	0.01773	0.01865
NOx (ppmvd)	20.72	20.67	20.90
CO (ppmvd)	4.46	4.46	4.48
O2 (%)	13.71	13.71	13.70
CO2 (%)	4.13	4.14	4.14
Fo	1.741	1.737	1.739
Stack Flow via O2 F-Factor (SCFH)	25363436	25403696	25308108
Stack Flow via CO2 F-Factor (SCFH)	25226432	25205444	25145526
Stack Flow Rate (Worst Case Scenario)	25363436	25403696	25308108
NOx (ppmvd @ 15% O2)	17.00	16.96	17.13
NOx (lbs/hr)	62.780	62.728	63.187
CO (lbs/hr)	8.227	8.240	8.246
SO2 (vol % @ 15% O2)	4.94E-08	4.94E-08	4.94E-08
SO2 (lbs/hr)	0.002539	0.002543	0.002537

* Used to determine the Reference CPD Pressure (Pref) for ISO Day Correction

Table 5
Unit P8
100% Load Emissions Summary

Plant	Florida Power, Intercession City Facility
Location	Intercession City, Florida
Technicians	JTL, DTA, LRF
Source	GE Frame 7EA Turbine No. P8

Date	7/11/01	7/11/01	7/11/01
Start Time	11:22 AM	11:57 AM	12:31 PM
End Time	11:50 AM	12:24 PM	1:00 PM
Mean Turbine Exhaust Plenum Temperature (°F)	1074.0	1074.0	1074.0
De NOx Water Flow (lb/sec)	15.67	15.63	15.63
Fuel Flow (lb/sec)	15.05	14.94	14.77
Water/Fuel Ratio (lb H2O/lb fuel)	1.047	1.048	1.061
Compressor Inlet Temperature (°F)	79.5	80.0	81.7
Specific Humidity (lb H2O/lb air)	0.0114	0.0109	0.0109
Inlet Guide Vane Angle (°)	85.2	85.2	85.2
Generator Output (MW)	85.4	84.5	83.7
% of Dry Iso Base Load (82.1 MW)*	103.98	102.97	101.90
Compressor Discharge Pressure (psig) Observed	161.40	160.7	160.1
Compressor Discharge Pressure (psig) Reference	184.30	183.87	183.41
Published M-19 O2 F-Factor (DSCF/MBtu)	9190	9190	9190
Published M-19 CO2 F-Factor (DSCF/MBtu)	1420	1420	1420
Fuel Heating Value (Gross Btu/lb) - Higher [HHV]	19689	19689	19689
Fuel Heating Value (Gross Btu/lb) - Lower [LHV]	18533	18533	18533
Heat Input (MBtu/hr)	1066.8	1059.0	1046.9
Total Sulfur in Fuel (wt %)	0.200	0.200	0.200
Barometer (in. Hg)	29.91	29.91	29.92
Temperature (°F dry)	82	84	88
Temperature (°F wet)	77	77	78
Humidity (lbs/lb of dry air)	0.01837	0.01789	0.01784
NOx (ppmvd)	39.04	39.67	40.06
CO (ppmvd)	0.04	0.05	0.04
O2 (%)	13.74	13.74	13.76
CO2 (%)	5.42	5.41	5.40
Fo	1.321	1.323	1.322
Stack Flow via O2 F-Factor (SCFH)	28616165	28407011	28162437
Stack Flow via CO2 F-Factor (SCFH)	27948083	27795074	27529685
Stack Flow Rate (Worst Case Scenario)	28616165	28407011	28162437
NOx (ppmvd @ 15% O2)	32.17	32.69	33.10
NOx (lbs/hr)	133.46	134.62	134.77
CO (lbs/hr)	0.08	0.10	0.08
SO2 (vol % @ 15% O2)	0.00376	0.00376	0.00376
SO2 (lbs/hr)	216.72	215.14	212.69

* Used to determine the Reference CPD Pressure (Pref) for ISO Day Correction

Table 6
Unit P8
100% Load Emissions Summary

Plant	Florida Power, Intercession City Facility
Location	Intercession City, Florida
Technicians	JTL, DTA, LRF
Source	GE Frame 7EA Turbine No. P8

Date	7/10/01	7/10/01	7/10/01
Start Time	12:00 PM	12:37 PM	1:13 PM
End Time	12:29 PM	1:06 PM	1:42 PM
Mean Turbine Exhaust Plenum Temperature (°F)	1075.0	1076.0	1075.0
De NOx Water Flow (lb/sec)	13.14	13.05	13.18
Fuel Flow (lb/sec)	12.68	12.64	12.69
Fuel Flow (SCF/hr)	971234	968170	972000
Water/Fuel Ratio (lb H2O/lb fuel)	1.0360	1.0340	1.0390
Compressor Inlet Temperature (°F)	88.30	89.30	87.80
Specific Humidity (lb H2O/lb air)	0.01200	0.01200	0.01150
Inlet Guide Vane Angle (°)	85.3	85.2	85.2
Generator Output (MW)	83.2	83.0	83.4
% of Dry Iso Base Load (82.1 MW)*	101.30	101.14	101.57
Compressor Discharge Pressure (psig) Observed	157.3	156.9	157.8
Compressor Discharge Pressure (psig) Reference	183.16	183.09	183.27
Published M-19 O2 F-Factor (DSCF/MBtu)	8710	8710	8710
Published M-19 CO2 F-Factor (DSCF/MBtu)	1040	1040	1040
Fuel Heating Value (Gross Btu/SCF)	1043	1043	1043
Heat Input (MBtu/hr)	1013.0	1009.8	1013.8
Total Sulfur (gr/Ccf)	0.059	0.059	0.059
Total Sulfur in Fuel (wt %)	1.88E-06	1.88E-06	1.88E-06
Barometer (in. Hg)	29.91	29.90	29.89
Temperature (°F dry)	90	90	91
Temperature (°F wet)	79	79	79
Humidity (lbs/lb of dry air)	0.01828	0.01829	0.01806
NOx (ppmvd)	22.65	22.81	23.14
CO (ppmvd)	2.46	2.28	2.22
O2 (%)	13.92	13.92	13.81
CO2 (%)	4.02	4.00	4.03
Fo	1.736	1.745	1.759
Stack Flow via O2 F-Factor (SCFH)	26419051.61	26335710.75	26029677.02
Stack Flow via CO2 F-Factor (SCFH)	26206890.31	26254839.83	26162477.42
Stack Flow Rate (Worst Case Scenario)	26419051.61	26335710.75	26162477.42
NOx (ppmvd @ 15% O2)	19.15	19.28	19.26
NOx (lbs/hr)	71.48382134	71.76169036	72.32102158
CO (lbs/hr)	4.726455105	4.366797946	4.223913809
SO2 (vol % @ 15% O2)	3.30E-08	3.30E-08	3.28E-08
SO2 (lbs/hr)	0.001713	0.001707	0.001714

* Used to determine the Reference CPD Pressure (Pref) for ISO Day Correction

Table 7
Unit P9
100% Load Emissions Summary

Plant	Florida Power, Intercession City Facility
Location	Intercession City, Florida
Technicians	JTL, DTA, LRF
Source	GE Frame 7EA Turbine No. P9

Date	7/24/01	7/24/01	7/24/01
Start Time	10:50 AM	11:27 AM	12:03 PM
End Time	11:19 AM	11:56 AM	12:32 PM
Mean Turbine Exhaust Plenum Temperature (°F)	1074.0	1074.0	1075.0
De NOx Water Flow (lb/sec)	15.11	14.86	14.81
Fuel Flow (lb/sec)	14.35	14.31	14.29
Water/Fuel Ratio (lb H2O/lb fuel)	1.052	1.038	1.041
Compressor Inlet Temperature (°F)	80.0	81.0	83.0
Specific Humidity (lb H2O/lb air)	0.00900	0.00920	0.00940
Inlet Guide Vane Angle (°)	86.2	86.2	86.1
Generator Output (MW)	81.8	81.2	81.1
% of Dry Iso Base Load (82.1 MW)*	99.67	98.87	98.72
Compressor Discharge Pressure (psig) Observed	159.9	159.1	158.9
Compressor Discharge Pressure (psig) Reference	182.46	182.12	182.06
Published M-19 O2 F-Factor (DSCF/MBtu)	9190	9190	9190
Published M-19 CO2 F-Factor (DSCF/MBtu)	1420	1420	1420
Fuel Heating Value (Gross Btu/lb) - Higher [HHV]	19498	19498	19498
Fuel Heating Value (Gross Btu/lb) - Lower [LHV]	18354	18354	18354
Heat Input (MBtu/hr)	1007.267	1004.459	1003.055
Total Sulfur in Fuel (wt %)	0.195	0.195	0.195
Barometer (in. Hg)	30.01	30.02	30.03
Temperature (°F dry)	86	89	91
Temperature (°F wet)	76	77	77
Humidity (lbs/lb of dry air)	0.01649	0.01666	0.01617
NOx (ppmvd)	37.68	37.82	38.15
CO (ppmvd)	0.40	0.37	0.37
O2 (%)	13.92	13.96	13.96
CO2 (%)	5.30	5.29	5.28
Fo	1.317	1.312	1.314
Stack Flow via O2 F-Factor (SCFH)	27717295	27799343	27760490
Stack Flow via CO2 F-Factor (SCFH)	26987145	26962793	26976103
Stack Flow Rate (Worst Case Scenario)	27717295	27799343	27760490
NOx (ppmvd @ 15% O2)	31.85	32.15	32.43
NOx (lbs/hr)	124.76	125.60	126.52
CO (lbs/hr)	0.81	0.75	0.75
SO2 (vol % @ 15% O2)	0.00370	0.00370	0.00370
SO2 (lbs/hr)	201.47	200.91	200.83

* Used to determine the Reference CPD Pressure (Pref) for ISO Day Correction

Table 8
Unit P9
100% Load Emissions Summary

Plant	Florida Power, Intercession City Facility
Location	Intercession City, Florida
Technicians	JTL, DTA, LRF
Source	GE Frame 7EA Turbine No. P9

Date	7/23/01	7/23/01	7/23/01
Start Time	11:18 AM	11:53 AM	12:31 PM
End Time	11:46 AM	12:23 PM	12:59 PM
Mean Turbine Exhaust Plenum Temperature (°F)	1071.0	1071.0	1070.0
De NOx Water Flow (lb/sec)	12.89	12.86	12.83
Fuel Flow (lb/sec)	12.69	12.67	12.64
Fuel Flow (SCF/hr)	972000	970468	968170
Water/Fuel Ratio (lb H2O/lb fuel)	1.015	1.015	1.015
Compressor Inlet Temperature (°F)	78.0	78.0	78.0
Specific Humidity (lb H2O/lb air)	0.00910	0.00910	0.00860
Inlet Guide Vane Angle (°)	86.2	86.1	86.2
Generator Output (MW)	83.7	83.6	84.0
% of Dry Iso Base Load (82.1 MW)*	101.91	101.79	102.28
Compressor Discharge Pressure (psig) Observed	160.2	159.9	160.8
Compressor Discharge Pressure (psig) Reference	183.41	183.36	183.57
Published M-19 O2 F-Factor (DSCF/MBtu)	8710	8710	8710
Published M-19 CO2 F-Factor (DSCF/MBtu)	1040	1040	1040
Fuel Heating Value (Gross Btu/SCF)	1040	1040	1040
Heat Input (MBtu/hr)	1010.880	1009.287	1006.897
Total Sulfur in Fuel (gr/Cof)	0.068	0.068	0.068
Total Sulfur in Fuel (wt %)	2.16E-06	2.16E-06	2.16E-06
Barometer (in. Hg)	29.90	29.90	29.91
Temperature (°F dry)	81	82	82
Temperature (°F wet)	75	74	73
Humidity (lbs/lb of dry air)	0.01688	0.01581	0.01499
NOx (ppmvd)	21.88	22.48	22.70
CO (ppmvd)	1.04	0.95	0.89
O2 (%)	13.85	13.85	13.84
CO2 (%)	4.02	4.01	4.02
Fo	1.754	1.758	1.756
Stack Flow via O2 F-Factor (SCFH)	26102069	26060931	25962398
Stack Flow via CO2 F-Factor (SCFH)	26152119	26176017	26049077
Stack Flow Rate (Worst Case Scenario)	26152119	26176017	26049077
NOx (ppmvd @ 15% O2)	18.31	18.81	18.97
NOx (lbs/hr)	68.36	70.29	70.64
CO (lbs/hr)	1.98	1.81	1.69
SO2 (vol % @ 15% O2)	3.80E-08	3.80E-08	3.80E-08
SO2 (lbs/hr)	0.001976	0.001973	0.001968

* Used to determine the Reference CPD Pressure (Pref) for ISO Day Correction

Table 9
Unit P10
100% Load Emissions Summary

Plant	Florida Power, Intercession City Facility
Location	Intercession City, Florida
Technicians	JTL, DTA, LRF
Source	GE Frame 7EA Turbine No. P10

Date	7/13/01	7/13/01	7/13/01
Start Time	11:32 AM	12:06 PM	12:42 PM
End Time	11:59 AM	12:32 PM	1:10 PM
Mean Turbine Exhaust Plenum Temperature (°F)	1072	1072	1071
De NOx Water Flow (lb/sec)	14.25	14.33	14.41
Fuel Flow (lb/sec)	14.82	14.70	14.70
Water/Fuel Ratio (lb H2O/lb fuel)	0.962	0.975	0.980
Compressor Inlet Temperature (°F)	81.0	79.0	79.0
Specific Humidity (lb H2O/lb air)	0.01840	0.01830	0.01880
Inlet Guide Vane Angle (°)	86.2	86.2	86.2
Generator Output (MW)	83.2	83.5	83.4
% of Dry Iso Base Load (82.1 MW)*	101.28	101.66	101.55
Compressor Discharge Pressure (psig) Observed	161.1	161.5	161.3
Compressor Discharge Pressure (psig) Reference	175.42	175.55	175.52
Published M-19 O2 F-Factor (DSCF/MBtu)	9190	9190	9190
Published M-19 CO2 F-Factor (DSCF/MBtu)	1420	1420	1420
Fuel Heating Value (Gross Btu/lb) - Higher [HHV] *	19501	19501	19501
Fuel Heating Value (Gross Btu/lb) - Lower [LHV] *	18337	18337	18337
Heat Input (MBtu/hr)	1040.42	1031.99	1031.99
Total Sulfur in Fuel (wt %) *	0.18	0.182	0.182
Barometer (in. Hg)	29.93	29.92	29.95
Temperature (°F dry)	78	82	85
Temperature (°F wet)	77	78	80
Humidity (lbs/lb of dry air)	0.01929	0.01925	0.02036
NOx (ppmvd)	41.15	41.92	42.43
CO (ppmvd)	0.02	0.01	0.03
O2 (%)	13.85	13.86	13.87
CO2 (%)	5.31	5.29	5.29
Fo	1.328	1.331	1.329
Stack Flow via O2 F-Factor (SCFH)	28345248	28155669	28195720
Stack Flow via CO2 F-Factor (SCFH)	27822837	27701889	27701889
Stack Flow Rate (Worst Case Scenario)	28345248	28155669	28195720
NOx (ppmvd @ 15% O2)	34.44	35.13	35.61
NOx (lbs/hr)	139.34	141.00	142.92
CO (lbs/hr)	0.04	0.02	0.06
SO2 (vol % @ 15% O2)	0.00345	0.00345	0.00345
SO2 (lbs/hr)	194.20	192.63	192.63

* Used to determine the Reference CPD Pressure (Pref) for ISO Day Correction

Table 10
Unit P10
100% Load Emissions Summary

Plant	Florida Power, Intercession City Facility
Location	Intercession City, Florida
Technicians	JTL, DTA, LRF
Source	GE Frame 7EA Turbine No. P10

Date	7/12/01	7/12/01	7/12/01
Start Time	10:50 AM	11:25 AM	12:06 PM
End Time	11:18 AM	11:54 AM	12:32 PM
Mean Turbine Exhaust Plenum Temperature (°F)	1076.0	1076.0	1069.0
De NOx Water Flow (lb/sec)	11.39	11.17	11.67
Fuel Flow (lb/sec)	12.25	12.17	12.72
Fuel Flow (SCF/hr)	938298	932170	974298
Water/Fuel Ratio (lb H2O/lb fuel)	0.930	0.918	0.917
Compressor Inlet Temperature (°F)	93.3	95.5	81.8
Specific Humidity (lb H2O/lb air)	0.01910	0.01980	0.01920
Inlet Guide Vane Angle (°)	86.1	86.1	86.1
Generator Output (MW)	79.4	78.9	83.7
% of Dry Iso Base Load (82.1 MW)*	96.71	96.09	101.90
Compressor Discharge Pressure (psig) Observed	155.5	154.9	160.8
Compressor Discharge Pressure (psig) Reference	181.20	180.93	183.41
Published M-19 O2 F-Factor (DSCF/MBtu)	8710	8710	8710
Published M-19 CO2 F-Factor (DSCF/MBtu)	1040	1040	1040
Fuel Heating Value (Gross Btu/SCF)	1044	1044	1044
Heat Input (MBtu/hr)	979.583	973.186	1017.167
Total Sulfur in Fuel (gr/Ccf)	0.089	0.089	0.089
Total Sulfur in Fuel (wt %) *	2.83E-06	2.83E-06	2.83E-06
Barometer (in. Hg)	29.95	29.94	29.94
Temperature (°F dry)	91	91	78
Temperature (°F wet)	78	80	75
Humidity (lbs/lb of dry air)	0.01711	0.01895	0.01756
NOx (ppmvd)	28.35	28.46	27.43
CO (ppmvd)	1.35	1.32	1.61
O2 (%)	14.02	14.00	13.94
CO2 (%)	3.85	3.86	3.92
Fo	1.787	1.788	1.776
Stack Flow via O2 F-Factor (SCFH)	25918940	25875037	26604032
Stack Flow via CO2 F-Factor (SCFH)	26481462	26220547	26986063
Stack Flow Rate (Worst Case Scenario)	26481462	26220547	26986063
NOx (ppmvd @ 15% O2)	24.31	24.34	23.25
NOx (lbs/hr)	89.617	89.145	88.428
CO (lbs/hr)	2.598	2.517	3.160
SO2 (vol % @ 15% O2)	4.87E-08	4.87E-08	4.90E-08
SO2 (lbs/hr)	0.002496	0.002480	0.002592

* Used to determine the Reference CPD Pressure (Pref) for ISO Day Correction

PROCESS DESCRIPTION

Florida Power Corporation (FPC) is the owner of the Intercession City Facility that is located in Osceola County, Florida. Fourteen General Electric manufactured combustion turbines are utilized for peaking electrical power generation at that facility. Six of these are GE Frame 7B units and seven are GE Frame 7EA, multi-nozzle, quiet combustor units. Emission testing was conducted on the seven newer units to determine their compliance status with regard to the state and federal regulations. Florida Power's Environmental Test Team performed the compliance emission testing utilizing a mobile test trailer. This section of the report provides a brief description of those turbines.

The seven newer turbines are GE Fame 7EA units that fire on distillate fuel oil or natural gas. The fuel oil is primarily delivered by truck. The fuel bound nitrogen (FBN) content of the fuel oil is typically about 0.016% by weight based on fuel analyses to date.

The seven units are designated as Turbines P7, P8, P9, P10, P12, P13, and P14. All seven units are simple-cycle, single shaft combustion turbines. Based on site conditions of 59°F inlet air temperature, 60% relative humidity, and 14.64psia atmospheric pressure, P7 through P10 have a base load rating of 82.1 MW while firing distillate fuel oil or natural gas. Based on site conditions of 59°F inlet air temperature, 60% relative humidity, and 14.64psia atmospheric pressure, P12 through P14 have a base load rating of 87 MW while firing distillate fuel oil or natural gas. The electricity produced from these units is then distributed to customers via high voltage transmission lines and the area's electrical power distribution grid.

The amount of water injection necessary for compliance with the NO_x emission limits is regulated by the GE Mark IV®control system. The Mark IV®utilizes an ambient humidity and temperature sensor and fuel flow data to adjust the water injection to the proper amount as determined by the water injection algorithm.

ANALYTICAL TECHNIQUE

Exhaust emissions from seven General Electric combustion turbines (P7, P8, P9, P10, P12, P13 and P14) were tested to determine the quantity of emissions being vented to the atmosphere. This section of the report describes the analytical techniques and procedures used during these tests.

The sampling and analysis procedures used during these tests conformed with those outlined in Code of Federal Regulations, 40 CFR 60, Appendix A, Methods 1, 9, 10, 19, and 20. Table 12 lists the instruments and detection principles used for the instrumental analyses.

Third party laboratories on daily fuel samples of the distillate fuel oil employed additional test methods. Caleb Bret Laboratories of Tampa analyzed the fuel oil heating value (ASTM D2382), fuel bound nitrogen (ASTM D 4629), and total sulfur content (ASTM D 4294). The results of all fuel analyses are contained in Appendix C.

The test matrix for each unit consisted of an initial O_2 traverse by sampling at 49 points across the stack. This traverse was conducted at the 100% load condition. Compliance tests were then conducted at peak load conditions (100%) during which NO_x and O_2 concentrations were measured. Additionally, CO concentration was measured at the 100% load condition and opacity observations were made at the 100% load conditions.

The instrumental sampling and analysis system used to determine gaseous emission concentrations during the turbine tests is depicted in Figure 1. Stack gas entered through a stainless steel probe with a stainless steel sintered filter to keep unwanted particulate out of the system. The sample was transported via 3/8-inch heat-traced Teflon®tubing to the "wet" side of the sample manifold via a stainless steel/Teflon® diaphragm pump. It was then delivered to a specially designed stainless steel/Teflon® minimum-contact condenser that dried the sample without removing NO_x or other compounds of interest. The sample was then passed to the dry side of the manifold where it was partitioned to the NO_x, CO, O_2 and CO_2 analyzers through glass and stainless steel rotometers for flow control of the sample.

Figure 1 shows that the sample system was also equipped with a separate path through which a calibration gas could be delivered to the probe and back through the entire sampling system. This allowed for a convenient way to perform the system bias checks as required by the test methods.

All instruments were housed in an air-conditioned mobile test trailer. Calibration gases were provided in aluminum cylinders with concentrations certified by the vendor. EPA Protocol No. 1 gases were used where applicable.

All data from the continuous monitoring instruments were recorded using a data acquisition system. This system consisted of a 486DX personal computer, LabView

software and a dot matrix printer. The data, from the individual test runs on unit P7, are located in Appendix H.

EPA Method 1 was used to determine the EPA Method 20 O_2 traverse point locations. The traverse point layout diagram is located in Appendix A.

The size and rectangular shape of the turbine stacks require 49 traverse points to be used for the initial O_2 traverses. The eight points of lowest O_2 concentration were used for all subsequent gaseous constituent tests. On all four of the units tested, no O_2 stratification was encountered; therefore, the eight most convenient traverse points were utilized for the tests.

The stack gas analyses for CO_2 and O_2 concentrations were performed in accordance with procedures set forth in EPA Method 3a. Instrumental analyses were used in lieu of an ORSAT procedure due to the greater accuracy and precision provided by the instruments. The CO_2 analyzer is based on the principle of infrared absorption; and, the O_2 analyzer operates on an electrochemical cell.

The F_o calculation of EPA Method 3 was used to verify the O_2 and CO_2 measurements. In all cases, the F_o fell within the expected values for distillate fuel oil.

CO emission concentrations were quantified during the 100% load test runs in accordance with procedures set forth in EPA method 10. A continuous infrared absorption analyzer was used for this purpose. This analyzer was equipped with a gas correlation filter that also eliminates any interference from moisture, CO_2, or other combustion products.

EPA Method 20 procedures were used to determine concentrations of NO_x (via chemiluminescence) and O_2 as prescribed by the testing regulations for gas turbine units. NO_x mass emission rates were calculated as if all the NO_x were in the form of NO_2. This approach corresponds to EPA's convention.

The traverse point layout requirements for EPA Method 20 were discussed previously. Sampling time at each point is required by the method to be 1-minute plus the average sample system response time. The response time test that was conducted on site prior to testing showed a response time for NO_x, O_2, and CO_2 of less than 1 minute. The response time for CO was less than 1 minute. Therefore, the sampling time used for the initial O_2 traverse was 2 minutes per point and 2 minutes per point for the NO_x/O_2 and CO concentration test runs.

The stoichiometric calculations of EPA Method 19 were used to calculate the stack volumetric flow rates. This calculation is based on the heating value and the O_2 and CO_2 F-factors (SCF of exhaust per MMBTU of burned fuel) for distillate fuel oil. Method 19 flow rate determination are also based on excess air (as measured from the exhaust diluent concentrations) and the fuel flow rates. EPA Method 19 was used as the stack flow rate measurement technique for all testing. Fuel samples were collected daily and sent to a third party laboratory for analysis. The results of the analyses can be found in Appendix C

of this report. The data presented in this report makes use of the published F-factor (i.e. 9190 for O_2 and 1420 for CO_2 for distillate fuel oil).

Each day during testing, a fuel sample was taken. These samples were delivered to the third party laboratory the following the testing. The results of the sulfur analyses were used as a means of indirectly measuring SO_2 emissions from the stack. This indirect measurement assumes that all sulfur present in the fuel is completely oxidized to SO_2 (i.e. worst case scenario for SO_2 emissions).

Ambient absolute pressure, ambient temperature and humidity were also collected during each test run. A continuous battery-operated psychrometer utilizing a wet/dry bulb was used to determine temperature and humidity conditions. A barometer/altimeter was used to measure absolute atmospheric pressure.

Operational data was also collected during the test runs. Following each test run the MARK IV® printer in the control cab provided a printout of various operational data. The operational test data was recorded every 5-minutes during the test runs and averaged over the test run period.

Operational data provided included the following:

- Mean turbine exhaust plenum temperature
- $DeNO_x$ water flow
- Fuel flow rate
- Compressor inlet temperatures
- Specific humidity
- Inlet guide vane angle
- Generator output
- Compressor discharge pressure

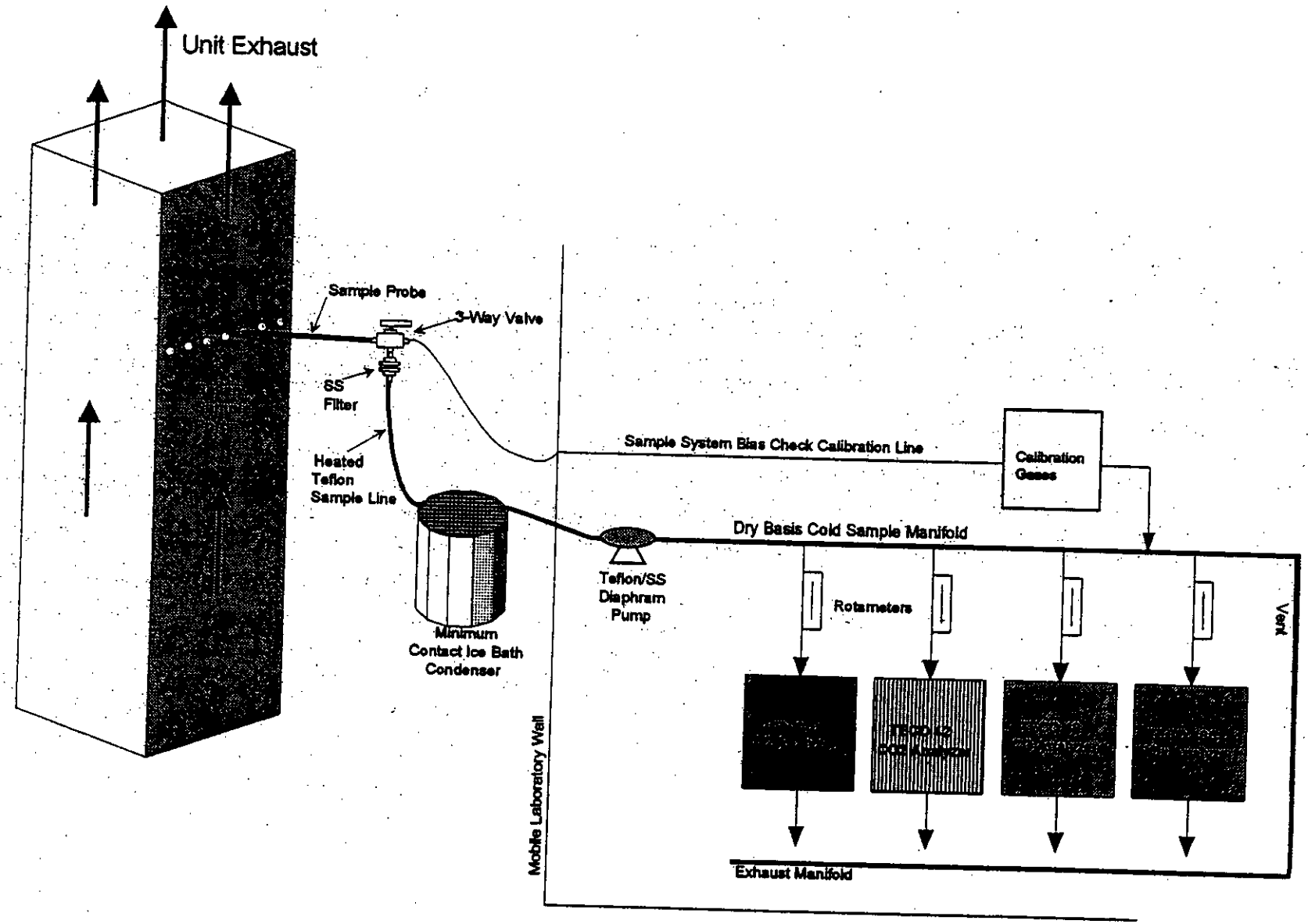
The printouts of the operational data for unit P7 are included in Appendix H of this report. The tabular summaries included in the *Summary of Results* include the average for all of the above operational parameters during each test run.

Analytical Instrumentation

Table 17

Parameter	Model & Manufacturer	Common Use Ranges	Sensitivity	Response Time (sec.)	Detection Principle
Oxygen (O_2)	Amatek Thermox	0-1% 0-10% 0-25% 0-100%	0.1%	5	Electrochemical cell convection process
Carbon Dioxide (CO_2) (high range)	California Analytical	0-1% 0-5% 0-10% 0-50% 0-100%	0.1 ppm	3	Infrared absorption, non-dispersive type deflection method, single IR, single beam (NDIR)
Carbon Monoxide (CO)	TECO 48	0-10 ppm 0-20 ppm 0-50 ppm 0-100 ppm 0-200 ppm 0-500 ppm 0-1000 ppm	0.1 ppm	120	Infrared absorption, gas filter correlation detector, microprocessor based linearization
N[illegible]gen Oxide ([illegible])	TECO 42H	0-10 ppm 0-20 ppm 0-50 ppm 0-100 ppm 0-200 ppm 0-500 ppm 0-1000 ppm 0-2000 ppm 0-5000 ppm	0.1 ppm	5	Chemiluminescence

Instrumental Sample System Diagram for Combustion Turbines



File: Sample.ds4

QUALITY ASSURANCE ACTIVITIES

A number of quality assurance activities were undertaken before, during, and after this testing project. This section of the report combined with Appendices D and E describe each of those activities.

Each instrument's response was check and adjusted in the field prior to the collection of data via multi-point calibration. The instrument's linearity was checked by first adjusting its zero and span responses to zero (nitrogen or zero air) and an upscale calibration gas in the range of the expected concentrations. The instrument response was then challenged with other calibration gases of known concentration. The instrument's response was accepted as being linear if the response of the other calibration gases agreed within ± 2% of range of the predicted values. Appendix D, Part 1 contains the calibration sheets.

As a minimum, before and after a set of test runs, the analyzers were checked for zero and span drift. This allows each set of test runs to be bracketed by calibrations and documents the precision of the data collected. The criterion for acceptable data is that the instrument drift is no more than 2% of the full-scale response. The quality assurance worksheets in Appendix D summarize all multipoint calibration checks and zero and span checks performed during the tests. These worksheets show that no analyzer calibration drifted in excess of 2% during the tests.

Interference response tests on the instruments were recorded for the NO_x, CO, CO_2 and O_2 analyzers. The sum of the interference responses was less than 2% of the applicable full-scale value. The instruments used for the tests meet the performance specifications for EPA Methods 3a, 10, and 20. The results of the interference tests are available in Appendix D, Part 2 of this report.

The NO_x, O_2, CO_2, and CO sampling and analysis system was checked onsite for response time per the procedures outlined in EPA Method 20. The average NO_x analyzer's response times were 44 seconds upscale and 45 seconds downscale. The average O_2 analyzer's response times were 42 seconds upscale and 45 seconds downscale. Method 20 requires a minimum sample time per traverse point of 1-minute plus the average sample system response time. Therefore, a sample time of 2 minutes was used for the initial O_2 traverse. The response time for the CO analyzer was 44 seconds upscale and 51 seconds downscale, therefore, a sample time of 2 minutes was chosen for the NO_x traverse since CO emission are collected during these test runs at the 100% load condition. The response time test data is contained in Appendix D, Part 2.

The sampling systems were leak checked by demonstrating that a vacuum greater than 10" Hg could be held for at least 1 minute with a decline of less than 1" Hg. A leak check was conducted after each sample system was set up and before the systems were dismantled. These tests were conducted to ensure that ambient air had not diluted the sample. Any leakage detected prior to the tests was repaired and another leak check was conducted before testing commenced. No leaks were detected after the tests were complete. Leak check data is contained in Appendix D, Part 2.

The absence of leaks in the gaseous constituent sampling system was also verified by system bias checks. Comparing the responses of each analyzer to a calibration gas introduced via two paths tested the sampling system's integrity. The first path was directly into the analyzer via the zero/span calibration manifold. The second path was to introduce a calibration gas into the sample system at the sample probe. Any difference in the instrument responses by these two methods was attributed to sampling system bias or leakage. These bias checks were conducted before and after the testing. The same sample system was used throughout the tests. The bias response check data is contained in Appendix D, Part 2. All responses, via both paths, agreed within ± 2%.

Having the analyzer sample a mixture of NO in N2 standard gas and zero air from a Tedlar® bag checked the efficiency of the NO2 to NO converter in the NOx analyzer. When this bag is mixed and exposed to sunlight, the NO is oxidized to NO_2 over approximately a 30 minute period. If the NO_x analyzer's converter is 100% efficient, then the NO_x response does not decrease as the NO in the bag is converted to NO_2. The criterion for acceptability is a demonstrated NO_x converter efficiency greater than 90%. The strip chart excerpt that demonstrates the converter efficiency is contained in Appendix D, Part 2.

The control gases used to calibrate the instruments were analyzed and certified by the compressed gas vendors to ± 1% accuracy for the NO_x, O_2 and CO_2 gases, and to ± 2% for the CO gases. EPA Protocol No. 1 was used, where applicable, to assign the concentration values traceable to the National Institute of Standards and Technology, Standard Reference Materials (SRM's). The calibration certification sheets are prepared by the vendor and are contained in Appendix E.

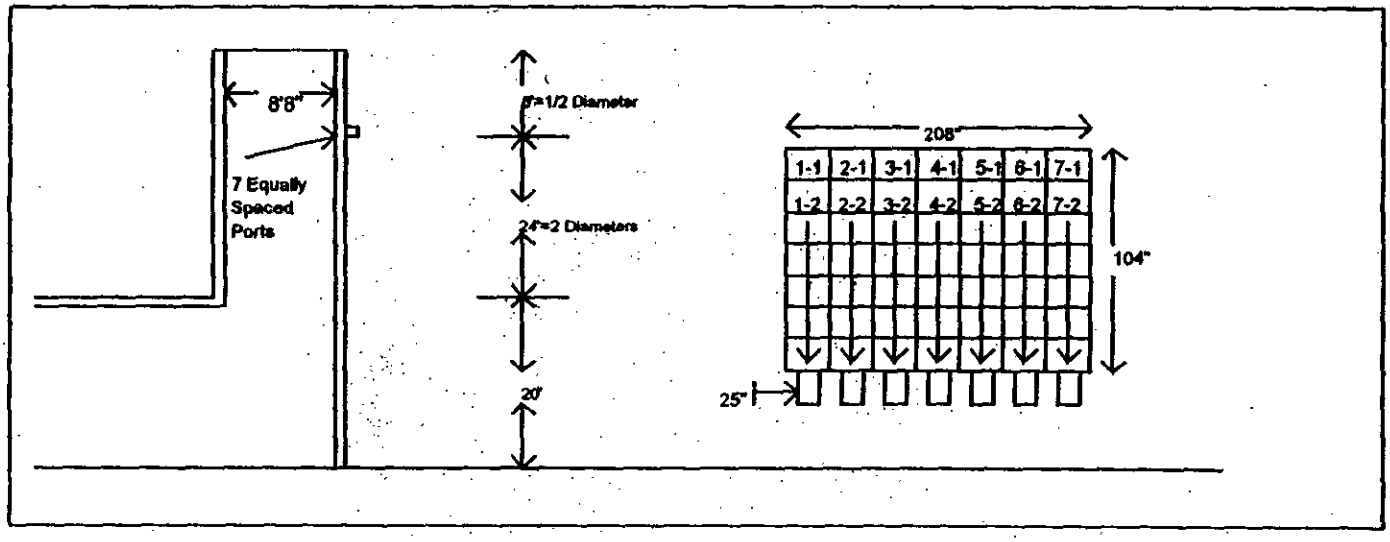
Rectangular Stack Sampling Traverse Point Layout
(EPA Method 1)

Intercession City Power Station

Date: July 2001
Plant: Florida Power Corporation
Source: P-7, P8, P9, P10, P12, P13, P14
Technician(s) JTL LRF, WET
Stack Length (L) 104 in.
Stack Width (W) 208 in.

Port + Stack ID: 129 in.
Port Extension (Ref. Pt.) 25 in.
Stack ID: 104 in.
Stack Area 150.2 ft.^{2}.
Total Req'd Trav. Pts (P). 49
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

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

Calculte Distance from Stack Wall to Traverse Points

(Example for Point No. 2)

Distance $= \frac{L \times 1.5}{P}$ 22.3 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

ATTACHMENT IC-EU2-J6

PROCEDURES FOR STARTUP/SHUTDOWN

ATTACHMENT IC-EU2-J6
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-J11

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT IC-EU2-J11
ALTERNATIVE METHODS OF OPERATION

The four combustion turbines making up Emission Unit 2 (CT 7, CT 8, CT 9, and CT 10) rated at 96.3 megawatts (MW) (GE PG7111EA) and one combustion turbine rated at 171 MW (Siemens V84.3) are limited in the current Title V 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 are 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 are 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) is 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.

ATTACHMENT IC-EU2-J14

COMPLIANCE ASSURANCE MONITORING PLAN

ATTACHMENT IC-EU2-J14

COMPLIANCE ASSURANCE MONITORING PLAN

Combustion Turbine Units CT 7, CT 8, CT 9, CT 10, and CT 11 control NO_x and SO_2 emissions with water injection and burning new No. 2 low sulfur fuel oil respectively. The sulfur and nitrogen content of the new No. 2 fuel oil is monitored and may be provided by the vendor upon delivery. Each unit employs a Continuous Emissions Monitor (CEM) to monitor NO_x emissions. The use of CEMs satisfies the compliance assurance monitoring plan and no additional monitoring is required.

ATTACHMENT IC-EU2-J15

ACID RAIN PERMIT APPLICATION
ACID RAIN PART – PHASE II

Florida Power
CORPORATION

December 21, 1999

Mr. Howard Rhodes
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Rd.
Tallahassee, Florida 32399-2400

Dear Mr. Rhodes:

Re: Intercession City P12-P14 Acid Rain Permit Application

As required by 40 CFR 72, Florida Power Corporation (FPC) submits the enclosed Phase II Acid Rain Permit Application and Certificate of Representation for FPC's new P12, P13, and P14 combustion turbine units at the Intercession City facility. An original and three copies are provided as required. Commencement of construction on these units will begin in January 2000, and commencement of operation is anticipated to occur in December 2000.

Please contact Mike Kennedy at (727) 826-4334 if you have any questions.

Sincerely,

W. Jeffrey Pardue, C.E.P.
Designated Representative

Enclosure

cc: J. Michael Kennedy, Alternate Designated Representative

ONE POWER PLAZA, 263 - 13th Avenue South, 88 1A, St. Petersburg, FL 33701-5511 •
P.O. Box 14042, 88 1A • St. Petersburg • Florida 33733-4042 • (727) 820-5151
A Florida Progress Company

Phase II Permit Application

For more information, see instructions and refer to 40 CFR 72.30 and 72.31 and Chapter 62-214, F.A.C.

This submission is: New ☐ ☒ Revised

STEP 1
Identify the source by plant name, State, and ORIS code from NADB

Intercession City	FL	8049
Plant Name	State	ORIS Code

STEP 2 Enter the boiler ID# from NADB for each affected unit and indicate whether a repowering plan is being submitted for the unit by entering "yes" or "no" at column c. For new units, enter the requested information in columns d and e.

a	Compliance Plan		d	e
Boiler ID#	b: Unit will hold allowances in accordance with 40 CFR 72.9(c)(1)	c: Repowering Plan	New Units: Commence Operation Date	New Units: Monitor Certification Deadline
7	Yes	No		
8	Yes	No		
9	Yes	No		
10	Yes	No		
11	Yes	No		
12	Yes	No	12/2000	3/2001
13	Yes	No	12/2000	3/2001
14	Yes	No	12/2000	3/2001
	Yes			
	Yes			
	Yes			
	Yes			

STEP 3
Check the box if the response in column c of Step 2 is "Yes for any unit

☐ For each unit that will be repowered, the Repowering Extension Plan form is included and the Repowering Technology Petition form has been submitted or will be submitted by June 1, 1997.

Plant Name (from Step 1)

STEP 4
Read the standard requirements and certification, enter the name of the designated representative, and sign and date

Standard Requirements

Permit Requirements.

(1) The designated representative of each Acid Rain source and each Acid Rain unit at the source shall:
(i) Submit a complete Acid Rain part application (including a compliance plan) under 40 CFR part 72, Rules 62-214.320 and 330, F.A.C. in accordance with the deadlines specified in Rule 62-214.320, F.A.C.; and
(ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain part application and issue or deny an Acid Rain permit;
(2) The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:
(i) Operate the unit in compliance with a complete Acid Rain part application or a superseding Acid Rain part issued by th permitting authority; and
(ii) Have an Acid Rain Part.

Monitoring Requirements.

(1) The owners and operators and, to the extent applicable, designated representative of each Acid Rain source and each Acid Rain unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75, and Rule 62-214.420, F.A.C.
(2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
(3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions o other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements.

(1) The owners and operators of each source and each Acid Rain unit at the source shall:
(i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
(ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
(3) An Acid Rain unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
(i) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2); or
(ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an Acid Rain un under 40 CFR 72.6(a)(3).
(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program
(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1)(i) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide i accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each Acid Rain unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements.

(1) The designated representative of an Acid Rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
(2) The owners and operators of an Acid Rain unit that has excess emissions in any calendar year shall:
(i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
(ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the source and each Acid Rain unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
(i) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with Rule 62-214.350, F.A.C.; provided that the certificate and documents shall be retained on site at the source beyond such 5-yea period until such documents are superseded because of the submission of a new certificate of representation changing

Plant Name (Step 1)

Recordkeeping and Reporting Requirements (cont)

the designated representative;
(ii) All emissions monitoring information, in accordance with 40 CFR part 75;
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Aci Rain Program; and,
(iv) Copies of all documents used to complete an Acid Rain part application and any other submission under the Acid Rai Program or to demonstrate compliance with the requirements of the Acid Rain Program.

(2) The designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability.

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment c any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
(4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program.
(5) Any provision of the Acid Rain Program that applies to an Acid Rain source (including a provision applicable to the designated representative of an Acid Rain source) shall also apply to the owners and operators of such source and of the Acic Rain units at the source.
(6) Any provision of the Acid Rain Program that applies to an Acid Rain unit (including a provision applicable to the designated representative of an Acid Rain unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
(7) Each violation of a provision of 40 CFR parts 72, 73, 75, 77, and 78 by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities. No provision of the Acid Rain Program, an Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8 shall be construed as:

(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an Acid Rain source or Acid Rain unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
(2) Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the unit shall not affec the source's obligation to comply with any other provisions of the Act;
(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

Certification

I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name W. Jeffrey Pardue, C.E.P.	
Signature	Date 12/21/99

STEP 5 (optional)
Enter the source AIRS and FINDS identification

AIRS
FINDS

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. 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.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Combustion Turbine CT 11

4. Emissions Unit Identification Number: [ ] No ID
ID: **011** [ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**JANUARY 1997**	**49**	[X]

9. Emissions Unit Comment: (Limit to 500 Characters)

Generator Nameplate Rating for oil firing; 154.3 MW for natural gas firing.

See Attachment IC-EU3-A9.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Water Injection – Oil Firing

2. Control Device or Method Code(s): **28**

Emissions Unit Details

1. Package Unit:
   Manufacturer: **Siemens** Model Number: **V84.3**
2. Generator Nameplate Rating: **171** MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		**2,032**	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr		tons/day
3. Maximum Process or Throughput Rate:			
4. Maximum Production Rate:			
5. Requested Maximum Operating Schedule:			
	24 hours/day	**7**	days/week
	52 weeks/year	**3,390**	hours/year

6. Operating Capacity/Schedule Comment (limit to 200 characters):

Maximum heat input rate at 20°F during peak loading.

See Attachment IC-EU3-B6

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

See Attachment IC-EU3-D	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **See Attachment IC-FI-C2**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Gas turbine gases exhaust through a single stack.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **75** feet	7. Exit Diameter: **19** feet
8. Exit Temperature: **1,034** °F	9. Actual Volumetric Flow Rate: **2,370,627** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: **17** East (km): **446.3** North (km): **3126**		
14. Emission Point Comment (limit to 200 characters): **Exit temperature and flow rate given for ambient temperature of 59 °F (oil- firing).**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Internal Combustion Engines – Electric Generation - Distillate Oil (Diesel) - Turbine**		
2. Source Classification Code (SCC): **2-01-001-01**	3. SCC Units: **1,000 Gallons Burned**	
4. Maximum Hourly Rate: **15.45**	5. Maximum Annual Rate: **44,650**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.2**	8. Maximum % Ash: **0.1**	9. Million Btu per SCC Unit: **132**
10. Segment Comment (limit to 200 characters): **Max. Hourly Rate per CT based on Peak Load Max. Heat Input at 20 °F = 2,032 MMBtu/hr / 131.52 MMBtu / SCC** **See Permit No. 0970014-004-AV Condition III.B.1.** **Max. Annual Rate per CT based on 38.7% Cap. Factor for Peak Load at 59 °F, 3,390 hr / yr = 13,171 gal / hr x 3,390 hr / yr / 1,000 gal** **See Permit No. 0970014-004-AV Condition III.B.3(a).**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Internal Combustion Engines – Electric Generation – Natural Gas – Turbine**		
2. Source Classification Code (SCC): **2-01-002-01**	3. SCC Units: **Million Cubic Feet Burned**	
4. Maximum Hourly Rate: **2.032**	5. Maximum Annual Rate: **5,007**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,000**
10. Segment Comment (limit to 200 characters): **Max. Hourly Rate per CT based on Peak Load Max. Heat Input at 20 °F = 2,032 MMBtu/hr / 1,000 MMBtu / SCC** **See Permit No. 0970014-004-AV Condition III.B.1.** **Max. Annual Rate per CT based on Operation at 59 °F and 3,390 hr / yr = 1.477 MMCF / hr x 3,390 hr / yr** **See Permit No. 0970014-004-AV Condition III.B.1.**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2			EL
NO_x	028		EL
PM			EL
PM_{10}			EL
CO			EL
VOC			EL
SAM			EL

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: SO_2	2. Total Percent Efficiency of Control: %
3. Potential Emissions: 407 lb/hour 588 tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 0.2% Sulfur Reference: Permit No. 0970014-004-AV Condition III.B.3	7. Emissions Method Code: 0
8. Calculation of Emissions (limit to 600 characters): Lb/hr at 59°F; permit limit for oil firing CT. TPY per Permit No. 0970014-004-AV Condition III.B.8 and AC 49-203114/PSD-FL-180(A).	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.2% Sulfur Oil	4. Equivalent Allowable Emissions: 407 lb/hour 588 tons/year
5. Method of Compliance (limit to 60 characters): Fuel oil analysis	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Oil Firing at 59 °F TPY = 689.87 if sulfur content 0.16% or less; capacity factor = 38.7% Permit No. 0970014-004-AV Conditions III.B.5, III.B.25, and III.B.26.	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **407** lb/hour **588** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.2% Sulfur** Reference: **Permit No. 0970014-004-AV Condition III.B.3**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing CT.** **TPY per Permit No. 0970014-004-AV Condition III.B.8 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **1 grain S / 100 CF**	4. Equivalent Allowable Emissions: **4.22** lb/hour **7.15** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel analysis**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Natural Gas Firing at 59 °F** **Permit No. 0970014-004-AV Condition III.B.8**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NO_x**	2. Total Percent Efficiency of Control: **80** %
3. Potential Emissions: **334** lb/hour **566** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **42 ppmvd @ 15% O_2** Reference: **Permit No. 0970014-004-AV Condition III.B.8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing.** **TPY per Permit No. 0970014-004-AV Condition III.B.8 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions **1** of **2**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **42 ppmvd @ 15% O_2**	4. Equivalent Allowable Emissions: **334** lb/hour **566** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 20**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Oil Firing at 59 °F** **Permit No. 0970014-004-AV Conditions III.B.19, III.B.23 and III.B.24.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NO_x**	2. Total Percent Efficiency of Control: **80** %
3. Potential Emissions: **334** lb/hour **566** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **42 ppmvd @ 15% O_2** Reference: **Permit No. 0970014-004-AV Condition III.B.8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing CT.** **TPY per Permit No. 0970014-004-AV Condition III.B.8 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **25 ppmvd @ 15% O_2**	4. Equivalent Allowable Emissions: **149** lb/hour **252.6** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 20**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Natural Gas Firing at 59 °F** **Permit No. 0970014-004-AV Condition III.B.8.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **17** lb/hour **29** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.01 lb/MMBtu** Reference: **Permit No. 0970014-004-AV Condition III.B.8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing.** **TPY per Permit No. 0970014-004-AV Condition III.B.8 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.01 lb/MMBtu**	4. Equivalent Allowable Emissions: **17** lb/hour **29** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Oil Firing at 59 °F** **If VE < 10% Opacity, PM compliance test (EPA Method 5) not required** **Permit No. 0970014-004-AV Conditions III.B.15 and III.B.17.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **17** lb/hour **29** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.01 lb/MMBtu** Reference: **Permit No. 0970014-004-AV Condition III.B.8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing.** **TPY per Permit No. 0970014-004-AV Condition III.B.8 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.01 lb/MMBtu**	4. Equivalent Allowable Emissions: **7.5** lb/hour **12.71** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Natural Gas Firing at 59 °F** **If VE < 10% Opacity, PM compliance test (EPA Method 5) not required** **Permit No. 0970014-004-AV Conditions III.B.15 and III.B.17.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **17** lb/hour **29** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.01 lb/MMBtu** Reference: **Permit No. 0970014-004-AV Condition III.B.8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing.** **TPY per Permit No. 0970014-004-AV Condition III.B.8 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.01 lb/MMBtu**	4. Equivalent Allowable Emissions: **17** lb/hour **29** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Oil Firing at 59 °F** **If VE < 10% Opacity, PM_{10} compliance test (EPA Method 5) not required** **Permit No. 0970014-004-AV Conditions III.B.15 and III.B.17.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **17** lb/hour **29** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.01 lb/MMBtu** Reference: **Permit No. 0970014-004-AV Condition III.B.8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing CT.** **TPY per Permit No. 0970014-004-AV Condition III.B.8 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.01 lb/MMBtu**	4. Equivalent Allowable Emissions: **7.5** lb/hour **12.71** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Natural Gas Firing at 59 °F** **If VE < 10% Opacity, PM_{10} compliance test (EPA Method 5) not required** **Permit No. 0970014-004-AV Conditions III.B.15 and III.B.17.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **79** lb/hour **134** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **25 ppmvd** Reference: **Permit No. 0970014-004-AV Condition III.B.8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing.** **TPY per Permit No. 0970014-004-AV Condition III.B.8 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **25 ppmvd**	4. Equivalent Allowable Emissions: **79** lb/hour **134** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 10**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Oil Firing at 59 °F** **Permit No. 0970014-004-AV Condition III.B.18.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **79** lb/hour **134** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **25 ppmvd** Reference: **Permit No. 0970014-004-AV Condition III.B.8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing.** **TPY per Permit No. 0970014-004-AV Condition III.B.8 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10 ppmvd**	4. Equivalent Allowable Emissions: **30.9** lb/hour **52.38** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 10**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Natural Gas Firing at 59 °F** **Permit No. 0970014-004-AV Condition III.B.18.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **9** lb/hour **15.3** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **9 lb/hr** Reference: **Permit No. 0970014-004-AV Condition III.B.8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing.** **TPY per Permit No. 0970014-004-AV Condition III.B.8 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions **1** of **2**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **9 lb/hr**	4. Equivalent Allowable Emissions: **9** lb/hour **15.3** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 25A**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Oil Firing at 59 °F** **If CO limits met, VOC test not required.** **Permit No. 0970014-004-AV Condition III.B.12.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **9** lb/hour **15.3** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **9 lb/hr** Reference: **Permit No. 0970014-004-AV Condition III.B.8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing.** **TPY per Permit No. 0970014-004-AV Condition III.B.8 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **5.3 lb/hr**	4. Equivalent Allowable Emissions: **5.3** lb/hour **8.98** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 25A**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Natural Gas Firing at 59 °F** **If CO limits met, VOC test not required.** **Permit No. 0970014-004-AV Condition III.B.12.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **28** lb/hour **41** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.2% Sulfur Oil** Reference: **Permit No. 0970014-004-AV Condition III.B.3/8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing.** **TPY per Permit No. 0970014-004-AV Condition III.B.8 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.2% Sulfur Oil**	4. Equivalent Allowable Emissions: **28** lb/hour **41** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 8**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Oil Firing at 59 °F** **If fuel oil sulfur limits met, SAM test not required.** **Permit No. 0970014-004-AV Condition III.B.16.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **28** lb/hour **41** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.2% Sulfur Oil** Reference: **Permit No. 0970014-004-AV Condition III.B.3/8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **Lb/hr at 59°F; permit limit for oil firing.** **TPY per Permit No. 0970014-004-AV Condition III.B.8 and AC 49-203114/PSD-FL-180(A).**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.64 lb/hr**	4. Equivalent Allowable Emissions: **0.64** lb/hour **1.08** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 8**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Natural Gas Firing at 59 °F** **If fuel oil sulfur limits met, SAM test not required.** **Permit No. 0970014-004-AV Condition III.B.16.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: [ ] Rule [X] Other
3. Requested Allowable Opacity: Normal Conditions: **10 %** Exceptional Conditions: **20 %** Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual VE Test EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Normal Conditions at full load. Exceptional conditions are specified for other loads.** **Rule 62-296.310(2)(a). No VE test < 400 hr/yr except for period of one year preceding permit renewal date. [Rule 62-297.310(7)(a)8]**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 1 of 2

1. Parameter Code: **EM**	2. Pollutant(s): **NO_x**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **CEM data may be used in lieu of water-to-fuel ratio.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE99**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **Best Operational Practices**	
5. Visible Emissions Comment (limit to 200 characters): **FDEP Rule 62-210.700(1); Allowed for 2 hours (120 minutes) per 24 hours for start up, shutdown and malfunction.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 2 of 2

1. Parameter Code: **EM**	2. Pollutant(s): **NO_x**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **Monitor complies with 40 CFR 75, Appendix E.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID: IC-EU2-J1[ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [X] Attached, Document ID: IC-EU3-J2[ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID: IC-EU2-J3 [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [X] Attached, Document ID: IC-EU3-J5 [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [X] Attached, Document ID: IC-EU3-J5 [ ] Previously submitted, Date:_____ [ ] Not Applicable
6. Procedures for Startup and Shutdown [X] Attached, Document ID: IC-EU2-J6[ ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID: _____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID: _____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[X] Attached, Document ID: **IC-EU2-J11** [ ] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [X] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable **See Attachment IC-EU2-J14**

15. Acid Rain Part Application (Hard-copy Required)

[X] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: **IC-EU2-J15**

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

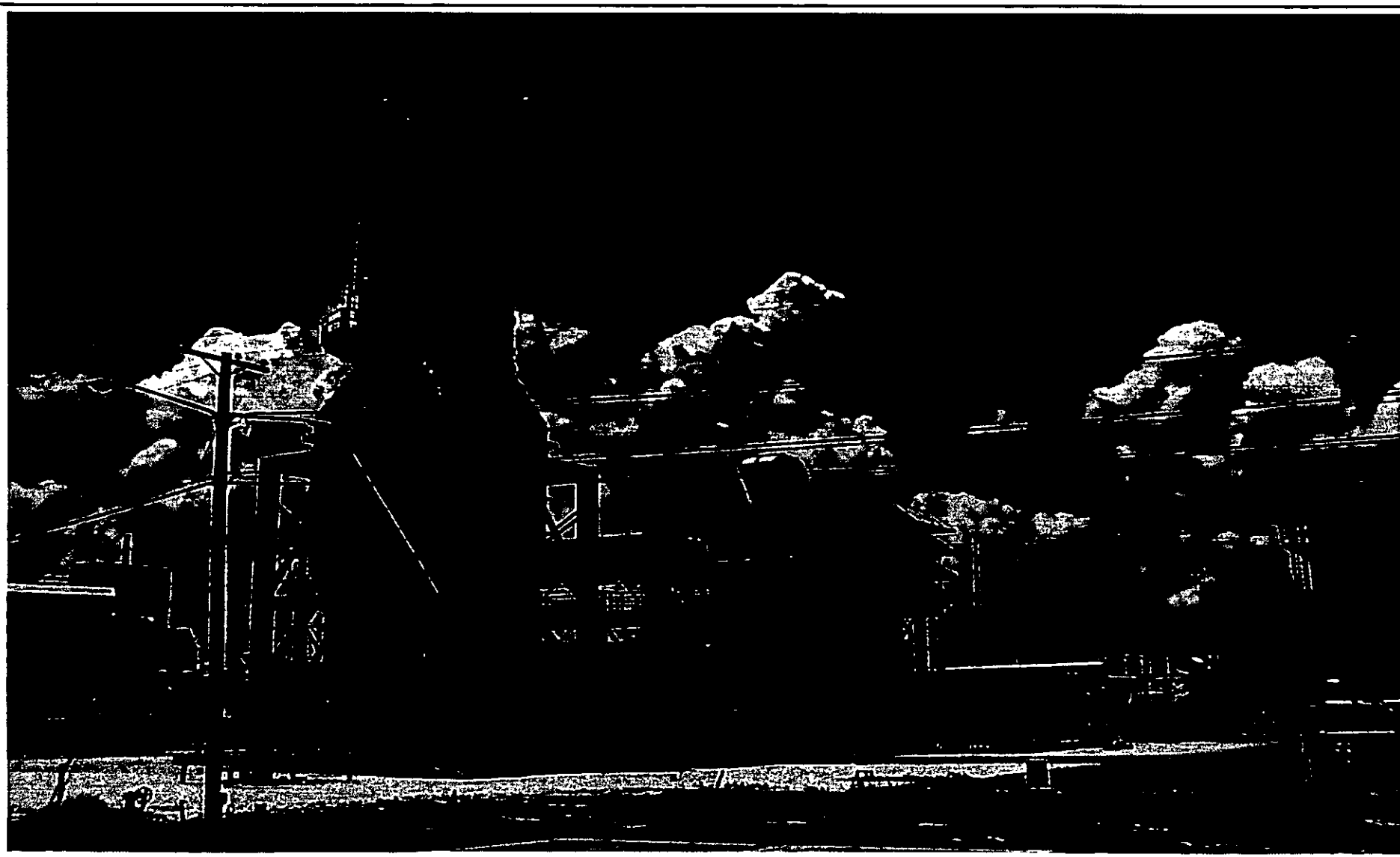
[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[ ] Not Applicable

ATTACHMENT IC-EU3-A9

EMISSIONS UNIT COMMENT



Attachment IC-EU3-A9
Combustion Turbine Unit 11
Florida Power, Intercession City

Source: Golder, 2002.

Golder Associates

ATTACHMENT IC-EU3-B6

OPERATING CAPACITY COMMENT

ATTACHMENT IC-EU3-B6
OPERATING CAPACITY COMMENT

The maximum heat input rate for oil-firing is based on the permit limit at 59°F and low heating value (LHV) for the combustion turbine (CT). The turbine is 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 13,171 gal/hr/unit or 44,649,000 gallons/year (59°F) is authorized by construction permit. Maximum heat input for natural gas-firing is 1,609 MMBtu/hr at 20°F and LHV.

ATTACHMENT IC-EU3-D

APPLICABLE REQUIREMENTS

ATTACHMENT IC-EU3-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/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.	- PM exemption if <400 hrs/yr
62-297.310(7)(a)6.	- PM exemption if < 200 hrs/6 month
62-297.310(7)(a)9.	- FDEP Notification - 15 days
62-297.310(7)(c)	- Waiver of Compliance Tests (fuel sampling)
62-297.310(8)	- Test Reports

Federal Rules:

NSPS General Requirements:

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

NSPS Subpart GG:

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

Acid Rain-Permits:

40 CFR 72.9(a)	- Permit Requirements
40 CFR 72.9(b)	- Monitoring Requirements
40 CFR 72.9(c)(1)	- SO2 Allowances-hold allowances
40 CFR 72.9(c)(2)	- SO2 Allowances-violation
40 CFR 72.9(c)(1)(iv)	- SO2 Allowances- other utility units
40 CFR 72.9(c)(4)	- SO2 Allowances-allowances held in ATS
40 CFR 72.9(c)(5)	- SO2 Allowances-no deduction for 72.9(c)(1)(i)
40 CFR 72.9(e)	- Excess Emission Requirements
40 CFR 72.9(f)	- Recordkeeping and Reporting
40 CFR 72.9(g)	- Liability
40 CFR 72.20(a)	- Designated Representative; required
40 CFR 72.20(b)	- Designated Representative; legally binding
40 CFR 72.20(c)	- Designated Representative; certification requirements
40 CFR 72.21	- Submissions
40 CFR 72.22	- Alternate Designated Representative
40 CFR 72.23	- Changing representatives; owners
40 CFR 72.30(a)	- Requirements to Apply (operate)
40 CFR 72.30(c)	- Requirements to Apply (reapply before expiration)
40 CFR 72.30(d)	- Requirements to Apply (submittal requirements)
40 CFR 72.32	- Permit Application Shield
40 CFR 72.33(b)	- Dispatch System ID;unit/system ID
40 CFR 72.33(c)	- Dispatch System ID;ID requirements
40 CFR 72.33(d)	- Dispatch System ID;ID change
40 CFR 72.40(a)	- General; compliance plan
40 CFR 72.40(b)	- General; multi-unit compliance options
40 CFR 72.40(c)	- 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.	- Determination of CO2; from combustion sources
Appendix H	- Traceability Protocol

40 CFR Part 77.3	- Offset Plans (future)
40 CFR Part 77.5(b)	- Deductions of Allowances (future)
40 CFR Part 77.6	- Excess Emissions Penalties SO2 and NOx

ATTACHMENT IC-EU3-J2

FUEL ANALYSIS
FUEL OIL

Intertek Testing Services
Caleb Brett

Report of Analysis

Lab Number 01-01063 ***Customer Reference***
Job Number T108009 ***Our Reference*** TA21-24146
Date Sampled 07/30/01 ***Submitted On*** 08/03/01 ***Date Tested*** 08/03/01
Product No. 2 Fuel Oil ***To*** Florida Power Corporation
Taken From Unit P11 ***By*** Florida Power Corporation
Location FPC, Intercession City
Sample Tested Submitted Sample

Sulfur Content	***ASTM D-4294***	0.197	***wt%***
Upper Heating Value	***ASTM D-240***	19,436	***BTU/lb***
		138,190	***BTU/gal***
Lower Heating Value	***ASTM D-240***	18,287	***BTU/lb***
		130,021	***BTU/gal***

Respectfully Submitted,

Daniel L. Thompson
Laboratory Technician

ATTACHMENT IC-EU3-J5

COMPLIANCE TEST REPORT

Florida Power
A Progress Energy Company

September 4, 2001

Mr. Garry Kuberski
Central District
Florida Department of Environmental Protection
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803-3767

Dear Mr. Kuberski:

Re: Intercession City Unit P11 Annual Compliance Test Results

I have enclosed a copy of the test report for the annual combustion turbine compliance testing for Florida Power's Intercession City Unit P11. The testing was conducted on July while burning distillate fuel.

The test results for this unit demonstrate compliance. Please contact Mike Kennedy at (727) 826-4334 or Jennifer Stenger at (727) 826-4132 if you have any questions.

I hereby certify that, based on the information and belief formed after reasonable inquiry, the statements and information in the attached documents are true, accurate and complete.

Sincerely,

Martin J. Drago
Plant Manager
Responsible Official

ONE POWER PLAZA, 263 - 13th Avenue South, BB1A, St. Petersburg, FL 33701-5511 •
P.O. Box 14042, IC44 • St. Petersburg • Florida 33733-4042 • (727) 820-5151
A Progress Energy Company

TEST REPORT

on

EXHAUST EMISSIONS
from one
SIEMENS COMBUSTION TURBINE
at

FLORIDA POWER
Intercession City Facility
Unit P11

Intercession City, Florida

July 2001

Prepared by
Florida Power Environmental Test Team

Florida Power
A Progress Energy Company

263 13th Avenue South, MAC BB1A
St. Petersburg, FL 33701-5511
(727) 826-4132 FAX (727) 826-4216

To the best of my knowledge, all applicable field procedures and calculations comply with Florida Department of Environmental Protection requirements, and all test data and plant operating data are true and correct.

Martin J. Drago
Plant Manager

9/5/01
Date

TABLE OF CONTENTS

INTRODUCTION

Exhaust emissions from one Siemens turbine were tested to determine the quantity of emissions being released to the atmosphere. This unit is in service at the Intercession City Facility located near Intercession City, Florida. The purpose of these tests was to verify that the turbine met the allowable emission limits required by 40 CFR Part 60, Subpart GG, the Florida Department of Environmental Protection (FDEP), Title V Air Operating Permit 1270028-003-AV. Florida Power's Environmental Test Team using a mobile emission test trailer conducted the test.

There is one Siemens V84.3 turbine which is capable of firing on distillate oil. This unit has a base load rating of 157 MW when firing distillate oil. The base load rating is based on site conditions of 59°F inlet air temperature, 60% relative humidity, and 14.64 psia atmospheric pressure. Water injection is utilized to control NO_x emissions.

Quantities of nitrogen oxides (NO_x), carbon monoxide (CO) and other combustion parameters were measured in the exhaust stack of the unit while firing distillate oil. Three test runs at 100% load condition were performed. The NO_x water injection rate, fuel flow, turbine load, and other key operational parameters were monitored and recorded during each test run. The tests followed the procedures set forth in the Code of Federal Regulations, Title 40, Part 60, Appendix A, Methods 1, 9, 10, 19, and 20. American Society of Testing and Materials (ASTM) test methods were utilized for analyses of fuel samples and are listed in Table 1.

Table 1

Background Data

Sources:	One Siemens, simple cycle, single shaft combustion turbine (designated as Unit P11). The unit is fired on distillate oil and utilizes water injection for NO_x control.
Location:	Florida Power Intercession City Facility 6525 Osceola-Polk Line Road Intercession City, FL 33848
Applicable Permits and Regulations:	State of Florida, Department of Environmental Protection (FDEP) Air Quality Permit No. 0970014-001-AV and 40 CFR 60 Subpart GG
Owner/Operator:	Florida Power 6525 Osceola-Polk Line Road Intercession City, FL 33848 Attn: Martin J. Drango (863) 678-4520
Emissions Test Coordinator:	Florida Power 263 13th Avenue South St. Petersburg, FL 33701 Attn: Jennifer A. Stenger, PE (727) 826-4132 (727) 826-4216 FAX
Test Dates:	July 30, 2001
Sampling Locations:	Circular stack of unit. Stack inside diameter is 20' 3". Four ports are equally spaced around the stack (See Appendix A, EPA Method 1 - Traverse Point Layout).

Test Methods:

- EPA Method 1 to establish O_2 traverse point locations for EPA Method 20
- EPA Method 3 (Section 4.4) F_o calculation for verification of O_2/ CO_2 concentrations
- EPA Method 9 for opacity observations
- EPA Method 10 for CO concentrations
- EPA Method 19 for mass emission, and stack flow rate calculations
- EPA Method 20 for NO_x and O_2 concentrations
- ASTM D 240 - for heating value of distillate fuel oil
- ASTM D 4629 - for fuel bound nitrogen content of distillate fuel oil
- ASTM D 4294 - for total sulfur content of distillate fuel oil

SUMMARY OF RESULTS

Emission testing was conducted on one Siemens turbine at Florida Power's Intercession City Facility in Intercession City, FL in Osceola County. Testing was conducted on this unit while firing distillate oil. During the entire test run water injection was maintained. Test runs on P11 were conducted at one load level: 100%

The basic test matrix consisted of first conducting an O_2 traverse. The unit was set to 100% of load. O_2 concentrations were measured at 48 traverse points (as determined in EPA Method 1) within the stack to determine the eight points of lowest O_2 concentration. No stratification was found on the unit; therefore, all subsequent test runs were conducted at the eight most convenient traverse points.

Following the initial O_2 traverse, the test matrix for P11 consisted of three test runs at the 100% load condition. NO_x, O_2 and CO concentrations were measured at the 100% load condition. One hour of opacity observations were made at the 100% load condition. SO_2 emission rates and concentrations were also determined during each test run using the sulfur content of the fuel and the fuel flow rate.

An executive summary of the test results is included as Table 2. This table provides the average emission measurements for unit P11. Table 2 also lists the applicable permit limit for each emission measurement. Limits from both the FDEP permit and Subpart GG (as applicable) are provided.

Tables 3 summarize the results of the 100% load test for Unit P11. This table contains all pertinent operational parameters, ambient conditions, emission measurements, and the calculated emission rates and corrected concentrations. NO_x is reported in ppmvd, ppmvd at 15% O_2, and lbs/hr. SO_2 emissions are reported in lbs/hr and volume percentage at 15% O_2. CO emissions are reported in ppmvd, and lbs/hr.

The mass emission rate measurements were based on the published F-Factors in EPA Method 19. Both O_2 and CO_2 F-Factors were utilized and the technique that resulted in the highest volumetric flow rate was used for the emission rate calculation (i.e. worst case scenario).

A fuel sample was taken during the test runs and analyzed at a later date for heating value, and total sulfur content. The results of those analyses are contained in Appendix D.

Appendix A contains the EPA Method 1 traverse point determinations. Appendix B contains examples of all calculations necessary for the reduction of the data presented in this report. All of the data collected will be kept at Florida Power for your review if necessary. Appendix G contains the operational data during each test run for unit P11. The operational data was recorded in the unit's control cab on computer printouts at regular intervals. The operational data reported is an average of the several readings recorded during each test run. Appendix H contains data summary sheets for Unit P11 and all of the computer printouts collected from the emissions test trailer during the preliminary O_2 traverse and the test runs at the various load conditions for unit P11.

Executive Summary

Plant: Florida Power - Intercession City Facility
Location: Intercession City, Florida
Test Dates: July 30, 2001
Test Engineer: JTL
Technicians: LRF, DTA
Source: Siemens V84.3 Turbine No. P11

	FDER Permit Limit	Subpart GG Limit	Unit P11 Emissions
NOx (lb/hr)	334	n.a.	200.8
CO (ppmvd)	25	n.a.	0.56
CO (lb/hr)	79	n.a.	1.68E+00
Opacity (%)	10	n.a.	0
Fuel Sulfur Content (wt %)	0.2	n.a.	0.197
SO2 (lb/hr)	407	n.a.	336.3
NOx at 100% Load (ppmvd @ 15% O2)	42	n.a.**	31.1
SO2 at 100% Load (vol % @ 15% O2)	n.a.	0.015	0.00375

All emission limits are for 100% load unless otherwise noted.

**EPA Subpart GG NOx emission limits are not applicable because the Florida DER permits are more stringent than the NSPS regulations.

Table 3
Unit P11
100% Load Emissions Summary

Plant	Florida Power, Intercession City Facility
Location	Intercession City, Florida
Technicians	JTL, DTA, LRF
Source	Siemens V84.3 Turbine No. P11

Date	7/30/01	7/30/01	7/30/01
Start Time	11:55 AM	12:30 PM	1:03 PM
End Time	12:22 PM	12:58 PM	1:35 PM
Mean Turbine Exhaust Plenum Temperature (°F)	1031.9	1032.4	1031.0
De NOx Water Flow (GPM)	275.8	275.8	275.9
Fuel Flow (GPM)	197.0	198.9	198.2
Fuel Flow (lb/sec)	23.59	23.81	23.73
Water/Fuel Ratio (lb H2O/lb fuel)	1.6480	1.6300	1.6380
Compressor Inlet Temperature (°F)	89.5	90.0	90.6
Inlet Guide Vane Angle (%)	103	109	109
Generator Output (MW)	146	147	146
Compressor Discharge Pressure (psig) Observed	217.2	220.3	219.9
Published M-19 O2 F-Factor (DSCF/MBtu)	9190	9190	9190
Published M-19 CO2 F-Factor (DSCF/MBtu)	1420	1420	1420
Fuel Heating Value (Gross Btu/lb) - Higher [HHV]	19436	19436	19436
Fuel Heating Value (Gross Btu/lb) - Lower [LHV]	18287	18287	18287
Heat Input (MBtu/hr)	1650.4	1666.3	1660.4
Total Sulfur in Fuel (wt %)	0.197	0.197	0.197
Barometer (in. Hg)	30.09	30.09	30.09
Temperature (°F dry)	88	91	93
Temperature (°F wet)	79	79	80
Humidity (lbs/lb of dry air)	0.01863	0.01792	0.01838
NOx (ppmvd)	40.73	41.46	40.75
CO (ppmvd)	0.59	0.51	0.59
O2 (%)	13.16	13.15	13.08
CO2 (%)	5.96	5.91	5.92
Fo	1.299	1.311	1.321
Stack Flow via O2 F-Factor (SCFH)	40954863	41296505	40782807
Stack Flow via CO2 F-Factor (SCFH)	39321197	40036312	39828019
Stack Flow Rate (Worst Case Scenario)	40954863	41296505	40782807
NOx (ppmvd @ 15% O2)	31.05	31.56	30.74
NOx (lbs/hr)	199.27	204.53	198.53
CO (lbs/hr)	1.76	1.53	1.75
SO2 (vol % @ 15% O2)	0.00375	0.00375	0.00375
SO2 (lbs/hr)	334.56	337.79	336.60

* Used to determine the Reference CPD Pressure (Pref) for ISO Day Correction

PROCESS DESCRIPTION

Florida Power is the owner of the Intercession City Facility, which is located in Osceola County, Florida. Thirteen General Electric manufactured combustion turbines and one Siemens combustion turbine are utilized for peaking electrical power generation at that facility. Emission testing was conducted on the Siemens unit to determine compliance status with regard to the state and federal regulations. Florida Power's Environmental Test Team performed the compliance emission testing utilizing a mobile test trailer. This section of the report provides a brief description of this turbine.

The Siemens turbine is a model V84.3 that fires on distillate fuel oil. The fuel oil is primarily delivered by truck to Florida Power and kept in storage tanks until needed.

The Siemens unit is designated as Turbine P11. The unit is a simple-cycle, single shaft combustion turbine. Based on site conditions of 59°F inlet air temperature, 60% relative humidity, and 14.64psia atmospheric pressure, the unit has a base load rating of 157 MW while firing distillate fuel oil. The electricity produced from these units is then distributed to customers via high voltage transmission lines and the area's electrical power distribution grid.

The circular exhaust stack was utilized for exhaust emission measurements. The exhaust stack dimensions are depicted in the stack diagram in Appendix A. Four ports are equally spaced around the stack. The ports are located 109 feet above ground level and 10 feet 5 inches from the top of the stack.

ANALYTICAL TECHNIQUE

Exhaust emissions from one Siemens combustion turbine (P11) were tested to determine the quantity of emissions being vented to the atmosphere. This section of the report describes the analytical techniques and procedures used during these tests.

The sampling and analysis procedures used during these tests conformed with those outlined in Code of Federal Regulations, 40 CFR 60, Appendix A, Methods 1, 9, 10, 19, and 20. Table 9 lists the instruments and detection principles used for the instrumental analyses.

The test matrix for the unit consisted of an initial O_2 traverse by sampling at 48 points inside the stack. This traverse was conducted at the 100% load condition. The compliance test was then conducted at one load condition for P11, during which NO_x, O_2 and CO concentrations were measured. Opacity observations were made at the 100% load condition for one hour.

The instrumental sampling and analysis system used to determine gaseous emission concentrations during the turbine test is depicted in Figure 1. Stack gas entered through a stainless steel probe with a stainless steel sintered filter to keep unwanted particulate out of the system. The sample was transported via 3/8-inch heat-traced Teflon® tubing to the "wet" side of the sample manifold via a stainless steel/Teflon® diaphragm pump. It was then delivered to a specially designed stainless steel/Teflon® minimum-contact condenser that dried the sample without removing NO_x or other compounds of interest. The sample was then passed to the dry side of the manifold where it was partitioned to the NO_x, CO, O_2 and CO_2 analyzers through glass and stainless steel rotometers for flow control of the sample.

Figure 1 shows that the sample system was also equipped with a separate path through which a calibration gas could be delivered to the probe and back through the entire sampling system. This allowed for a convenient way to perform the system bias checks as required by the test methods.

All instruments were housed in an air-conditioned mobile test trailer. Calibration gases were provided in aluminum cylinders with concentrations certified by the vendor. EPA Protocol No. 1 gases were used where applicable.

All data from the continuous monitoring instruments were recorded using a data acquisition system. This system consisted of a 486DX personal computer, LabView software and a dot matrix printer. The data from the individual test runs are located in Appendix H.

EPA Method 1 was used to determine the EPA Method 20 O_2 traverse point locations. The traverse point layout diagram is located in Appendix A.

The size of the turbine stack required 48 traverse points to be used for the initial O_2 traverses. The eight points of lowest O_2 concentration were used for all subsequent gaseous constituent tests. No O_2 stratification was encountered; therefore, the eight most convenient traverse points were utilized for the test.

The stack gas analyses for CO_2 and O_2 concentrations were performed in accordance with procedures set forth in EPA Method 3a. Instrumental analyses were used in lieu of an ORSAT procedure due to the greater accuracy and precision provided by the instruments. The CO_2 analyzer is based on the principle of infrared absorption; and, the O_2 analyzer operates on an electrochemical cell.

The F_o calculation of EPA Method 3 was used to verify the O_2 and CO_2 measurements. In all cases, the F_o fell within the expected values for distillate oil.

CO emission concentrations were quantified during the 100% load test runs in accordance with procedures set forth in EPA method 10. A continuous infrared absorption analyzer was used for this purpose. This analyzer was equipped with a gas correlation filter, which also eliminates any interference from moisture, CO_2, or other combustion products.

EPA Method 20 procedures were used to determine concentrations of NO_x (via chemiluminescence) and O_2 as prescribed by the testing regulations for gas turbine units. NO_x mass emission rates were calculated as if all the NO_x were in the form of NO_2. This approach corresponds to EPA's convention.

The traverse point layout requirements for EPA Method 20 were discussed previously. Sampling time at each point is required by the method to be 1-minute plus the average sample system response time. The response time test that was conducted on site prior to testing showed a response time for NO_x, O_2, and CO_2 of less than 1 minute. The response time for CO was less than 2 minutes. Therefore, the sampling time used for the initial O_2 traverse was 2 minutes per point and 3 minutes per point for the NO_x/O_2 and CO concentration test runs.

The stoichiometric calculations of EPA Method 19 were used to calculate the stack volumetric flow rates. This calculation is based on the heating value and the O_2 and CO_2 F-factors (SCF of exhaust per mmBtu of burned fuel) for distillate fuel oil. Method 19 flow rate determination are also based on excess air (as measured from the exhaust diluent concentrations) and the fuel flow rates. EPA Method 19 was used as the stack flow rate measurement technique for all testing. The results of the fuel analyses can be found in Appendix B of this report. The data presented in this report makes use of the published F-factor (i.e. 9190 for O_2 and 1420 for CO_2 for distillate oil).

The sulfur content of the distillate oil was used as a means of indirectly measuring SO_2 emissions from the stack. This indirect measurement assumes that all sulfur present in the fuel is completely oxidized to SO_2 (i.e. worst case scenario for SO_2 emissions).

Ambient absolute pressure, ambient temperature and humidity were also collected during each test run. A hand held sling psychrometer utilizing a wet/dry bulb was used to determine temperature and humidity conditions. A barometer/altimeter was used to measure absolute atmospheric pressure.

Operational data was also collected during the test runs. Following each test run the printer in the control cab provided a printout of various operational data. The operational test data was recorded several times during the test runs and averaged over the test run period.

Operational data provided included the following:

- Mean turbine exhaust plenum temperature
- $DeNO_x$ water flow
- Fuel flow rate
- Compressor inlet temperatures
- Inlet guide vane percentage
- Generator output
- Compressor discharge pressure

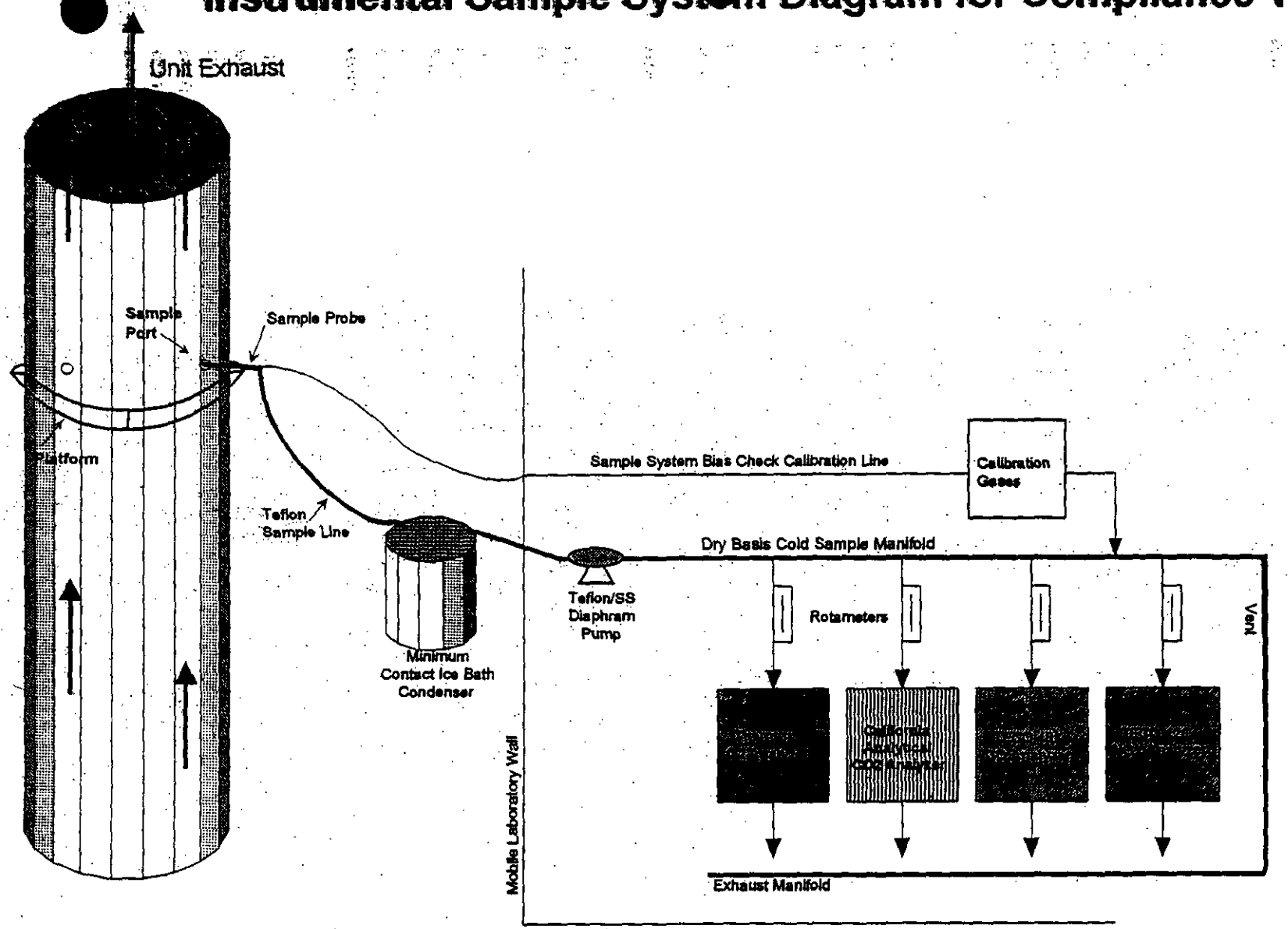
The printouts of the operational data for unit P11 is included in Appendix G of this report. The tabular summaries included in the *Summary of Results* include the average for all of the above operational parameters during each test run.

Analytical Instrumentation

Table 4

Parameter	Model & Manufacturer	Common Use Ranges	Sensitivity	Response Time (sec.)	Detection Principle
Oxygen (O_2)	Amatek Thermox	0-1% 0-10% 0-25% 0-100%	0.1%	5	Electrochemical cell convection process
Carbon Dioxide (CO_2) (high range)	California Analytical	0-1% 0-5% 0-10% 0-50% 0-100%	0.1 ppm	3	Infrared absorption, non-dispersive type deflection method, single IR, single beam (NDIR)
Carbon Monoxide (CO)	TECO 48	0-10 ppm 0-20 ppm 0-50 ppm 0-100 ppm 0-200 ppm 0-500 ppm 0-1000 ppm	0.1 ppm	120	Infrared absorption, gas filter correlation detector, microprocessor based linearization
Nitrogen Oxide (NOx)	TECO 42H	0-10 ppm 0-20 ppm 0-50 ppm 0-100 ppm 0-200 ppm 0-500 ppm 0-1000 ppm 0-2000 ppm 0-5000 ppm	0.1 ppm	5	Chemiluminescence

Instrumental Sample System Diagram for Compliance Testing



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QUALITY ASSURANCE ACTIVITIES

A number of quality assurance activities were undertaken before, during, and after this testing project. This section of the report combined with Appendices D and E describe each of those activities.

Each instrument's response was check and adjusted in the field prior to the collection of data via multi-point calibration. The instrument's linearity was checked by first adjusting its zero and span responses to zero (nitrogen or zero air) and an upscale calibration gas in the range of the expected concentrations. The instrument response was then challenged with other calibration gases of known concentration. The instrument's response was accepted as being linear if the response of the other calibration gases agreed within ± 2% of range of the predicted values. Appendix D, Part 1 contains the calibration sheets.

As a minimum, before and after a set of test runs, the analyzers were checked for zero and span drift. This allows each set of test runs to be bracketed by calibrations and documents the precision of the data collected. The criterion for acceptable data is that the instrument drift is no more than 2% of the full-scale response. The quality assurance worksheets in Appendix D summarize all multipoint calibration checks and zero and span checks performed during the tests. These worksheets show that no analyzer calibration drifted in excess of 2% during the tests.

Interference response tests on the instruments were recorded for the NO_x, CO, CO_2 and O_2 analyzers. The sum of the interference responses was less than 2% of the applicable full-scale value. The instruments used for the tests meet the performance specifications for EPA Methods 3a, 10, and 20. The results of the interference tests are available in Appendix D, Part 2 of this report.

The NO_x, O_2, CO_2, and CO sampling and analysis system was checked on site for response time per the procedures outlined in EPA Method 20. The average NO_x analyzer's response times were 45 seconds upscale and 46 seconds downscale. The average O_2 analyzer's response times were 42 seconds upscale and 48 seconds downscale. Method 20 requires a minimum sample time per traverse point of 1-minute plus the average sample system response time. Therefore, a sample time of 2 minutes was used for the initial O_2 traverse. The response time for the CO analyzer was 45 seconds upscale and 67 seconds downscale, therefore, a sample time of 3 minutes was chosen for the NO_x traverse since CO emission are collected during these test runs at the 100% load condition. The response time test data is contained in Appendix D, Part 2.

The sampling systems were leak checked by demonstrating that a vacuum greater than 10" Hg could be held for at least 1 minute with a decline of less than 1" Hg. A leak check was conducted after each sample system was set up and before the systems were dismantled. These tests were conducted to ensure that ambient air had not diluted the sample. Any leakage detected prior to the tests was repaired and another leak check was conducted before testing commenced. No leaks were detected after the tests were complete. Leak check data is contained in Appendix D, Part 2.

The absence of leaks in the gaseous constituent sampling system was also verified by system bias checks. Comparing the responses of each analyzer to a calibration gas introduced via two paths tested the sampling system's integrity. The first path was directly into the analyzer via the zero/span calibration manifold. The second path was to introduce a calibration gas into the sample system at the sample probe. Any difference in the instrument responses by these two methods was attributed to sampling system bias or leakage. These bias checks were conducted before and after the testing. The same sample system was used throughout the tests. The bias response check data is contained in Appendix D, Part 2. All responses, via both paths, agreed within ± 2%.

Having the analyzer sample a mixture of NO in N2 standard gas and zero air from a Tedlar® bag checked the efficiency of the NO2 to NO converter in the NOx analyzer. When this bag is mixed and exposed to sunlight, the NO is oxidized to NO_2 over approximately a 30 minute period. If the NO_x analyzer's converter is 100% efficient, then the NO_x response does not decrease as the NO in the bag is converted to NO_2. The criterion for acceptability is a demonstrated NO_x converter efficiency greater than 90%. The strip chart excerpt that demonstrates the converter efficiency is contained in Appendix D, Part 2.

The control gases used to calibrate the instruments were analyzed and certified by the compressed gas vendors to ± 1% accuracy for the NO_x, O_2 and CO_2 gases, and to ± 2% for the CO gases. EPA Protocol No. 1 was used, where applicable, to assign the concentration values traceable to the National Institute of Standards and Technology, Standard Reference Materials (SRM's). The calibration certification sheets are prepared by the vendor and are contained in Appendix E.

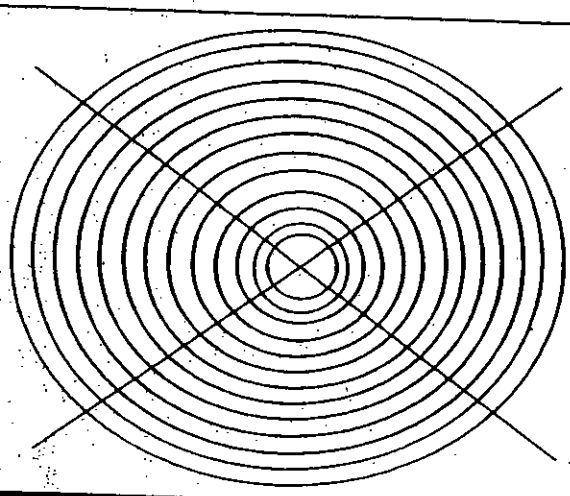
Rectangular Stack Sampling Traverse Point Layout
(EPA Method 1)

Siemens P11

Date: July, 2001
Plant: Florida Power
Source: Stack
Technician(s) JTL, LRF, DTA
Stack Length (L) N/A in.
Stack Width (W) N/A in.

Port + Stack ID: 249 in.
Port Extension (Ref. Pt.) 6 in.
Stack ID: 243 in.
Stack Area 322 ft.².
Total Req'd Trav. Pts (P). 48
No. of Traverse Pts. 24 /dimen.
No. of Traverse Pts. 12 /port

TRAVERSE POINT	DISTANCE % OF DIAMETER
1	1.1
2	3.2
3	5.5
4	7.9
5	10.5
6	13.2
7	16.1
8	19.4
9	23.0
10	27.2
11	32.3
12	39.8



Stack Diagram (Top view)

Point No.	Percent of Stack Diameter From Wall	Distance From Ref. Point (inches)
1	1.1	2.7
2	3.2	8.0
3	5.5	13.7
4	7.9	19.7
5	10.5	26.1
6	13.2	32.9
7	16.1	40.1
8	19.4	48.3
9	23.0	57.3
10	27.2	67.7
11	32.3	80.4
12	39.8	99.1

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[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.

2. 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.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Peaking Units P12, P13, and P14

4. Emissions Unit Identification Number: [ ] No ID
ID: **018, 019, 020** [ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A		**49**	[X]

9. Emissions Unit Comment: (Limit to 500 Characters)

This emission unit is comprised of 3 GE Frame 7EA dual-fuel turbines operating in simple cycle mode with dry low NOx (DLN) combustion technology when firing natural gas and water injection when firing No. 2 distillate oil.

See Attachment IC-EU4-A9.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Dry Low NO_x combustion - Natural gas firing

Water Injection – Oil firing

2. Control Device or Method Code(s): **25, 28**

Emissions Unit Details

1. Package Unit:
   Manufacturer: **General Electric** Model Number: **PG 7121EA**
2. Generator Nameplate Rating: **91** MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:			978	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr			tons/day
3. Maximum Process or Throughput Rate:				
4. Maximum Production Rate:				
5. Requested Maximum Operating Schedule:				
	24	hours/day	7	days/week
	52	weeks/year	3,390	hours/year

6. Operating Capacity/Schedule Comment (limit to 200 characters):

Maximum heat input at 100% load and 59°F oil firing (LHV).

Maximum for gas firing is 905 MMBtu/hr at 100% load and 59°F (LHV).

The CTs will operate no more than an average of 3,390 hrs/CT/yr with 1,000 hrs/CT/yr on oil operation. In addition, the group of 3 CTs is limited to no more than 2,500 hrs/yr of oil firing.

See Permit No. PSD-FL-268A Condition III.3

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

See Attachment IC-EU4-D	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **See Attachment IC-FI-C2**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Gas turbine gases exhaust through a single stack per turbine unit.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **56** feet	7. Exit Diameter: **16.1** feet
8. Exit Temperature: **993** °F	9. Actual Volumetric Flow Rate: **1,436,310** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: **17** East (km): **446.3** North (km): **3126**		
14. Emission Point Comment (limit to 200 characters): **Exit temperature and flow rate given for a single CT at an ambient temperature of 59 °F (oil-firing).**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Internal Combustion Engines – Electric Generation - Distillate Oil (Diesel) - Turbine**		
2. Source Classification Code (SCC): **2-01-001-01**	3. SCC Units: **1,000 Gallons Burned**	
4. Maximum Hourly Rate: **7.44**	5. Maximum Annual Rate: **7,436**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash: **0.1**	9. Million Btu per SCC Unit: **132**
10. Segment Comment (limit to 200 characters): **Max. Hourly Rate per CT based on Baseload Max. Heat Input, ISO conditions = 978 MMBtu/hr / 131.52 MMBtu / SCC** **Max. Annual Rate per CT based on 1,000 hr/yr, Baseload, ISO conditions. 978 MMBtu/hr / 131.52 MMBtu / SCC x 1,000 hr / yr** **See PSD-FL-268A Condition III.6.** **Heat Content is LHV.**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Internal Combustion Engines – Electric Generation – Natural Gas – Turbine**		
2. Source Classification Code (SCC): **2-01-002-01**	3. SCC Units: **Million Cubic Feet Burned**	
4. Maximum Hourly Rate: **0.953**	5. Maximum Annual Rate: **3,229**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **950**
10. Segment Comment (limit to 200 characters): **Max. Hourly Rate per CT based on Baseload Max. Heat Input, ISO conditions = 905 MMBtu/hr / 950 MMBtu / SCC** **Max. Annual Rate per CT based on 3,390 hr/yr, Baseload, ISO conditions. 905 MMBtu/hr / 950 MMBtu / SCC x 3,390 hr / yr** **See PSD-FL-268A Condition III.6.** **Heat Content is LHV.**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2			EL
NO_x	025	028	EL
PM			EL
PM_{10}			EL
CO			EL
VOC			EL
SAM			EL

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **49.5** lb/hour **29.1** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.05% Sulfur** Reference: **PSD-FL-268A Condition III.5**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Emissions per CT; total TPY for 3 CTs = 80.1 (2,500 hr/yr on oil, 7,670 hr/yr on gas)** **Maximum hourly emissions based on inlet temperature of 59°F, oil firing, 100% load.** **Annual emissions based on 2,390 hr/yr on natural gas and 1,000 hr/yr on distillate oil; at 59°F**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.05% Sulfur Oil**	4. Equivalent Allowable Emissions: **49.5** lb/hour **29.1** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel oil analysis**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emissions based on oil firing at 59 °F, 100% load; TPY based on 1,000 hr/yr/CT.** **PSD-FL-268A Condition III.37b.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **49.5** lb/hour **29.1** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.05% Sulfur** Reference: **PSD-FL-268A Condition III.5**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Emissions per CT; total TPY for 3 CTs = 80.1 (2,500 hr/yr on oil, 7,670 hr/yr on gas)** **Maximum hourly emissions based on inlet temperature of 59°F, oil firing, 100% load.** **Annual emissions based on 2,390 hr/yr on natural gas and 1,000 hr/yr on distillate oil; at 59°F**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **1 grain S / 100 CF**	4. Equivalent Allowable Emissions: **3.0** lb/hour **5.0** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel analysis – Vendor supplied**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emissions based on pipeline natural gas firing at 59°F inlet temperature, 100% load; TPY based on 3,390 hr/yr/CT.** **PSD-FL-268A Conditions III.37a and III.38.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NO_x**	2. Total Percent Efficiency of Control: **80** %
3. Potential Emissions: **169** lb/hour **123.9** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **42 ppmvd @ 15% O_2** Reference: **PSD-FL-268A Condition III.B.17**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Emissions per CT; total TPY for 3 CTs = 337.8 (2,500 hr/yr on oil, 7,670 hr/yr on gas)** **Maximum hourly emissions based on inlet temperature of 59°F, oil firing, 100% load.** **Annual emissions based on 2,390 hr/yr on natural gas and 1,000 hr/yr on distillate oil; at 59°F**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **42 ppmvd @ 15% O_2 & 169 lb/hr**	4. Equivalent Allowable Emissions: **169** lb/hour **84.5** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 7E/20**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Lb/hr based on oil firing at 59 °F, baseload; TPY based on 1,000 hr/yr/CT at 59°F, baseload; compliance testing at baseload. Test required if > 200 hr/yr oil firing.** **CEMs will be used to demonstrate compliance with 42 ppmvd @ 15% O_2, 24-hr block avg.** **Annual test for compliance with 42 ppmvd @ 15% O_2 & 169 lb/hr based on a 3-hr avg.** **PSD-FL-268A Condition III.B.17**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: NO_x	2. Total Percent Efficiency of Control: 80 %
3. Potential Emissions: 169 lb/hour 123.9 tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 42 ppmvd @ 15% O_2 Reference: PSD-FL-268A Condition III.B.17	7. Emissions Method Code: 2
8. Calculation of Emissions (limit to 600 characters): Emissions per CT; total TPY for 3 CTs = 337.8 (2,500 hr/yr on oil, 7,670 hr/yr on gas) Maximum hourly emissions based on inlet temperature of 59°F, oil firing, 100% load. Annual emissions based on 2,390 hr/yr on natural gas and 1,000 hr/yr on distillate oil; at 59°F	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 9,10 ppmvd @ 15% O_2 & 33 lb/hr	4. Equivalent Allowable Emissions: 33 lb/hour 55.9 tons/year
5. Method of Compliance (limit to 60 characters): Annual Compliance Test – EPA Method 7E/20	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Lb/hr based on natural gas firing at 59 °F, baseload; TPY based on 3,390 hr/yr/CT at 59°F, baseload; compliance testing at baseload. CEMs will be used to demonstrate compliance with 10 ppmvd @ 15% O_2, 24-hr block avg. Annual test for compliance with 9 ppmvd @ 15% O_2 & 33 lb/hr based on a 3-hr avg. PSD-FL-268A Condition III.B.17	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **10** lb/hour **11** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **10 lb/hr** Reference: **GE; Vendor Guarantee**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Emissions per CT; total TPY for 3 CTs = 31.7 (2,500 hr/yr on oil, 7,670 hr/yr on gas)** **Maximum hourly emissions, oil firing, 100% load.** **Annual emissions based on 2,390 hr/yr on natural gas and 1,000 hr/yr on distillate oil**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10 lb/hr**	4. Equivalent Allowable Emissions: **10** lb/hour **5** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Lb/hr based on oil firing, all loads; TPY, all loads, 1,000 hr/yr/CT.** **VE < 10% opacity, 6-minute test average used as a surrogate for PM/PM_{10} compliance test.** **PSD-FL-268A Condition III.B.18**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **10** lb/hour **11** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **10 lb/hr** Reference: **GE; Vendor Guarantee**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Emissions per CT; total TPY for 3 CTs = 31.7 (2,500 hr/yr on oil, 7,670 hr/yr on gas)** **Maximum hourly emissions based on oil firing, 100% load.** **Annual emissions based on 2,390 hr/yr on natural gas and 1,000 hr/yr on distillate oil**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

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

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **5 lb/hr**	4. Equivalent Allowable Emissions: **5** lb/hour **8.5** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Lb/hr based on gas firing, all loads; TPY, all loads, 3,390 hr/yr/CT.** **VE < 10% opacity, 6-minute test average used as a surrogate for PM/PM_{10} compliance test.** **PSD-FL-268A Condition III.B.18**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **10** lb/hour **11** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **10 lb/hr** Reference: **GE; Vendor Guarantee**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Emissions per CT; total TPY for 3 CTs = 31.7 (2,500 hr/yr on oil, 7,670 hr/yr on gas)** **Maximum hourly emissions based on oil firing, 100% load.** **Annual emissions based on 2,390 hr/yr on natural gas and 1,000 hr/yr on distillate oil**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10 lb/hr**	4. Equivalent Allowable Emissions: **10** lb/hour **5** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Lb/hr based on oil firing, all loads; TPY, all loads, 1,000 hr/yr/CT.** **VE < 10% opacity, 6-minute test average used as a surrogate for PM/PM_{10} compliance test.** **PSD-FL-268A Condition III.B.18**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **10** lb/hour **11** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **10 lb/hr** Reference: **GE; Vendor Guarantee**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Emissions per CT; total TPY for 3 CTs = 31.7 (2,500 hr/yr on oil, 7,670 hr/yr on gas)** **Maximum hourly emissions based on oil firing, 100% load.** **Annual emissions based on 2,390 hr/yr on natural gas and 1,000 hr/yr on distillate oil**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **5 lb/hr**	4. Equivalent Allowable Emissions: **5** lb/hour **8.5** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Lb/hr based on gas firing, all loads; TPY, all loads, 3,390 hr/yr/CT.** **VE < 10% opacity, 6-minute test average used as a surrogate for PM/PM_{10} compliance test.** **PSD-FL-268A Condition III.B.18**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **44** lb/hour **73.4** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **20 ppmvd @ 15% O_2** Reference: **PSD-FL-268A Condition III.B.16**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Emissions per CT; total TPY for 3 CTs = 219.9 (2,500 hr/yr on oil, 7,670 hr/yr on gas)** **Maximum hourly emissions based on inlet temperature of 59°F, oil firing, 100% load.** **Annual emissions based on 2,390 hr/yr on natural gas and 1,000 hr/yr on distillate oil; at 59°F**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **20 ppmvd**	4. Equivalent Allowable Emissions: **44** lb/hour **22** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 10, 3-hr average**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Emissions based on oil firing at 59 °F; TPY based on 1,000 hr/yr/CT.** **PSD-FL-268A Condition III.B.16**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **44** lb/hour **73.4** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **20 ppmvd @ 15% O_2** Reference: **PSD-FL-268A Condition III.B.16**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Emissions per CT; total TPY for 3 CTs = 219.9 (2,500 hr/yr on oil, 7,670 hr/yr on gas)** **Maximum hourly emissions based on inlet temperature of 59°F, oil firing, 100% load.** **Annual emissions based on 2,390 hr/yr on natural gas and 1,000 hr/yr on distillate oil; at 59°F**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **20 ppmvd**	4. Equivalent Allowable Emissions: **43** lb/hour **72.9** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 10, 3-hr average**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Emissions based on gas firing at 59 °F; TPY based on 3,390 hr/yr/CT.** **PSD-FL-268A Condition III.B.16**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **5** lb/hour **4.9** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **4 ppmvd** Reference: **PSD-FL-268A Condition III.B.19**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Emissions per CT; total TPY for 3 CTs = 13.9 (2,500 hr/yr on oil, 7,670 hr/yr on gas)** **Maximum hourly emissions based on inlet temperature of 59°F, oil firing, 100% load.** **Annual emissions based on 2,390 hr/yr on natural gas and 1,000 hr/yr on distillate oil; at 59°F**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **4 ppmvd**	4. Equivalent Allowable Emissions: **5** lb/hour **2.5** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 18, 25/25A**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Emissions based on oil firing at 59 °F; TPY based on 1,000 hr/yr/CT.** **If CO limits met, VOC test not required.** **PSD-FL-268A Condition III.B.19**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **5** lb/hour **4.9** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **4 ppmvd** Reference: **PSD-FL-268A Condition III.B.19**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Emissions per CT; total TPY for 3 CTs = 13.9 (2,500 hr/yr on oil, 7,670 hr/yr on gas)** **Maximum hourly emissions based on inlet temperature of 59°F, oil firing, 100% load.** **Annual emissions based on 2,390 hr/yr on natural gas and 1,000 hr/yr on distillate oil; at 59°F**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **2 ppmvd**	4. Equivalent Allowable Emissions: **2** lb/hour **3.4** tons/year
5. Method of Compliance (limit to 60 characters): **Annual Compliance Test – EPA Method 18, 25/25A**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Emissions based on gas firing at 59 °F; TPY based on 3,390 hr/yr/CT.** **If CO limits met, VOC test not required.** **PSD-FL-268A Condition III.B.19**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **5.5** lb/hour **2.9** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.05% Sulfur Oil** Reference: **PSD-FL-268A Condition III.B.5**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Emissions per CT; total TPY for 3 CTs = 8.6 (2,500 hr/yr on oil, 7,670 hr/yr on gas)** **Maximum hourly emissions based on inlet temperature of 59°F, oil firing, 100% load.** **Annual emissions based on 2,390 hr/yr on natural gas and 1,000 hr/yr on distillate oil; at 59°F**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.05% Sulfur Oil**	4. Equivalent Allowable Emissions: **5.5** lb/hour **2.75** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel oil analysis**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Emissions based on oil firing at 59 °F; TPY based on 1,000 hr/yr/CT.** **Fuel analysis as compliance method, may be vendor supplied.** **PSD-FL-268A Condition III.B.37b**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control: %
3. Potential Emissions: **5.5** lb/hour **2.9** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.05% Sulfur Oil** Reference: **PSD-FL-268A Condition III.B.5**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Emissions per CT; total TPY for 3 CTs = 8.6 (2,500 hr/yr on oil, 7,670 hr/yr on gas)** **Maximum hourly emissions based on inlet temperature of 59°F, oil firing, 100% load.** **Annual emissions based on 2,390 hr/yr on natural gas and 1,000 hr/yr on distillate oil; at 59°F**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **1 grain S / 100 CF**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **Fuel analysis**	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): **Fuel analysis as compliance method, may be vendor supplied.** **PSD-FL-268A Condition III.B.37b, 40 CFR 60.333, and 40 CFR 75 Appendix D**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: **2 hr/24 hr** min/hour	
4. Method of Compliance: **Annual VE Test EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **During startup and shutdown.** **Rule 62-296.310(2)(a). No VE test < 400 hr/yr except for period of one year preceding permit renewal date. [Rule 62-297.310(7)(a)8]**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 1 of 1

1. Parameter Code: **EM**	2. Pollutant(s): **NO_x**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **CEM complies with 40 CFR 75.** **See Alternate Monitoring Plan in Permit PSD-FL-268A.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE99**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **Best Operational Practices**	
5. Visible Emissions Comment (limit to 200 characters): **FDEP Rule 62-210.700(1); Allowed for 2 hours (120 minutes) per 24 hours for start up, shutdown and malfunction.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID: IC-EU4-J1[ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [X] Attached, Document ID: IC-EU4-J2[ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID: IC-EU4-J3 [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [X] Attached, Document ID: IC-EU4-J5 [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [X] Attached, Document ID: IC-EU4-J5 [ ] Previously submitted, Date:_____ [ ] Not Applicable
6. Procedures for Startup and Shutdown [X] Attached, Document ID: IC-EU4-J6 [ ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [X] Attached, Document ID: IC-EU4-J7 [ ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[X] Attached, Document ID: **IC-EU4-J11** [ ] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [X] Not Applicable

13. Identification of Additional Applicable Requirements
[X] Attached, Document ID: **IC-EU4-J13** [ ] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable **See Attachment IC-EU4-J14**

15. Acid Rain Part Application (Hard-copy Required)

[X] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: **IC-EU2-J15**

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[ ] Not Applicable

ATTACHMENT IC-EU4-A9

EMISSIONS UNIT COMMENT

Photo 1. Combustion Turbine Peaking Units 12 and 14

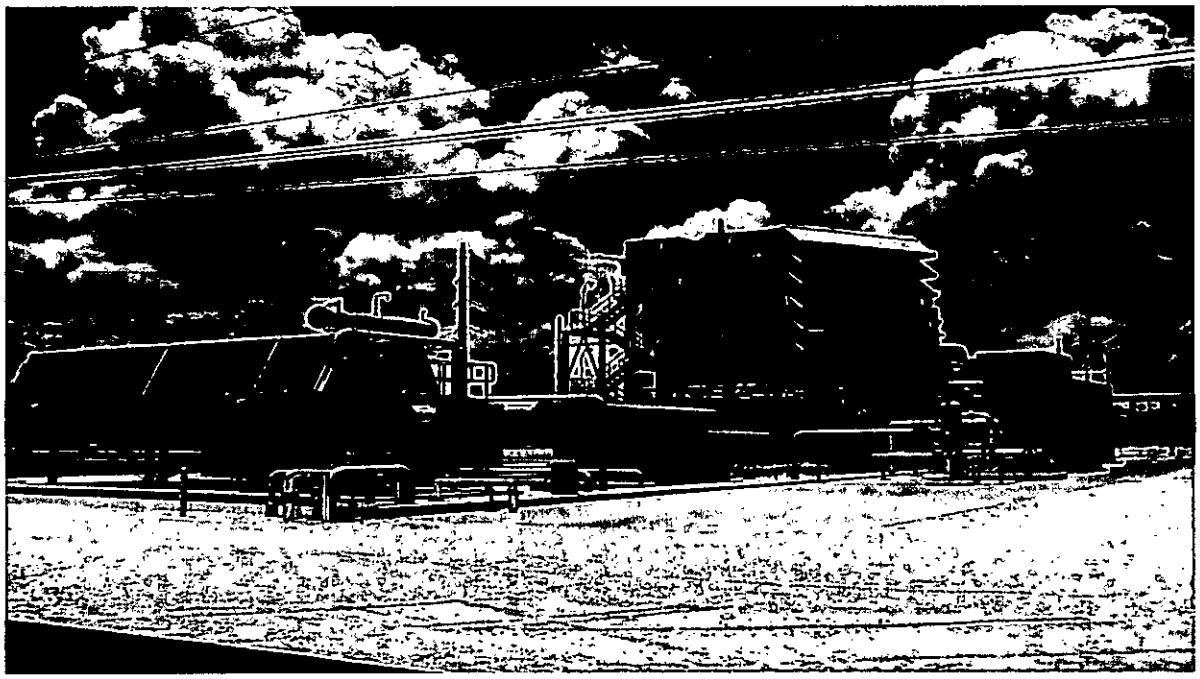


Photo 2. Combustion Turbine Peaking Unit 13

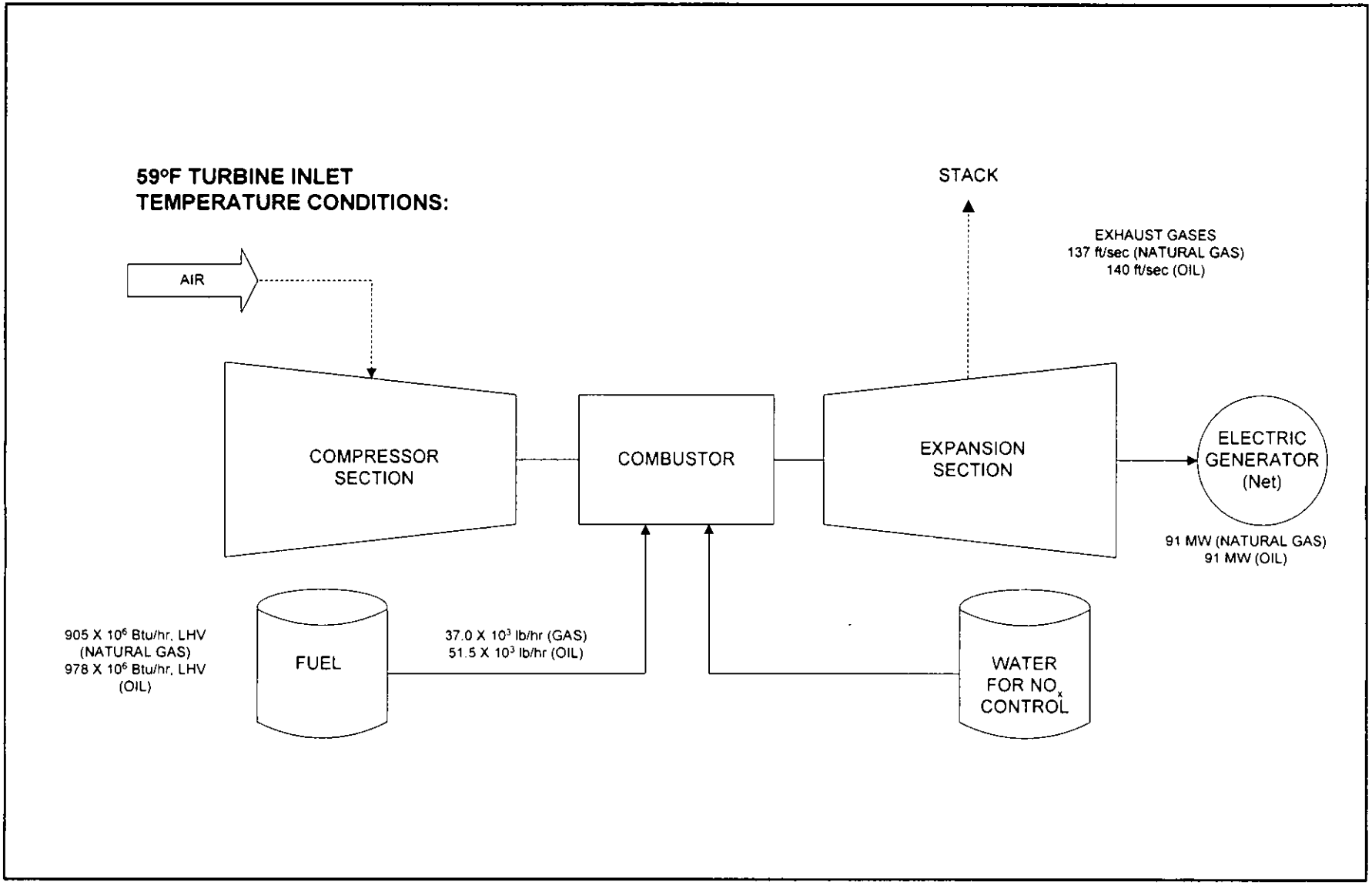
Attachment IC-EU4-A9
Combustion Turbine Peaking Units 12, 13, and 14
Florida Power, Intercession City

Source: Golder, 2002.

Golder Associates

ATTACHMENT IC-EU4-J1

PROCESS FLOW DIAGRAM



Attachment IC-EU4-J1
Simplified Flow Diagram of GE PG7121EA
Combustion Turbine
Baseload, Annual Design Conditions

Process Flow Legend
Solid/Liquid
Gas
Steam

Project: 0237530/4/4.4/4.4.1/IC-EU4-J1.VSD
Date: 6/26/02

Golder Associates

ATTACHMENT IC-EU4-J2

FUEL ANALYSIS
FUEL OIL

DISTILLATE FUEL OIL

Client Florida Power Corporation
Sample ID Intercession City Plant, Unit P-12
Time 20:05
Date 5/5/02

Specific Gravity	0.84930

Gross Heating Value	
Btu/lb	19495

CALCULATION OF F FACTORS

		Weight Percents				
		Carbon	Hydrogen	Nitrogen	Oxygen	Sulfur
Totals	100	87.7154	12.22	0.009	0.01	0.0456

CALCULATED VALUES		
O2 F Factor (dry)	**9167**	DSCF of Exhaust/MM Btu of Fuel Burned @ 0% excess air
O2 F Factor (wet)	**10377**	SCF of Exhaust/MM Btu of Fuel Burned @ 0% excess air
Moisture F Factor	**1210**	SCF of Water/MM Btu of Fuel Burned @ 0% excess air
Combust. Moisture	**11.7**	volume % water in flue gas @ 0% excess air
CO2 F Factor	**1444**	DSCF of CO2/MM Btu of Fuel Burned @ 0% excess air

Commercial Testing & Engineering Co.
SINCE 1908

1212 N. 39th Street
Suite 323
Tampa, FL 33605
Tel: (813) 248-6566
Fax: (813) 247-2562

May 09, 2002

FLORIDA POWER CORPORATION
100 Center Avenue – Mail Code CX1N
St. Petersburg, FL 33701

CERTIFICATE OF ANALYSIS

RE:	SUBMITTED SAMPLE
PRODUCT:	SAID TO BE NO. 2 FUEL OIL
SUBMITTED BY:	FLORIDA POWER CORP., INTERCESSION CITY, FL on 05/06/02
SAMPLE MARKED:	FPC - INTERCESSION CITY P-12 POST TEST DATED 05/05/02 SAMPLE 1 @ 1935 HRS
P.O. NUMBER:	B7000184
OUR REF:	08-5651A

TEST	METHODS	RESULTS
GRAVITY		
°API	ASTM D-287	35.1
SPECIFIC at 60°F		0.8493
SPECIFIC at 80°F		0.8418
SPECIFIC at 100°F		0.8338
LB/GALLON at 60°F		7.072
HEATING VALUE		
HIGHER HEATING VALUE (GROSS)	ASTM D-240	19,495
LOWER HEATING VALUE (NET)		18,380
ULTIMATE		
HYDROGEN, WT. %	ASTM D-5291	12.22
NITROGEN, ppm	ASTM D-4629	90
SULFUR, WT %	ASTM D-4294	0.0456

/S/: Victoria A. Linde, Operations Manager
COMMERCIAL TESTING & ENGINEERING CO.

VAL/ne

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis

Number: 1030-2002060109-001A

Tony Ruiz
Cubix Corporation
9225 US Hwy 183 South
Austin TX 78747-
USA

Sample ID:		Report Date:	June 10, 2002	
Station Name:	Florida Power Corp.	Sample Of:	Fuel Oil #2	
Station Number:	Job# 7009	Sample Date:	05/05/2002	20:35
Station Location:	Intercession City, FL	Sample Condition:		
Sample Point:	P-12	PO / Ref. No:	2002362	

ANALYTICAL DATA

Test	Method	Result	Unit	Detection Limit	Lab Tech.	Date Analyzed
Sulfur Content by X-Ray	ASTM-D-4294	0.040	wt%	0.003	HR	06/10/02
Organically Bound N2-Chemiluminescence	ASTM-D-4629	97.8	ppmw	1.0	HR	06/10/02

Comments:

Bob Ransale
Hydrocarbon Laboratory Manager

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP or GPA guidelines for quality assurance, unless otherwise stated

ATTACHMENT IC-EU4-J3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

WATER INJECTION SYSTEM

This attachment provides a general description of the water injection system's operation as recommended by General Electric. Actual operation will depend on operating conditions as determined by the facility.

WATER INJECTION SYSTEM

I. GENERAL

The water injection system provides water to the combustion system of the gas turbine to limit the levels of nitrogen oxides (NOX) in the turbine exhaust. This limitation is required by strict local and federal regulations. The water injection system schedules water flow to the turbine as a function of total fuel flow, relative humidity, and ambient temperature. The required water/fuel ratio is established through field compliance testing of the individual turbine. A final control schedule based on these tests is programmed in the SpeedTronic control, which then regulates the system.

The water injection system, shown in the reference drawings section of this manual, consists of both on-base components and an off-base water injection skid. This skid is a factory assembled and enclosed package. It receives water from the customer's treatment facility, and delivers filtered water at the pressure and flow rate required to meet the applicable emissions requirement at that operating condition.

The filtered water is introduced to the turbine combustion system through a water supply manifold. The manifold supplies water to each of the 10 combustors on the gas turbine. The manifold inlet connection is located on the turbine base. The water is injected through identical nozzles in each of the combustors.

The following is a listing of the on-base and off-base components, together with a brief functional description of the system. More detailed information on individual items is given in the manufacturer's literature (Equipment Publications), which follows this text.

A. On-Turbine Base

1. Water injection manifold, associated piping and flex hoses to carry water to the manifold. Ten tubing/flex hose arrangements to carry water to the connection points of each of Ten combustion chambers. Ten flow proportioning valves, one installed in each of the tubing/flex hose lines supplying each of the combustors. A low point drain is provided on the turbine base adjacent to the inlet connection point.

2. Ten separate combustors, each with a set of identical water injection nozzles fed from a single connection point per combustor.

B. Off-Base Skid

1. Inlet Water Strainer (FW1-2)

2. Inlet water pressure switch (63WN-1)

3. A high pressure centrifugal water injection pump/motor assembly with a motor space heater (PW1-1/88WN-1/23WN-1)

4. A Variable Frequency Drive units each with pump/motor speed feedback and alarm relays (97WN-1/96WN-4/30WN-1/84WN-1)

5. Water pump discharge pressure transmitter (96WP-1)

6. A Five micron (nominal) water filter assembly (FW1-1)

7. Water filter differential pressure switch (63WN-3)

8. A Turbine Flowmeter with three identical Pick-Ups/Transmitters (FM1-1 / 96WF-1 to 3) and downstream strainer (FW1-3).
9. Water actuated stop valve (VS2-1) with Solenoid (20WN-1), Actuation Pressure Regulator (VPR62-11), Actuation Pressure Relief Valve (VR70-1), Quick-Exhaust Valve (VQE1-1)

10. Associated piping, flanges, check valves, pressure gauges, manual isolation valves, and inlet water temperature gauge.

11. Compartment ventilation/cooling fan/motor, 88JS-1, and cooling thermostat, 26JS-1, are provided to keep the skid cool. Thermostat 26JS-2, which is set at a higher temperature than 26JS-1, signals a high temperature alarm in the SpeedTronic control.

12. Compartment heater, 23WR-1, and heating thermostat, 26WR-1 are provided to maintain skid temperature at a comfortable level, to minimize condensation, and to prevent freezing. Thermostat 26WR-2, which is set at a lower temperature than 26WR-1, signals a low temperature alarm in the SpeedTronic control.

13. Skid lighting consists of AC lights AL-58, AL-59 and AL-82, AC light switch ASW-28, DC light DL-18 with isolation relay 27WN-1. There are two AC power outlets, AR-41 and AR-42, each with grounded receptacles.

II. FUNCTIONAL DESCRIPTION

The water injection system supplies treated and filtered water at the required flow rate and pressure to the combustion system of the gas turbine. The customer is responsible for supplying water to the water injection skid from the customer's treatment and storage facility (see Customer Responsibilities).

Water enters the skid and passes through a strainer (FW1-2), which protects the system components from damage by foreign objects. A pressure switch (63WN-1) senses pressure upstream of the Pump. The SpeedTronic control system will trip the pump motor if the pressure sensed by this switch is too low. This protects the pump from damage due to cavitation.

An electric motor (88WN-1) drives the centrifugal water injection pump (PW1-1). The speed of the electric motor is controlled by a Variable Frequency Drive unit or VFD (97WN-1). The VFD modulates the frequency of the AC power supplied to the motor (88WN-1). By varying the frequency of the AC power, the pump speed can be precisely controlled. By varying the pump speed, the pump discharge pressure, and hence the discharge flow rate are controlled. The VFD controls the pump speed in response to a 4-20 mA demand signal from the SpeedTronic. A 0-10 mV speed feedback signal (96WN-4) from the VFD is fed back to the SpeedTronic for monitoring and fault detection purposes.

The minimum and maximum flow rates for this Gas Turbine are specified in the water Injection System Piping Schematic included in this Manual.

Downstream of the pump, the pump discharge flow is split into a main line to the turbine, and a recirculation line, which returns to the water storage tank via the "cascade" recirculation orifice. The recirculation flow allows the pump to run in a stable and safe condition when there is little or no flow being delivered to the turbine. It is important that the recirculation flow is returned to the storage tank and not to the pump inlet. Failure to do so would result in overheating of the pump, or damage to the pump seals at low flow conditions. The installation of valves in the Customer's recirculation line between the skid and the storage tank is not recommended. However, if the user decides to install valves in the line, they must be tagged or locked open during skid operation in order to prevent overheating of the pump, or damage to the pump seals.

In the main line downstream of the recirculation "tee", a discharge pressure transmitter (96WP-1) is located. The signal from this transmitter is fed back to the SpeedTronic for monitoring and fault detection.

The water flow in the main line next passes through a high pressure filter assembly (FW1-1). This filter has a "Beta" rating (β) of 75 for 40 micron or larger particles, and a nominal rating of 5 microns. The filter

elements are contained in a high pressure filter housing, with a vent and drain. A differential pressure gauge indicates the pressure drop across the filter. A differential pressure switch (63WN-3) also senses the differential pressure across the filter, and signals an alarm in the SpeedTronic control if the pressure differential exceeds 15 psid (103 kPad).

Downstream of the filter, the flow passes through a turbine flowmeter (FM1-1), with triple pick-ups, each with its own Flow Transmitter (96WF-1, 96WF-2, 96WF-3). The flowmeter provides a signal to the SpeedTronic control system. A strainer (FW1-3) is installed downstream of the flowmeter, to protect the other system components in the event of a flowmeter failure. Manually operated bypass/isolation valves, and a bypass piping loop is provided to allow the flowmeter to be isolated (e.g. for flushing) or to be removed for maintenance (if necessary).

Downstream of the flowmeter, the flow passes through a water actuated stop valve (VS2-1), with solenoid control valve (20WN-1), which shuts off water flow in response to a command from the control system.

Downstream of the stop valve is an exit check-valve, and manual isolation valve, followed by the skid discharge connection ("WJ2").

Interconnecting piping (provided by the customer) carries the water flow from the skid discharge to the manifold connection on the turbine base ("WI2"). The manifold distributes flow equally to Ten flow proportioning valves (VWP1-1 to 10). These valves have a 15 psid (103 kPad) cracking pressure, and provide a graduated flow restriction such that the flow resistance is relatively high at low flows. The purpose of the flow proportioning valves is to provide an even flow distribution at start-up and at low flows. The discharge from each of these valves is connected to a flex hose line which carries the flow of water to one of the combustors.

III. CONTROL AND MONITORING

Total water flow to the turbine is scheduled as a function of fuel flow to the turbine. A control schedule must be established during field compliance tests to meet emissions limits specified by the applicable local or federal standards. The compliance curve, determined as a result of these tests, is programmed into the SpeedTronic control system. It is used as a reference for comparison to the actual water flow, in order to verify that emissions regulations are being met.

The electronic controllers (micro-computers R, S, and T) in the SpeedTronic, control the flow of water in accordance with the control schedule and compliance control curve. The controllers generate a 4 to 20 mA demand signal to the Variable Frequency Drive, which accurately modulates pump speed to obtain the required flow. The control signal is generated in accordance with the control schedule, to achieve the required emissions levels at that particular operating condition. The skid flowmeter (FM1-1) generates a 4-20 mA output proportional to flow rate, which the SpeedTronic uses in the flow control loop as a feedback signal.

For a more detailed description of the control system and the operation of the water injection system, refer to the Control and Protection text in this manual.

IV. SYSTEM REQUIREMENTS

A. Customer Responsibilities

The customer must supply water meeting the requirements of Table 1.

The fluid must be water, and not water/glycol mixture. The customer must provide a storage tank of suitable size, and the necessary piping from the tank to the skid. Water must be supplied to the skid at a temperature between 35°F (1.7°C) and 110°F (43.3°C). The recommended minimum operating skid inlet pressure is 0 psig (0 kPag). The maximum skid inlet pressure should be 20 psig (138 kPag). The storage

tank and related piping should be designed and positioned to deliver water to the skid within this pressure range.

The customer must provide stainless steel piping, flanges, valves, etc., to and from the water injection skid. The water storage tank must be stainless or suitably coated. The piping from the skid to the gas turbine base must be designed for a maximum pressure drop of 10 psid (69 kPad) at the maximum water flow shown on the water injection system schematic diagram.

The storage tank, and all piping must be completely clean before the system is operated. As there are no water filters or strainers on the turbine base, this is particularly important for the piping from the skid to the turbine base. In order to ensure clean piping, the system must be flushed. For system flushing instructions, refer to long-term Shutdown Checks herein.

B. Operation

1. Long Term Shutdown Checks

Before operating the skid for the first time, following an overhaul, or following a period of extended shutdown, it is important that the following checks be made.

a) Verify that the water-injection pump gear-box and/or bearing housing is supplied with lubricant. The lubricant color and level should be checked. Refer to the pump manufacturer's instructions following this text.

b) Check all manual valves (isolation valves etc.) for operability.

c) Verify tightness of all flanges, bolted joints etc. to ensure against leaks.

d) Check alignment of pump and motor in accordance with the pump or skid manufacturers recommendations (if required). Check motor mount and pump mount bolts and tighten if required.

e) Check water filter elements to ensure that they are properly seated. When replacing the filter head it is important to ensure elements remain correctly aligned, and to tighten all studs evenly. This will ensure against any leaks on startup.

f) Remove and inspect any strainer baskets in the strainers. Clean if necessary.

g) Verify all gauges are zeroed

h) Verify that all the settings programmed in the VFD unit are in accordance with the as-shipped values supplied by the Skid Manufacturer (refer to the Skid Manufacturer's Service Manual/Equipment Publications for these settings).

CAUTION

The variable frequency drive has been factory set and tested. Alteration of the factory settings may cause system malfunction or failure. Do not change these settings unless such a change has been approved by the manufacturer of this skid. A list of the factory settings is included in the skid service manual.

i) Jog the pump in accordance with the pump manufacturer's operating instructions.

CAUTION

Do not operate or jog the pump until the water supply has been connected to the system. Even brief operation of the pump without water can cause failure of the shaft seal.

j) The water injection skid and the piping from the skid to the turbine should be flushed on site using water of the same quality as will be used in operation. The flush should be of at least one-half hour in duration. The water discharged during flushing should not be supplied to the turbine combustors but should be drained, or reclaimed. The flushing strainer should then be checked for debris. If any debris is found, the strainer should be cleaned, re-assembled, and the skid should be flushed once again for the same time period. The strainer should then be checked again. This process should be repeated until the strainer is found to remain clean. The system should be checked for leaks during and after this flush and any leaks should be corrected. When the flush is complete, the skid filter elements should be checked for cleanliness, and replaced if necessary before continuing with system operation.

CAUTION

To prevent damage to flowmeter, prior to flushing the system and on initial startup, isolate the flowmeter by closing the flowmeter inlet and outlet isolation valves and opening the flowmeter bypass isolation valve. Ensure that the system is vented of air, or flushed, prior to opening the flowmeter isolation valve and allowing flow through the flowmeter. Operate all manual isolation valves slowly in order to avoid shocking the flowmeter. Open the upstream flowmeter isolation valve first. Then open the downstream flowmeter isolation valve. Finally, close the flowmeter bypass isolation valve to ensure that all system flow is passing through the flowmeter. Do not exceed the maximum flow rating of the flowmeter. Failure to comply with this procedure may cause flowmeter damage.

2. Pre-Operation Checks

All manual isolation valves in the system delivery flow line should be open. All isolation/snubbing valves in the sensing lines to pressure gauges should be open. The flowmeter bypass isolation valve should be closed and the isolation valves upstream and downstream of the flowmeter should be open. The valve on the filter vent line should be closed.

3. Startup

When the system is started, the valve on the filter vent line should be opened slightly to bleed off any trapped air. When a steady stream of water comes out of the vent, the valve should be tightly closed.

V. MAINTENANCE

A. Periodic Maintenance

1. During the first week of operation, the system should be checked periodically for leaks or other problems. After this it should be checked at monthly intervals.
2. The pump and motor should be maintained in accordance with instructions from their respective manufacturers in the section following this text.
3. The inlet strainer should be checked and its basket cleaned or replaced if necessary when the system is shut down.
4. The filter elements should be replaced when the filter differential pressure reaches 15 psid (103 kPad). Replace the filter elements in accordance with the manufacturer's instructions.

5. All manually operated valves should be cycled once per month to verify freedom of movement. They should be returned to their normal running position following this check.

B. Troubleshooting

If the water injection system fails to provide water to the turbine at the required flow rate or pressure, the following possible causes should be investigated.

1. Water supply exhausted: Verify adequate water supply
2. Insufficient supply pressure to water injection skid: Verify 0 psig minimum supply pressure at inlet pressure gauge.
3. Loss of pump suction: Check for air leaks in pump inlet piping. Check condition of gaskets. Tighten all joint connections.
4. Excessive filter pressure differential: Verify 15 psid (103 kPad) or less indicated on filter differential pressure gauge at design flow rate. Replace elements if dirty.
5. Variable Frequency Drive (97WN-1) not responding: Verify correct power supply and control signal to the VFD. Verify motor/pump are running at correct speed in response to control signal. Refer to VFD manufacturer's instructions in the section following this text. Refer also to Turbine Control specification.
6. Stop valve (VS2-1) closed: Verify correct porting and power supply to 20WN-1 solenoid valve. Check for blockage in control pressure supply line to solenoid valve. Check for correct operation of stop valve.
7. Skid check valves stuck closed: Remove check valves and verify mechanisms are free to move.
8. Strainers blocked : Remove baskets and inspect. Clean if necessary. Replace baskets and tighten all bolts.
9. Skid inlet or discharge lines blocked: Check for blockage. Verify lines are not frozen if exposed to cold temperatures.
10. Pump discharge inadequate: Verify pump to motor coupling, drive shaft, or pump impeller key has not sheared. Disassemble pump and inspect if necessary. Check pump gear box. Verify pump is rotating in correct direction. Refer to pump manufacturer's instructions in the section following this text for further pump troubleshooting guidance.
11. Pump motor failed: Verify motor is not single-phased. Verify motor operable. Refer to motor manufacturer's instructions in the section following this text for further motor troubleshooting guidance
12. Incorrect pressure gauge or flowmeter readings: Verify calibration. Check flowmeter to ensure it is generating an output signal to the SpeedTronic controller, and that the correct "K" factor (recorded on a tag attached to the flowmeter) is set for the flow Transmitter. Check SpeedTronic to ensure correct calibration is programmed.

C. Long-Term Storage

The water injection skid is an enclosed structure designed to maintain the system from freezing. If the skid will not be operated for an extended period of time, the operator may choose to drain the system. However, it is still recommended that the power to the skid space heater and motor space heaters (if provided) be left connected in order to protect the skid from freezing damage and to minimize the condensation of moisture in the skid. The following procedure may be used to prepare the skid for storage

1. Close the skid inlet isolation valve.
2. Open the filter vent line valve.
3. Blank off the recirculation line at the skid package connection point.
4. Open the filter drain.
5. Open the pump drain (e.g. by removing the plug in the lower half of the pump casing).
6. Remove the plugged tap on the line from the pump outlet.
7. Close the manual isolation valves at the skid discharge.
8. Open strainer drain to evacuate as much water as possible from the skid piping.
9. Open all low point drains in the skid piping. Allow any water present to drain fully before replacing low point drains.

When returning the skid to service, the above steps should be reversed.

Table 1
Properties of Water for Injection system

Total of Sodium (Na) + Potassium (K) + Lead (Pb) + Vanadium (V) + Lithium (Li) = 0.5 ppm maximum Total of dissolved plus undissolved solids = 5 ppm maximum pH = 6.5 to 7.5
Note: Refer also to paragraph "Non-Fuel Contaminants" in "Gas Turbine Fuel Recommendations" under FLUID SPECIFICATIONS tab. **Note: Refer also to GE drawing 334A7731 for water injection water quality criteria**

ATTACHMENT IC-EU4-J3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

FUEL GAS CONTROL SYSTEM
DLN$_x$I

This attachment provides a general description of Dry Low NO_X system's operation as recommended by General Electric. Actual operation will depend on operating conditions as determined by the facility.

GEK106855
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GE Power Systems
Gas Turbine

Fuel Gas Control System (DLN_x I)

I. GENERAL

Fuel gas flow is controlled with the fuel gas stop/ratio valve, gas control valve, gas splitter valve and the gas transfer valve assemblies. The stop/ratio valve and the gas control valve (GCV) work in conjunction to regulate the total fuel flow delivered to the gas turbine. The gas splitter valve (GSV) and the gas transfer valve (GTV) are used to control the distribution of the fuel flow to a multi-nozzle combustion system. The gas purge system is used to protect the gas manifolds from a number of undesirable effects described within.

It is the gas control valve which controls the desired fuel flow in response to the command voltage, FSR. To enable it to do this in a predictable way, the stop/ratio valve is designed to maintain a predetermined pressure, P2, at its inlet.

The gas splitter valve and the gas transfer valve regulate the percentage of the total fuel flow delivered to each of the gas system manifolds. These manifolds supply fuel to the various combustors.

The gas purge valves are used to port compressor discharge air to the primary fuel nozzles and transfer fuel nozzles under certain operating conditions.

Other system features, as discussed here, are provided for reliability of operation and protection against malfunctions.

II. FUEL GAS CONTROL SYSTEM

The four valve assemblies described above are combined in the formation of the fuel gas system as shown in Figure 1. Typically, the gas fuel system valves are actuated by hydraulic cylinders moving against spring-loaded valve plugs. Servovalves, controlled by signals from the SPEEDTRONIC™ control panel, are used to regulate the hydraulic fluid in the cylinders. Redundant Linear Variable Differential Transformers (LVDTs) mounted on each valve are used to provide valve position feedback for closed loop position control in the SPEEDTRONIC™ panel.

Refer to Figure 2, where all the typical gas fuel system components are shown interconnected schematically. A functional explanation of each part or subsystem is contained in subsequent paragraphs. For more detail on the electrohydraulic circuits see the SPEEDTRONIC™ System text, Gas Fuel system schematics, and Control Sequence diagrams furnished to the site.

III. GAS CONTROL VALVE

The position of the gas control valve plug is intended to be proportional to FSR which represents the total called-for fuel flow.

When the turbine is to run on gas fuel the permissives must be "true". This enables the GCV to open. The stroke of the valve will then be proportional to FSR.

FSR goes through the fuel splitter (discussed in the dual fuel section) and becomes FSR2, which is then conditioned for offset and gain. This signal is converted to an analog signal and used in a servo-driver to position the valve. The gas control valve stem position is sensed by the output of a linear variable differential transducer (LVDT), rectified, and fed back to an operational amplifier. There are two LVDTs, so it will select the highest output and this is compared to the FSROUT input signal at the summing junction. If the feedback is in error with FSROUT, the operational amplifier will increase the signal to the hydraulic servovalve to drive the gas control valve in a direction to decrease the error. In this way the desired relationship between position and FSR is maintained, and the control valve meters the correct gas fuel. See Figure 3.

Actuation of the spring-loaded gas control valve is by a hydraulic cylinder controlled by the electrohydraulic servovalve.

The plug in the gas control valve is contoured to provide the proper flow area in relation to valve stroke. The gas control valve uses a skirted valve disc and venturi seat to obtain adequate pressure recovery. High pressure recovery occurs at overall valve pressure ratios substantially less than the critical pressure ratio. The net result is that flow through the control valve is independent of valve pressure drop. Gas flow then is a function of valve inlet pressure, P_2, and valve area only.

An open or a short circuit in one of the servo coils or the signal to one coil does not cause a trip. The GCV has two LVDTs and can run correctly on one.

IV. GAS CONTROL VALVE (GVC) POSITION CONTROL LOOP

The position control loop is shown on Figure 4. Two LVDTs, 96GC-1 and -2, are used for position sensing. Their feedback signals go through the servo-amplifier where two independent transformers and a discriminator circuit demodulates the LVDT ac output to dc feedback signals acceptable for use by the position control. The highest signal is diode gated and proportioned by an amplifier to the correct valve stroke calibration. See Figure 4 for a typical calibration curve.

It is this dc signal which is fed back and compared to FSR at the summing junction of an error amplifier in the servo-driver circuitry. For stable control, the amplified error is properly proportioned to command the integrating amplifier which drives the servovalve, 65GC. When the LVDT feedback equals the FSR input signal the servo-drive amplifier summing junction is satisfied.

The Control Specifications give the correct position loop settings for a specific turbine.

V. LVDT TERMINAL CONNECTIONS

Linear Variable Differential Transformers (LVDTs) used in SPEEDTRONIC™ control have special proprietary windings which requires that several of the terminals be jumpered at the first terminal board, since the SPEEDTRONIC™ system requires only four LVDT leads. The primary winding of the LVDTs is tapped off at the 25% point, and the connection is brought out to become one of the two output connections of the LVDT. The low voltage input connection of the primary coil must be connected to the zero stroke end connection of the secondary windings, and the null position ends of the two secondary windings must be connected to permit the secondary windings to be in series opposition. Four leads used in the SPEEDTRONIC™ fuel control loop are the two primary connection leads for excitation and the two special output connections. One of the output connections is the tapped connection lead of the primary winding. The other connection is the maximum stroke end connection of the secondary winding. Polarity of the tapped primary connection is opposite to the polarity of the secondary winding at zero stroke, and is in series addition to the polarity of the secondary winding at zero stroke, and is in series addition to the polarity of the secondary winding at maximum stroke. Thus, the polarity of the ac output of the LVDT (or the rectified dc output), as used in SPEEDTRONIC™ control, does not reverse as the LVDT core position is moved from the zero fuel stroke to the maximum fuel stroke position. The LVDT with the proprietary output circuit is designed for an output of 0.7 V rms ac with the zero stroke of the valve stem and 3.5 V rms ac at the designed maximum stroke for the specified LVDT. The actual maximum required position of the gas control valve's stem, and travel, may be slightly less than the actual design stroke for the LVDT.

VI. LVDT OSCILLATORS

Excitation for each LVDT is provided by an oscillator in the SPEEDTRONIC™ panel. The output of each oscillator is 7.0 V ac at a nominal frequency of 3000 Hz. The two oscillators, however, on the two LVDTs can cause a beat frequency equal to the difference in the frequency of the two oscillators. Therefore, one oscillator is set at 3200 Hz and the other oscillator is set at 2800 Hz to eliminate the effects of the beat frequency in the same control loop.

VII. SERVOVALVE (65GC AND 90SR) MECHANICAL POSITION

The servovalves are furnished with a mechanical null offset bias to cause the gas control valve or stop/ratio valve to go to the zero stroke position on zero voltage or an open circuiting of both servovalve coils. During calibration, checks should be made to insure that this happens.

VIII. STOP/RATIO VALVE

The stop/ratio valve is a dual function valve. It serves as a stop valve and is therefore an integral part of the protection system. Any emergency trip or normal shutdown will trip the valve to its closed position shutting off gas fuel flow to the turbine. This is done either by dumping hydraulic oil from the SRV hydraulic cylinder or driving the position control closed electrically.

The valve also serves as a pressure regulating valve to hold a known fuel gas pressure ahead of the gas control valve and because of these dual functions the valve is sometimes called a stop/speed ratio valve.

IX. SPEED RATIO FUNCTION

The stop/speed ratio valve has two control loops. There is a position control loop similar to that for the gas control valve and there is a pressure control loop. See Figure 5. Fuel gas pressure P2 at the inlet to the gas control valve is controlled by the pressure loop as a function of turbine speed. This is done by proportioning the turbine speed signal TNH, and comparing it with the pressure feedback signal from transducer 96FG, at the summing junction of a controlling amplifier.

See Figure 6. Any error between signals causes the amplifier to generate a pressure control signal to reposition the valve. The valve will be modulated continuously to hold this pressure.

The pressure control signal commands a servo-drive amplifier to control the ratio valve position loop in the same way the gas control valve drives its position loop in response to FSR.

Many of the values used in these algorithms are also sent to modules to be displayed on the CRT (e.g. fuel gas pressure, valve stroke, FSROUT, and FPRG).

X. STOP VALVE FUNCTION

The stop/ratio valve provides a shutoff of the fuel gas flow when required by either normal operation or emergency conditions. A hydraulic trip relay dump valve is located between the electrohydraulic servovalve 90SR, and the hydraulic cylinder. This relay dump valve is operated by the low pressure control oil trip system. When the trip oil (OLT) is at normal pressure, the dump valve is maintained in a position that allows the electrohydraulic servovalve 90SR to control the cylinder position. When the trip oil pressure is low (as in the case of normal or emergency shutdown), the dump valve spring shifts a spool to a position which dumps high pressure hydraulic oil (OH) in the stop/speed ratio valve actuating cylinder to the lube oil reser-

voir. The closing spring, atop the valve plug, instantly shuts the valve, thereby shutting off fuel gas flow to the turbine combustors.

XI. GAS SPLITTER VALVE FUNCTION

The function of the gas splitter valve (GSV) is to take the total fuel flow regulated by the gas control valve and divide it between the primary and secondary fuel paths. The primary fuel path (left side) supplies a manifold which distributes fuel to the combustion chamber primary nozzles. The secondary side (right side) of the gas splitter valve supplies the gas transfer valve with a fuel source.

The GSV assembly is a three-way valve actuated by a hydraulic cylinder (VGS–3). When the primary side of the GSV is closed by a fixed amount, the secondary side is opened by the same amount and vice versa.

The split between the primary and secondary fuel is determined by a control algorithm in the SPEEDTRONIC™ software. This software generates a digital GSV position command FSRXSOUT referenced to the primary valve position. This command is converted into an analog signal for use in a servo amplifier. The servo amplifier takes the difference between the analog position command and the processed LVDT position feedback to create an error signal. This position error signal is amplified and converted into a current to drive the servovalve 65GS-1.

Two redundant LVDTs, 96GS-1 and -2, are mounted on the gas splitter valve to provide valve position feedback. Both LVDTs transmit a position signal to the SPEEDTRONIC™ referenced to the primary valve. The highest signal is diode gated and proportioned by an amplifier to provide the position feedback signal used in the servo amplifier.

Certain operational situations, such as load rejection, require the GSV to be tripped to the full primary position. The controls software will drive the servovalve to port hydraulics to the bottom side of the double ended hydraulic cylinder to stroke the valve to a 100% primary position (stem up).

Refer to the Control Specifications for the correct GSV setting for a specific turbine.

XII. GAS TRANSFER VALVE FUNCTION

The function of the gas transfer valve VGD-1 is to regulate the gas fuel flow exiting the right hand side of the three-way splitter valve (VGS–3) between two separate flow paths called the secondary fuel flow and the transfer fuel flow. Both flow paths supply gas fuel to unique manifolds which in turn supply various combustion chamber fuel nozzles.

The gas transfer valve (GTV) assembly is a three-way valve actuated by a hydraulic cylinder. The SPEEDTRONIC™ software regulates the secondary and transfer flow split by generating a relative GTV digital position command FSRXOUT. Similar to the GSV position control, this command is converted to an analog signal and used in the servo amplifier to drive the servovalve 65GD-1. Two LVDTs, 96GD-1 and -2, are mounted on the gas transfer valve to provide valve position feedback for closed loop control.

A schematic of the gas transfer valve control system can be seen in Figure 7. Refer to the Control Specifications for the correct GTV settings for a particular turbine.

XIII. GAS FUEL PURGE SYSTEM

To prevent ingestion of liquid fuel and water (for units with steam or water injection) through the gas nozzles and coking of the gas fuel nozzles while operating on liquid fuel, some atomizing air is diverted through the gas fuel nozzles, see Figure 8.

When transfer from gas to liquid is completed, gas fuel system purge valves VA13-1 and -2 are opened by energizing 20PG-1 and 20PG-2. The signal to energize 20PG-1 and -2 also closes gas vent solenoid valve 20GV-2 to prevent venting of the volume between the purge valves.

Limit switches 33PG-1 and -2 on the purge valves indicate that the valves are closed and permit transfer from liquid to gas when both purge valves are closed and the intervolume pressure switch 63PG-1 indicates low pressure. Limit switches 33PG-2 and -4 indicate that the purge valves are open and used to determine valve fault.

During normal gas fuel operation (Primary/Lean–Lean/Premix) the gas fuel transfer nozzle purge valves VA13-3 and -4 are opened by energizing 20PG-3 and 20PG-4. The signal to energize 20PG-3 and -4 also closes gas vent solenoid valve 20VG-3 to prevent venting of the volume between the purge valves.

The transfer purge system is closed during a transfer from Primary mode to Lean–Lean mode. The transfer purge is not reestablished until the transfer valve is at the 100% secondary position. Similarly, the transfer valve will not admit fuel to the transfer fuel nozzles until the purge valves are closed.

The transfer purge system should be tested periodically. Proper transfer purge system operation is required to protect the gas fuel transfer nozzles from being damaged.

Limit switches 33PG-5T8 and pressure switch 63PG-2 are used to detect proper system operation as described for the primary purge system.

XIV. VALVE MALFUNCTION ALARMS

In addition to being displayed, the feedback signals and the control signals of all valves are compared to normal operating limits, and if they should go outside of these limits, there will be an alarm. The following are typical alarms:

1. Loss of feedback.
2. Valve is open prior to permissive to open.
3. Loss of servo current signal.
4. P_2 pressure (96PG) is zero during operation.
5. Valve not following command.

The servovalves are furnished with a mechanical null offset bias to cause the gas control valve or speed ratio valve to go to the zero stroke position (fail safe condition) should the servovalve coil signals or power be lost. During a trip or no run condition, a positive voltage bias is placed on the servo coils holding them in the position calling for valve closed.

XV. CALIBRATION OF FUEL GAS PRESSURE TRANSDUCERS, 96FG-2A, 2B, 2C

The fuel gas pressure transducer, 96FG, is a pressure transducer with a dc voltage output directly proportional to pressure input in psig. It incorporates solid state circuits and an amplifier in the transducer case.

A diode is connected across the output of the transducer. This prevents any possibility of a spurious signal driving the transducer amplifier negative, out of its normal operating range.

The transducer is normally factory adjusted and calibrated; however, the calibration must be checked in the field and necessary readjustment made to meet the volts–output versus pressure–input requirements, as specified in the Control specifications.

XVI. GAS STRAINER

A strainer is provided in gas supply lines to remove any foreign particles from the gas fuel before it is admitted to the speed/ratio valve assembly. There is a blowdown connection on the bottom of the strainer body which should be utilized periodically for cleaning the strainer screen. The frequency of cleaning will depend upon the quality of the fuel gas used. The strainer should be cleaned shortly after full load has been attained for the first time, and after any disassembly of the purchaser's fuel gas lines.

A conical strainer(s) is field installed upstream of each fuel gas manifold between two mating flanges. The strainer(s) is oriented with the tip in the opposite direction of fuel flow and is used to prevent foreign particles from entering the combustion system. Prior to commercial operation or following the first 10 hours of unit operation, the strainer(s) and gaskets are removed. A new gasket(s) should be reinstalled prior to restarting the unit.

XVII. LOW PRESSURE SWITCH, 63FG

This pressure switch is installed in the gas piping upstream from the gas stop/speed ratio valve and control valve assembly and initiates an alarm on the annunciator panel whenever the gas pressure drops below a specified setting. On dual fuel units, this switch or a second 63FG pressure switch set below alarm setpoint is used to initiate a transfer to liquid fuel.

XVIII. PRESSURE GAUGES

Three pressure gauges, with hand valves, are installed in the fuel gas supply line. The upstream pressure gauge measures the pressure of the gas entering the stop/speed ratio valve, the intermediate pressure gauge measures P2 pressure ahead of the gas control valve, and the downstream gauge measures the pressure as the gas leaves the gas control valve.

XIX. GAS FUEL VENT SOLENOID VALVE 20VG

This solenoid valve vents the volume between the stop/speed ratio valve and the gas control valve when the solenoid is deenergized. The solenoid is energized and the vent valve closed when the master control protection circuit is energized. When a turbine start signal is given the valve, therefore, will be closed and remain closed during gas fuel operation.

The vent is open when the turbine is shut down because the stop/speed ratio and gas control valves have metal plugs and metal seats and therefore, are not leak tight. The vent insures that during the shutdown period, fuel

gas pressure will not build up between the stop/speed ratio and gas control valves, and that no fuel gas will leak past the closed gas control valve to collect in the combustors or exhaust.

XX. SPEED RATIO VALVE, SRV

Gas control valves which contain dual gain speed ratio valve plugs (SRV) also contain two P2 pressure connections. One pressure connection is used for the P2 pressure gauge and the other is used for the P2 pressure transducer and vent solenoid 20VG. See Figure 1.

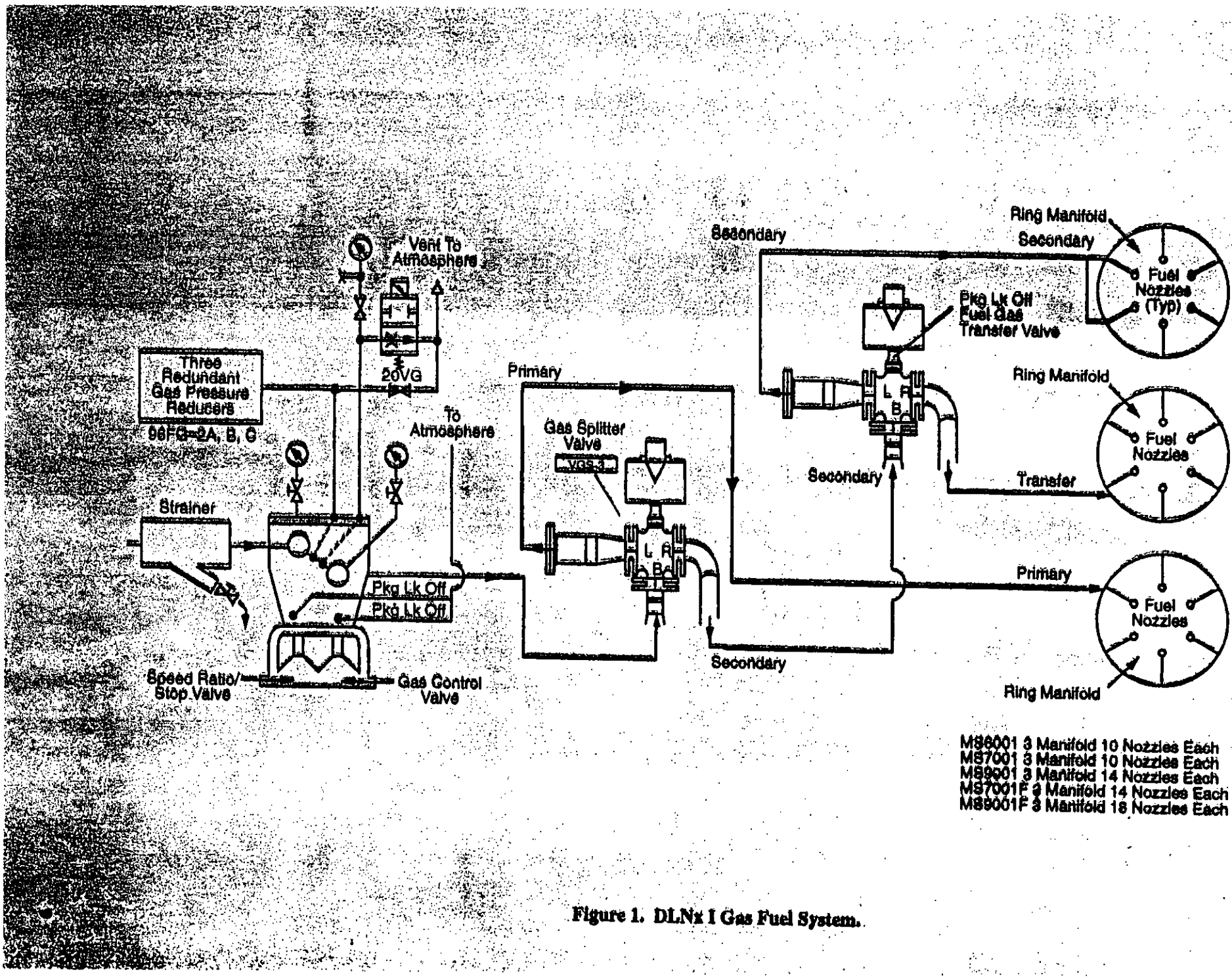


Figure 1. DLNx I Gas Fuel System.

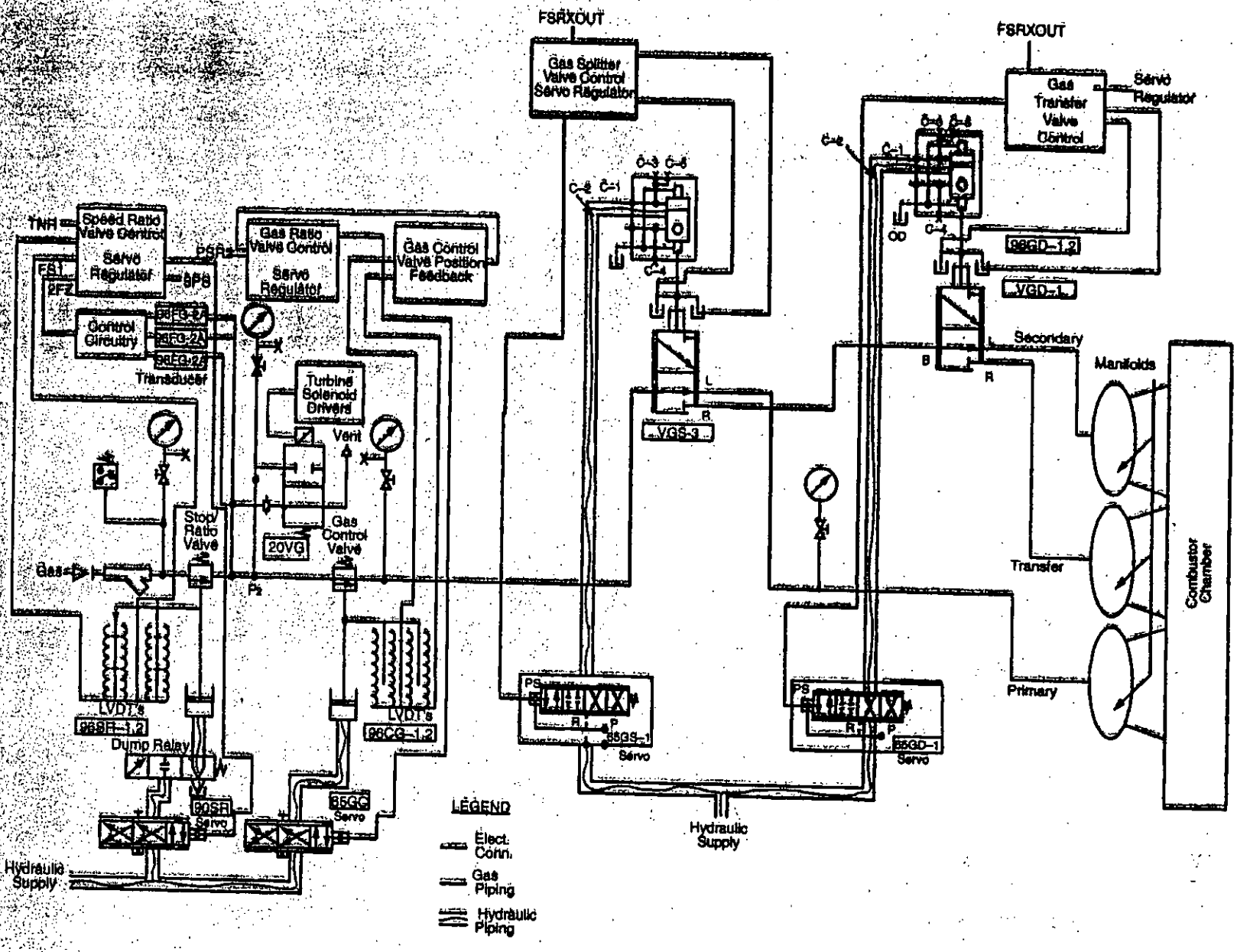


Figure 2. DLNx I Gas Fuel Control System.

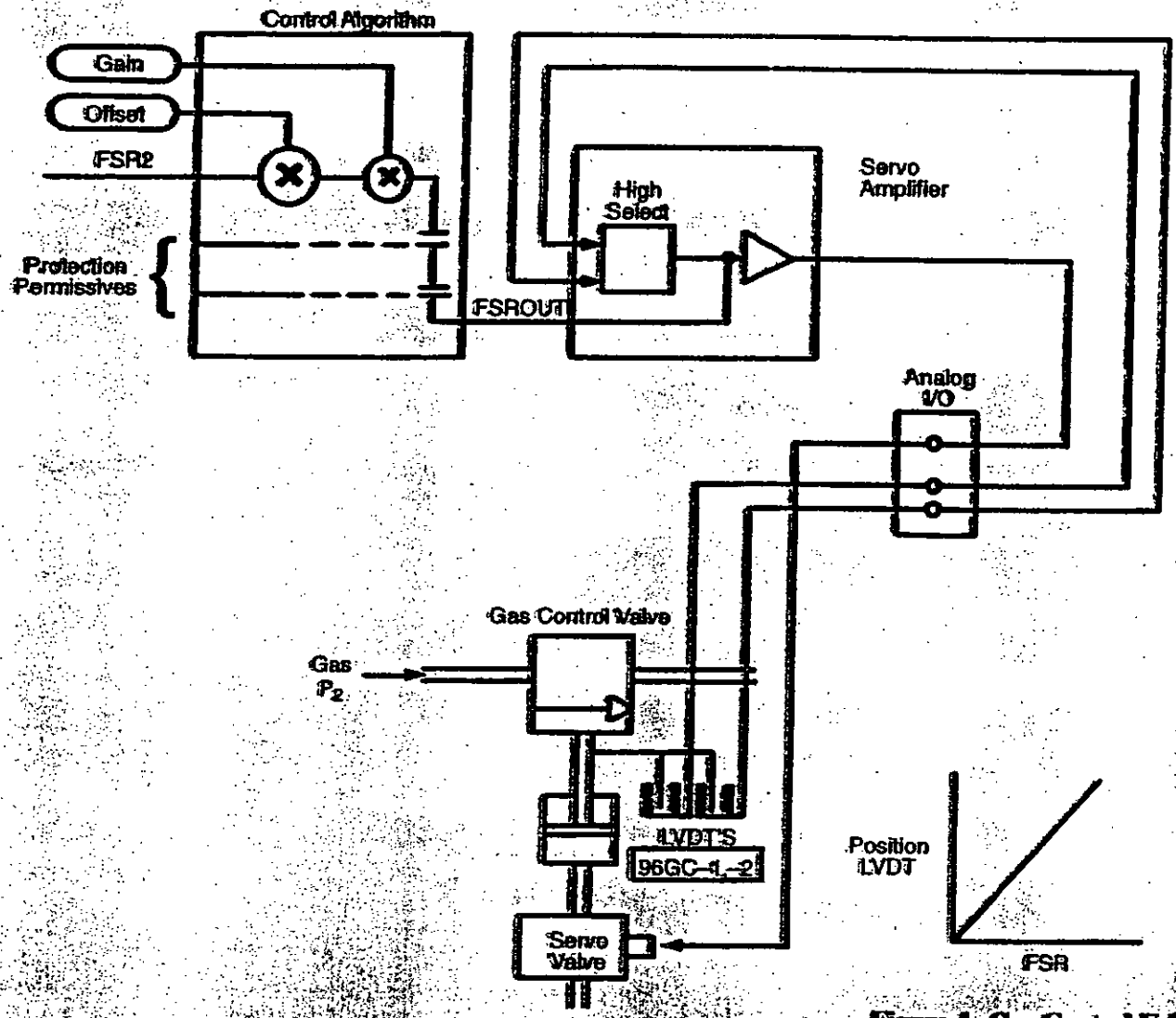


Figure 4. Gas Control Valve Position Loop Calibration.

Figure 3/4. Gas Control Valve Control Schematic

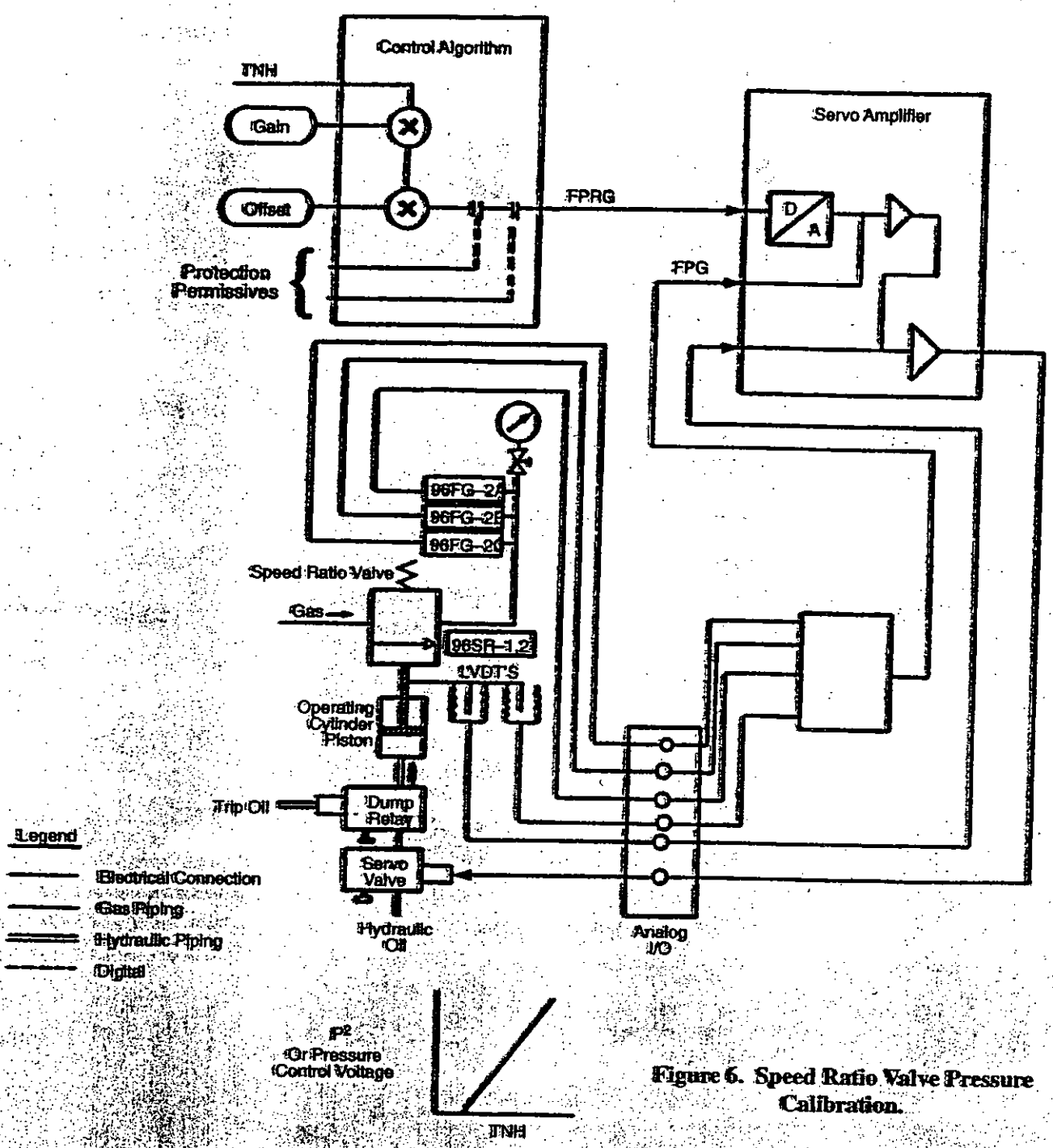


Figure 6. Speed Ratio Valve Pressure Calibration.

Figure 5/6. Speed Ratio/Stop Valve Control Schematic

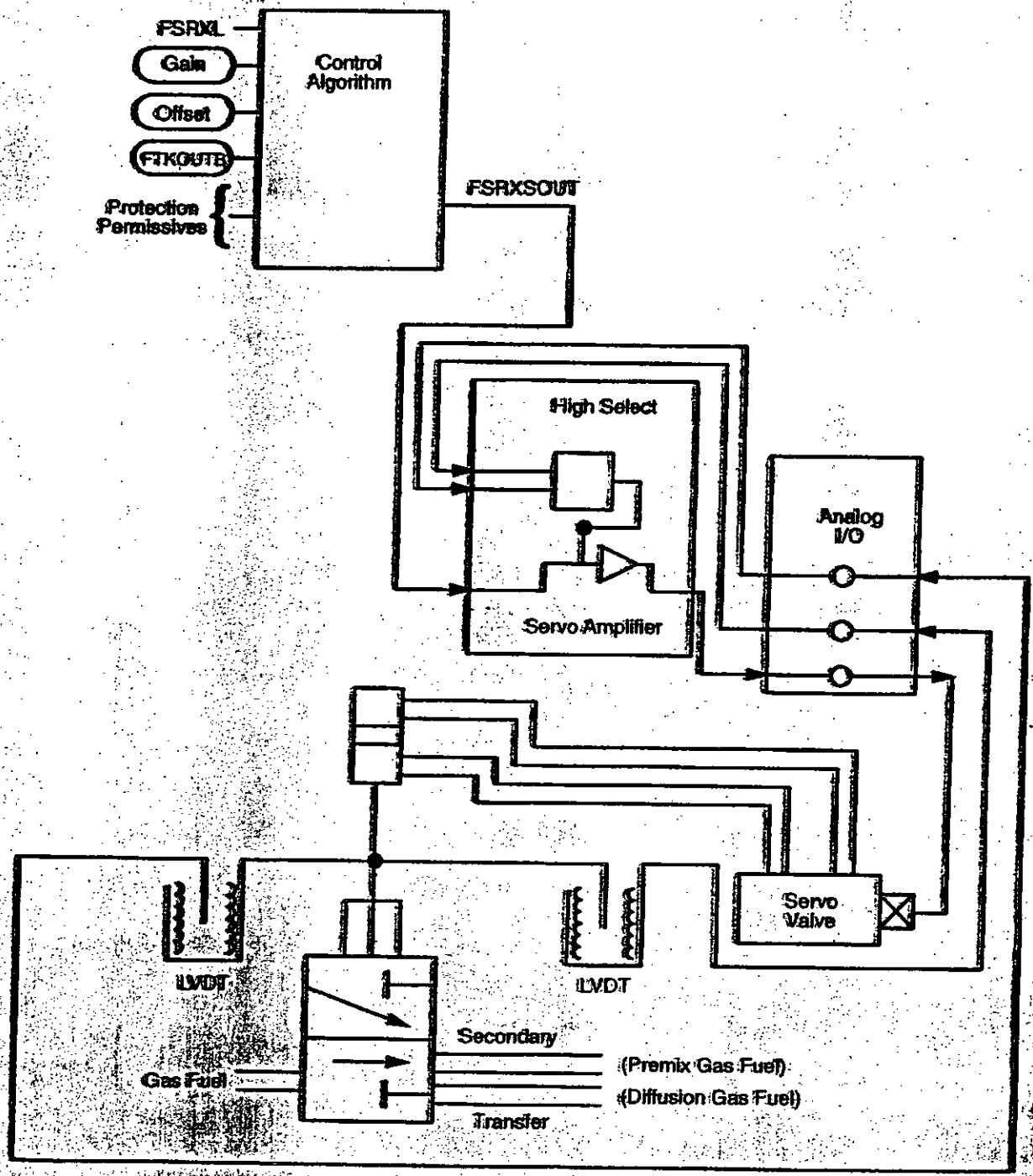


Figure 7. Gas Transfer Valve Control System

Figure 8. Gas Fuel Nozzle Purge System. (1 for each, Primary & Transfer)

GE Power Systems
General Electric Company
One River Road, Schenectady, NY 12345
518 • 385 • 2211 TX 145258

ATTACHMENT IC-EU4-J5

COMPLIANCE TEST REPORT

Florida Power
A Progress Energy Company

June 19, 2002

Mr. Garry Kuberski
Florida Department of Environmental Protection
Central District
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803-3767

Dear Mr. Kuberski:

Re: Intercession City Plant – Unit P12
Initial Compliance Testing after Modification for Units P12 – P14
Permit: 0970014-006-AC / PSD-FL-268A

Please find enclosed the initial post-modification air emissions compliance testing for Unit P12 at the Intercession City Plant. This testing will also serve as the annual compliance test for Unit P12. The test reports for Units P13 and P14 will be submitted separately.

The testing occurred on May 5th and demonstrates compliance for NOx, VOC, CO and visual emissions on each fuel (natural gas and oil). Please contact Jamie Hunter at (727) 826-4363 if you have any questions or need additional information.

I hearby certify that based on the information and belief formed after reasonable inquiry, the statements and information in the attached document are true, accurate and complete.

Sincerely,

Martin J. Drago
Plant Manager
Responsible Official

jjh/JJH036

enclosure

P.O. Box 14042
St. Petersburg, FL 33733

EMISSION TEST REPORT

for
EMISSIONS COMPLIANCE
of
ONE GENERAL ELECTRIC FRAME 7EA TURBINE
P-12
at the
INTERCESSION CITY POWER PLANT
near
INTERCESSION CITY, OSCEOLA COUNTY, FLORIDA

Prepared for
Florida Power Corporation

Test Dates: May 5, 2000

Cubix Job No. 7009

TABLE OF CONTENTS

INTRODUCTION

Emission tests were conducted on one stationary gas turbine located at the Intercession City Power Plant near Intercession City, Florida. The purpose of these tests was to determine the compliance status of the unit with regard to the Florida Department of Environmental Protection (FDEP) PSD Permit No. PSD-FL-268A, Project No. 0970014-006-, and 40 CFR 60 Subpart GG. The testing was conducted by Cubix Corporation of Austin, Texas on May 5, 2002.

Quantities of nitrogen oxides (NOx), carbon monoxide (CO) and volatile organic compounds (VOC) were measured in the exhaust of the turbine.

The emission tests followed the procedures set forth in the Code of Federal Regulations, Title 40, Part 60, Appendix A, Methods 1, 3a, 9, 10, 19, 20 and 25a. Table 1 summarizes the background information pertinent to these tests.

This report has been reviewed and approved for submittal by the following representatives:

Cubix Corporation

Florida Power Corporation

TABLE 1
BACKGROUND DATA

Owner/Operator:	Florida Power Corporation
Test Coordinator:	Florida Power Corporation One Power Plaza, 263 13th Avenue South, BB1A St. Petersburg, FL 33701-5511 Attn: Jamie Hunter, Environmental Engineer (727) 826-4363 TEL (727) 826-4216 FAX
Test Contractor:	Cubix Corporation 9225 US Highway 183 S. Austin, Texas 78747 Attn.: Tony Ruiz, Project Manager (512) 243-0202 TEL (512) 243-0222 FAX
Test Dates:	May 5, 2002
Location:	Intercession City, Florida.
Process Description:	The turbine is utilized for generation of electricity. Dry-low NOx burners are utilized for NOx control when fueled by natural gas. Water injection is utilized for NOx control when fueled by No. 2 fuel oil.
Emission Point:	Emissions were measured in the in 7 ports located on the rectangular exhaust stack of each unit.
Test Methods:	Traverse point layout by EPA Method 1 O_2 and CO_2 concentrations and molecular weight by EPA Method 3a Stack moisture also by stoichiometry Opacity by EPA Method 9 CO concentration by EPA Method 10 Stack flow rates by EPA Method 19 NOx and O2 by EPA Method 20 THC concentration by EPA Method 25a
Regulatory Applications:	40 CFR 60 Subpart GG

SUMMARY OF RESULTS

Exhaust gases from the gas turbine generation unit were tested to satisfy permit requirements. Cubix Corporation of Austin, Texas conducted testing. The results of those tests are summarized in this section of the report.

Test Matrix

The test matrix consisted of three test runs at base load for natural gas testing and also three runs for distillate fuel oil testing.

During the 1-hour test runs conducted at base load, NOx, CO, THC, CO_2 and O_2 concentrations were continuously monitored via instrumental analysis. In addition, opacity was measured. Fuel samples of natural gas and distillate fuel oil were collected and subsequently analyzed for total sulfur content as an indirect measurement of SO_2 emissions.

Tables 2 and 3 provide the executive summaries of the testing results for natural gas testing and distillate fuel oil testing. These tables provide the pertinent unit operational data, ambient conditions, Cubix measurements, and calculated emissions during each test run.

The data used to generate these tables are supported by the documents presented in the appendices of this report. Appendix A contains a sketch of the stack and the traverse point layout. Examples of calculations used for the presentation of the data are contained in Appendix B. Turbine operational data provided by FPC is located in Appendix C. Summaries of the QA/QC activities are presented in Appendix D. Certifications of the calibration gases are included in Appendix E. Copies of the strip chart records from these tests are located in Appendix F. Fuel analyses and F-factor worksheets required for calculation of stack volumetric flow rates can be found in Appendix G. Opacity worksheets and observer certifications are presented in Appendix H.

Table 2: Summary of Results
Unit P-12 Full Load Testing
Natural Gas Fuel

Company: Florida Power Corporation
Plant: Intercession City Plant
Location: Intercession City, Osceola County, Florida
Technicians: TR, SO
Source: Unit P-12, a GE Frame 7EA Combustion Turbine

Test Number	P12-NG-1	P12-NG-2	P12-NG-3		FDEP Permit Limits
Date	5/5/02	5/5/02	5/5/02		
Start Time	12:39	13:56	15:06		
Stop Time	13:39	14:56	16:06		
Power Turbine Operation				*Averages*	
Generator Output (MW, DWATT)	78.0	77.4	77.5	***77.6***	
Heat Input (MMBtu/hr, LHV) (fuel meter run)	833.7	826.9	829.9	***830.2***	905†
Turbine Capacity (Mfg.'s Curve, Generator Output vs. T-1)	82.2	81.6	81.6	***81.8***	
Percent Load (% of maximum heat input at inlet temp)	94.8%	94.8%	94.9%	***94.9%***	
Barometric Pressure ("Hg, AFPAP)	30.1	30.1	30.1	***30.1***	
Air Inlet Duct Losses ("H_2O, AFPCS)	3.50	3.50	3.50	***3.50***	
Specific Humidity (CMHUM)	0.0156	0.0144	0.0148	***0.0149***	
Compressor Inlet Temperature (°F, CTIM)	87	89	89	***88***	
Engine Compressor Discharge Pressure (psia, CPD)	162.6	161.6	161.6	***161.9***	
Compressor Discharge Temperature (°F, CTD)	708	709	708	***708***	
Mean Turbine Exhaust Temperature (°F, TTXM)	1038	1040	1040	***1039***	
Inlet Guide Vane Angle (degrees, CSGV)	84.0	84.0	84.0	***84.0***	
Turbine Fuel Data (Natural Gas, FGT)					
Fuel Heating Value (Btu/lb, HHV)	23094	23094	23094	***23094***	
Fuel Heating Value (Btu/lb, LHV)	20806	20806	20806	***20806.5***	
Fuel Specific Gravity	0.5777	0.5777	0.5777	***0.5777***	
Sulfur in Fuel (grains/100 SCF of fuel gas)	0.093	0.093	0.093	***0.093***	**1.0**
O_2 "F_d Factor" (DSCFex/MMBtu @ 0% excess air)	8641	8641	8645	***8642***	
CO_2 "F_c Factor" (DSCFex/MMBtu @ 0% excess air)	1029	1029	1029	***1029***	
Gas Fuel Flow (FQG, lbs/sec from Mark V)	11.13	11.04	11.08	***11.08***	
Heat Input (MMBtu/hr, HHV, from Mark V)	925.3	917.8	921.2	***921.4***	
Ambient Conditions					
Atmospheric Pressure ("Hg)	30.21	30.20	30.18	***30.20***	
Temperature (°F): Dry bulb	78.0	76.0	77.0	***77.0***	
(°F): Wet bulb	88.0	88.0	87.5	***87.8***	
Humidity (lbs moisture/lb of air)	0.0300	0.0305	0.0297	***0.0301***	
Measured Emissions					
NO_X (ppmv, dry basis)	5.68	5.72	5.72	***5.70***	
NO_X (ppmv, dry @ 15% excess O_2)	**5.49**	**5.61**	**5.56**	***5.56***	**9.0**
NO_X (ppmv @ 15% O_2, ISO Day)	7.95	8.15	7.96	***8.02***	
CO (ppmv, dry basis)	7.59	6.77	6.47	***6.94***	
CO (ppmv, dry @15% excess O_2)	7.34	6.64	6.30	***6.76***	**20.0**
UHC (ppmv, wet basis)	0.91	0.59	0.28	***0.60***	**2.0**
Visible Emissions (% opacity)	N/A	N/A	0	***0***	**10**
O_2 (% volume, dry basis)	14.80	14.89	14.84	***14.84***	
CO_2 (% volume, dry basis)	3.52	3.48	3.48	***3.50***	
F_o (fuel factor, range = 1.600-1.836 for NG)	1.73	1.73	1.74	***1.73***	
Stack Volumetric Flow Rates (via EPA Method 19)					
via O_2 "F_d Factor" (SCFH, dry basis) (fuel meter run)	2.74E+07	2.76E+07	2.75E+07	***2.75E+07***	
via CO_2 "F_c Factor" (SCFH, dry basis) (fuel meter run)	2.70E+07	2.71E+07	2.72E+07	***2.71E+07***	
Calculated Emission Rates (via M-19 O_2 "F-factor")					
NO_X (lbs/hr)	**18.6**	**18.8**	**18.7**	***18.7***	**33.0**
CO (lbs/hr)	**15.1**	**13.6**	**12.9**	***13.9***	**43.0**
UHC as VOC (lbs/hr)	**1.16**	**0.75**	**0.36**	***0.76***	**2.0**

† Permitted capacity is at a reference of: 59°F inlet temperature, 60% relative humidity, and 14.7 psia ambient air pressure.

Table 3: Summary of Results
Unit P-12, Full Load Testing
Distillate Oil Fuel

Company: Florida Power Corporation
Plant: Intercession City Plant
Location: Intercession City, Osceola County, Florida
Technicians: TR, SO
Source: Unit P-12, a GE Frame 7EA Combustion Turbine

Test Number	P12-FO-1	P12-FO-2	P12-FO-3		
Date	5/5/02	5/5/02	5/5/02		
Start Time	16:46	18:07	19:19		
Stop Time	17:46	19:07	20:19		FDEP Permit Limits
Power Turbine Operation				*Averages*	
Generator Output (MW, DWATT)	81.1	81.8	82.6	*81.8*	
Heat Input (MMBtu/hr, LHV) (Mark V fuel meter)	868.8	873.8	880.7	*874.5*	978†
Turbine Capacity (Mfg.'s Curve, Generator Output vs. T-1)	82.3	82.6	83.6	*82.8*	
Percent Load (% of maximum heat input at inlet temp)	98.5%	99.0%	98.8%	*98.8%*	
Barometric Pressure ("Hg, AFPAP)	30.10	30.10	30.10	*30.10*	
Air Inlet Duct Losses ("H_2O, AFPCS)	3.50	3.50	3.60	*3.53*	
Specific Humidity (CMHUM)	0.0158	0.0157	0.0157	*0.0157*	
Compressor Inlet Temperature (°F, CTIM)	87	86	83	*85*	
Engine Compressor Discharge Pressure (psia, CPD)	166.6	167.5	168.6	*167.6*	
Compressor Discharge Temperature (°F, CTD)	717	715	712	*715*	
Mean Turbine Exhaust Temperature (°F, TTXM)	1042	1041	1039	*1041*	
Inlet Guide Vane Angle (degrees, CSGV)	84.0	84.0	84.0	*84.0*	
Water Injection Rate (WQ, lbs/sec)	12.77	12.80	12.85	*12.81*	
Water to Fuel Ratio (WQJ, unitless)	0.918	0.915	0.911	*0.915*	
Turbine Fuel Data (Distillate Oil Fuel)					
Fuel Heating Value (Btu/lb, HHV)	19495	19495	19495	*19495*	
Fuel Heating Value (Btu/lb, LHV)	17351	17351	17351	*17351*	
Fuel Specific Gravity	0.8493	0.8493	0.8493	*0.8493*	
Sulfur in Fuel (% weight in fuel oil)	0.040	0.040	0.040	*0.040*	0.05
O_2 "F_d Factor" (DSCFex/MMBtu @ 0% excess air)	9167	9167	9167	*9167*	
CO_2 "F_c Factor" (DSCFex/MMBtu @ 0% excess air)	1444	1444	1444	*1444*	
Oil Fuel Flow (FQLM1, lbs/sec, from Mark V)	13.9	14.0	14.1	*14.0*	
Heat Input (MMBtu/hr, Higher Heat Value)	976.2	981.8	989.6	*982.5*	
Ambient Conditions					
Atmospheric Pressure ("Hg)	30.17	30.15	30.18	*30.17*	
Temperature (°F): Dry bulb	86.0	85.0	83.0	*84.7*	
(°F): Wet bulb	77.0	76.0	76.0	*76.3*	
Humidity (lbs moisture/lb of air)	0.0173	0.0166	0.0171	*0.0170*	
Measured Emissions					
NO_x (ppmv, dry basis)	38.94	39.26	39.45	*39.22*	
NO_x (ppmv, dry @ 15% excess O_2)	**34.0**	**34.0**	**34.1**	*34.0*	42.0
NO_x (ppmv @ 15% O_2, ISO Day)	38.7	38.2	39.1	*38.7*	
CO (ppmv, dry basis)	8.78	8.94	8.56	*8.76*	
CO (ppmv, dry @15% excess O_2)	7.68	7.73	7.40	*7.61*	20.0
UHC (ppmv, wet basis)	0.44	0.19	0.91	*0.51*	4.0
Visible Emissions (% opacity)	N/A	0	N/A	**0**	10
O_2 (% volume, dry basis)	14.15	14.08	14.08	*14.10*	
CO_2 (% volume, dry basis)	5.00	5.01	5.01	*5.00*	
F_o (fuel factor, range = 1.260 to 1.413 for FO)	1.35	1.36	1.36	*1.36*	
Stack Volumetric Flow Rates					
via O_2 "F_d Factor" (SCFH, dry basis)	2.77E+07	2.76E+07	2.78E+07	*2.77E+07*	
via CO_2 "F_c Factor" (SCFH, dry basis)	2.82E+07	2.83E+07	2.86E+07	*2.84E+07*	
Calculated Emission Rates (via M-19 O_2 "F-factor")					
NO_x (lbs/hr)	**131**	**133**	**134**	*133*	169.0
CO (lbs/hr)	**18.0**	**18.4**	**17.8**	*18.1*	44.0
UHC as VOC (lbs/hr)	**0.57**	**0.24**	**1.18**	*0.66*	5.0

† Permitted capacity is at a reference of: 59°F inlet temperature, 60% relative humidity, and 14.7 psia ambient air pressure.

PROCESS DESCRIPTION

Florida Power Corporation is the owner and operator of the Intercession City Power Plant near Intercession City, Florida. Emissions testing was conducted on one turbine in operation at that facility and this section of the test report provides a brief description of this unit.

The facility utilizes these units to provide electricity to the local power grid. The turbine is a General Electric Frame 7EA simple-cycle unit. Dry-low NOx burners are utilized for NOx control when fueled by natural gas. Water injection is utilized for NOx control when fueled by No. 2 fuel oil.

Unit exhaust is vented to the atmosphere through a 9 ft X 19 ft rectangular stack approximately 56 ft above grade. Seven sample ports meeting EPA criteria are provided at the 95 ft level.

ANALYTICAL TECHNIQUE

The sampling and analysis procedures used during these tests conformed in principle with those outlined in the Code of Federal Regulations, Title 40, Part 60, Appendix A, Methods 1, 3a, 9, 10, 19, 20, and 25a and ASTM methodology for the fuel analyses. The test procedures are discussed below. The stack gas analyses for NO_x, CO, THC/VOC, CO_2, and O_2 were performed by continuous instrumental monitors. Table 12 lists the instruments and detection principles used for these analyses.

The test matrix for each unit consisted of continuously monitoring NOx, CO, THC/VOC, CO_2, and O_2 concentrations at base throughout three 1-hour test runs. Ten 6-minute opacity observations were also conducted while operating at base load. A fuel sample was collected and subsequently analyzed for composition and total sulfur content. Method 19 stoichiometric calculations were utilized for all emission rate calculations. This procedure was performed for both natural gas and distillate fuel oil fuels.

The sampling and analysis system used to determine exhaust emission concentrations of NOx, CO, O_2, CO_2, and THC/VOC is depicted in Figure 1. Stack gas entered the sample system through a heated stainless steel probe with a glass wool filter. The sample was transported via 3/8-inch heat-traced Teflon® tubing using a stainless steel/Teflon® diaphragm pump to the wet portion of the sample manifold. This feature is designed to ensure that no condensation of heavy hydrocarbons will occur during THC sampling. The sample was then delivered to a Hartmann and Braun® sample conditioner, which dried the sample without removing the pollutants of interest before being passed back to the dry portion of the sample manifold. From the dry manifold, the sample was partitioned to the analyzers through glass and stainless steel rotameters that controlled the flow of the sample.

Figure 1 shows that the sampling system was equipped with a separate path through which a calibration gas could be delivered to the probe and back through the entire sampling system. This allowed for convenient performance tests of system bias checks and calibrations as required by the testing methods.

All instruments were housed in an air-conditioned mobile laboratory. Gaseous calibration standards were provided in aluminum cylinders with the concentrations certified by the vendor.

All data from the continuous monitoring instruments were recorded on two synchronized 3-pen strip chart recorders (Linseis). These recorders were operated

at a chart speed of 30 centimeters/hour and recorded over a 25-centimeter width. Strip chart records may be found in Appendix F of this report.

EPA Method 1 was utilized for selection of the traverse points for the compliance testing. The stack configurations and sample port locations did meet EPA Method 1 criteria.

The O_2 and CO_2 concentration measurements used in determination of stack gas molecular weight were measured in accordance with the procedures of EPA Method 3a and 20. Instrumental analyses were used in lieu of the Orsat or Fyrite techniques. A paramagnetic O_2 analyzer and an infrared absorption CO_2 analyzer were utilized for these emission tests.

EPA Method 9 was utilized for opacity observations throughout thirty 6-minute readings. The opacity observer has been EPA certified per Method 9. Method 9 Observation Worksheets can be found in Appendix H.

CO concentrations were quantified during the tests in accordance with procedures set forth in EPA Method 10. A continuous non-dispersive infrared (NDIR) analyzer was used for this purpose.

EPA Method 19 stoichiometric formulas were used for calculation of stack volumetric flow rates and mass emission rates of NOx, CO, SO_2, PM and VOC. These calculations were based on the fuel analysis data, diluent O_2 measurements, and plant provided fuel flow rates. Method 19 stoichiometry was also utilized as a means to calculate the moisture content of the stack gas.

Method 20 was used for measurement of NO_X and O_2 concentrations. A chemiluminescent cell analyzer was used for the NOx measurements and a paramagnetic analyzer utilized for the O_2 measurements.

In addition to the instrument test method requirements (Methods 10 and 20). Method 6c quality assurance procedures were also utilized throughout the testing in any cases where the Method 6c criterion is more stringent that another method requirements. For example, all zero/span checks were conducted through the entire sample system, which is not required by Methods 10 or 20. Additionally, Equation 6c-1 was used to correct all emission concentrations for zero and span drift.

VOC testing included measuring "total" hydrocarbons on a wet basis using a CAI (California Analytical Instrumentation) flame ionization analyzer calibrated in accordance with EPA Method 25a. Per the discussions, VOC emissions were determined based on THC measurements and the non-methane, non-ethane fraction of the fuel as found from the fuel analyses. Methane calibration standards were utilized for the tests and the emission concentrations are reported as methane

equivalents and the mass emission rates were calculated using the molecular weight of methane.

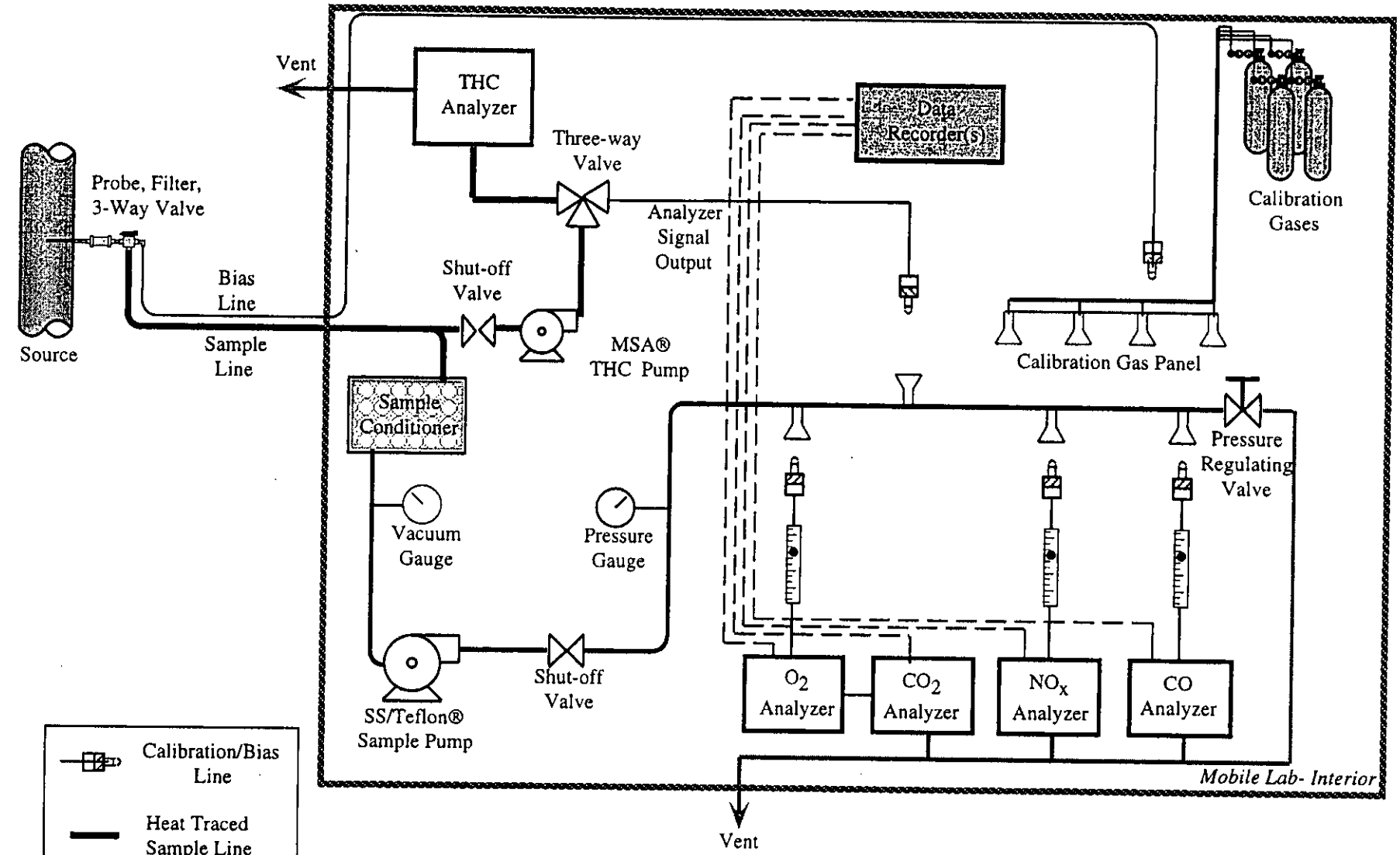
Atmospheric pressure was measured at the test site using a calibrated digital barometer. Ambient temperature and humidity were quantified during each test run via sling psychrometry.

Plant personnel provided key operational data. This data included turbine megawatts, fuel flow rates, and compressor discharge pressures. All plant provided operational data is contained in Appendix C.

TABLE 4
ANALYTICAL INSTRUMENTATION

Cubix Laboratory #603					
Parameter	**Model and Manufacturer**	**Common Ranges**	**Sensitivity**	**Response Time**	**Detection Principle**
NOx	TECO 42	0-10 ppm 0-100 ppm 0- 200 ppm 0-500 ppm 0-1000 ppm 0-5000 ppm	0.04 ppm	10 sec.	Thermal reduction of NO_2 to NO. Chemiluminescence reaction of NO with O_3. Detection by PMT. Inherently linear for listed ranges.
CO	Hartmann & Braun Uras 14	0-10 ppm 0-30 ppm 0-50 ppm 0-100 ppm 0-500 ppm 0-1000 ppm 0-5000 ppm	0.05 ppm	10 sec.	Infrared absorption, Microprocessor based linearization.
O_2	Hartman & Braun Magnos 16	0-5 % 0-25%	0.03%	10 sec.	Paramagnetic cell, Inherently linear.
CO_2	Hartmann & Braun Uras 14	0-5 % 0-25 %	0.03%	10 sec.	Infrared absorption, solid state detector.
THC	California Analytical 300-HFID	0-10 ppm 0-100 ppm 1-1K ppm 0-10K ppm 0-100K ppm	0.2 ppm	5 sec.	Flame ionization of Hydrocarbons inherently linear over 2 orders of magnitude.

FIGURE 1
INSTRUMENTAL SAMPLE SYSTEM DIAGRAM



Cubix Corporation

QUALITY ASSURANCE ACTIVITIES

A number of quality assurance activities were undertaken before, during, and after this testing project to ensure the accuracy of results obtained. This section of the report and the documentation contained in Appendices D and E describe each quality assurance activity that was performed.

With the exception of the fuel analysis, all sampling and analyses were conducted on-site to afford any interested parties the opportunity to observe all aspects of the test and to circumvent the possibility of sample loss or contamination during transport.

Each instrument's response was checked and adjusted in the field prior to the collection of data via multi-point calibration. The instrument's linearity was checked by first adjusting the zero and span responses to zero (nitrogen) and an upscale calibration gas in the range of the expected concentrations. The instrument response was then challenged with other calibration gases of known concentration and accepted as being linear if the response of the other calibration gases agreed within $\pm$ 2 percent of range of the predicted values. The strip chart excerpts that present the results of the initial multi-point linearity test are provided in Appendix D as are the Quality Assurance Worksheets.

In addition to the initial linearity checks, the calibration error checks were repeated as required throughout the tests. Anytime an adjustment was made to an analyzer, the calibration error test was repeated. Adjustment to the analyzer could have occurred for one of three reasons. If the post test run calibration check showed that the analyzer drift was approaching 3% (2% for Method 20), the technician may have chosen to reset the analyzer back to the correct setting before continuing with the next test run. If the drift exceeded 3% (but was less than 5%), the run is considered valid; however, adjustment to the analyzer is made before additional tests are conducted. Additionally, the analyzer span values could be changed. Anytime an adjustment was made to an analyzer for one of these reasons, the calibration error check (and bias check) was repeated before continuing. The Quality Assurance Worksheets of Appendix D summarize these calibration error checks.

Before and after each test run, the analyzers were checked for zero and span drift. This allowed each test run to be bracketed by calibrations and documented the precision of the data just collected. Documentation of drift also allowed for the use of Equation 6c-1 for correction of the observed emission concentrations. Calibrations were made through the entire sample system (via the bias check valve) at the end of every test run. The criterion for acceptable data is that the instrument drift is no more than 3 percent of the full-scale response. The quality assurance worksheets in Appendix D summarize all multipoint calibration

checks and zero to span checks performed during the tests. These worksheets (as prepared from the strip chart records of Appendix F) show that there were no drifts in excess of 5% and that additional calibration error and bias checks were conducted for any drifts in excess of 3% (2% for Method 20).

Use of Equation 6c-1 requires documentation of both the initial and final zero and calibration responses. When two consecutive test runs were conducted one after the other, the final drift for the previous run was used for the initial calibration response of the subsequent run. In cases where there was a sufficient delay between test runs to deem this strategy invalid, a separate initial calibration was conducted and the response from this calibration was used in Equation 6c-1.

The instrumental sampling system was leak checked by demonstrating that a vacuum greater than 10" Hg could be held for at least 1 minute with a decline of less than 1" Hg. A leak test was conducted after a sample system was set up and before that system was dismantled. These tests were conducted to ensure that ambient air had not diluted the sample. Any leakage detected prior to the tests was repaired and another leak check conducted before testing commenced. No leaks were found during the post test leak checks.

The absence of leaks in the sampling system was also verified by system bias checks. The sampling system's integrity was tested by comparing the responses of each of the analyzers used to a calibration gas introduced via two paths. The first path was into the analyzer via the zero/span calibration manifold via the calibration error check. The second path was to introduce a calibration gas into the sample system at the sample probe via the calibration line and switching valve. Any difference in the instrument responses by these two methods was attributed to sampling system bias or leakage. Bias checks were conducted prior to and upon completion of testing for all analyzers. Examination of the strip chart excerpts in Appendix D show that the analyzer responses via both sample paths agreed within acceptable limits in all cases.

Bias checks were also conducted at other times throughout the tests as required by the test method. Anytime adjustment to the analyzer or drift in excess of 3% was recorded necessitated a repeat of the calibration error check, the bias check was also repeated. All bias check results are summarized in the Quality Assurance Worksheets of Appendix D.

Prior to testing on each unit, a NO_X converter efficiency check was conducted as required by EPA Methods 7e and 20. To conduct this test, a NO_X calibration gas was blended with air in a Tedlar® bag. Over a 30-minute period, the NO_X concentration was monitored and the NO concentration checked at 5-minute intervals via bypassing of the converter. As shown on the Instrumental Quality Assurance Worksheet of Appendix D, there was no appreciable drop in

NO_X concentration (<2%) over the 30-minute period. Appendix D provides the results of the initial converter efficiency check.

Interference response tests on the instruments were conducted by the instrument vendors and Cubix Corporation on the NO_X, CO, CO_2, and O_2, analyzers. The sum of the interference responses for H_2O, NO_X, CO, SO_2, CO_2 and O_2 (as appropriate for each analyzer) are less than 2 percent of the applicable full-scale span value. The instruments used for the tests meet the performance specifications for EPA Methods 3a, 20, 7e, and 10. The results of these direct interference tests are available in Appendix E of this report.

The residence time of the sampling and measurement system was estimated using the pump flow rate and the sampling system volume. The pump's rated flow is 0.8 SCFM at 5 psig. The sampling system volume is 0.13 scf. Therefore, the sample residence time is approximately 10 seconds.

Response time tests were conducted on site on the sample system utilized during the tests. These tests were conducted simultaneously with the initial bias checks and are documented on the Instrumental Quality Assurance Worksheet of Appendix D. Method 20 response time tests were also conducted for the NOx and O_2 sample systems. The response times were found to be just less than one minute.

The control gases used to calibrate the instruments were analyzed and certified by the compressed gas vendors to ± 1% accuracy or EPA Protocol 1. The gas calibration sheets as prepared by the vendor are contained in Appendix E.

Appendix E contains calibration data on the digital barometer used during this testing.

Cubix collected and reported the enclosed test data in accordance with the procedures and quality assurance activities described in this test report. Cubix makes no warranty as to the suitability of the test methods. Cubix assumes no liability relating to the interpretation and use of the test data.

ATTACHMENT IC-EU4-J6

PROCEDURES FOR STARTUP/SHUTDOWN

Refer to the general description of Dry Low NO_X and water injection system's operation as recommended by General Electric (GE) which is provided in Attachment IC-EU4-J3. The startup and shutdown procedures for these systems are described by GE, and will be applied to the particular units. Actual operation will depend on operating conditions as determined by the facility.

ATTACHMENT IC-EU4-J7

OPERATION AND MAINTENANCE PLAN

Refer to the general description of Dry Low NO_X and water injection system's operation as recommended by General Electric (GE) which is provided in Attachment IC-EU4-J3. Operation and maintenance plans for these systems are described by GE, and will be applied to the particular units. Actual operation will depend on operating conditions as determined by the facility.

ATTACHMENT IC-EU4-J13

IDENTIFICATION OF APPLICABLE REQUIREMENTS

PERMITTEE:

Florida Power Corporation
P.O. Box 368
Intercession City, FL 33848

Authorized Representative:
Mr. Martin J. Drango, Plant Manager

Project No. 0970014-006-AC
PSD Permit No. PSD-FL-268A
Facility ID No. 0970014
SIC No. 4911
Expires: December 1, 2002

PROJECT AND LOCATION

This revised permit is issued pursuant to the requirements for the Prevention of Significant Deterioration of Air Quality (PSD Permit). This existing facility is an electric power generating plant with a nominal capacity of 1170 MW. The proposed project will add three simple cycle, dual-fuel, General Electric Model 7EA combustion turbines with electrical generator sets each having a maximum capacity of 91 MW.

The project will be located at the existing FPC Intercession City Plant in Osceola County approximately 3.5 miles west of Intercession City. The address is 6525 Osceola Polk County Line Road, Intercession City, Florida 33848. The UTM coordinates are Zone 17, 446.3 km E, 3126.0 km N and the map coordinates are Latitude 28° 15' 38", Longitude 81° 32' 51".

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and 40 CFR 52.21. The permittee is authorized to operate the equipment in accordance with the conditions of this revised permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

APPENDICES

The following Appendices are attached as part of this permit.

Appendix A - Terminology
Appendix BD - Department's BACT Determination
Appendix GC - Construction Permit General Conditions
Appendix GG - NSPS Subpart GG Requirements for Gas Turbines
Appendix XS - CEMS Excess Emissions Report

Howard L. Rhodes, Director
Division of Air Resources Management

Effective Date: _____

SECTION I. FACILITY INFORMATION

FACILITY DESCRIPTION

The existing facility is an electric power generating plant consisting of fourteen combustion turbine peaking units (P1-P14). Units P1-P6 each consist of two gas turbines having a combined capacity of 56.7 MW and firing No. 2 distillate oil. Units P7-P10 each consist of a General Electric Model 7EA gas turbine having a capacity of 96.3 MW and firing natural gas or distillate oil. Unit P11 is a Siemens Model V84.3 having a capacity of 171 MW and firing distillate oil. Units P12-P14 each consist of a General Electric Model 7EA gas turbine with a nominal generating capacity of 91 MW when firing natural gas or distillate oil

PROPOSED PROJECT

The proposed project affects the following newly constructed emissions units.

ARMS ID No.	EMISSION UNIT DESCRIPTION
018 019 020	**Peaking Units P12, P13, and P14**: Each peaking unit consists of a General Electric Model No. PG7121 7EA dual-fuel simple cycle combustion turbine with electrical generator set having a nominal power production output of 91 MW. The units may employ an evaporative cooling system. Dry low-NOx (DLN) combustion technology will be used to control nitrogen oxide emissions when firing the primary fuel of pipeline natural gas. Water injection will be used to control nitrogen oxide emissions when firing the backup fuel of low sulfur distillate oil.

The proposed project modifies original air permit No. PSD-FL-268 to: increase the maximum heat inputs and nominal power production for both gas and oil firing; revise the NOx compliance averaging period from a 3-hour rolling average to a 24-hour block average of actual operating hours; clarify the permit conditions regarding data exclusion for the NOx continuous emissions monitoring system; and correct the minimum observation period for a compliance visible emissions test. The permittee is allowed to perform the minor upgrades on each existing gas turbine (P12-P14) to achieve the capacity increases. No other construction or modification is authorized.

REGULATORY CLASSIFICATION

The facility is a "major facility" with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD) of Air Quality because emissions of at least one pollutant exceed 250 tons per year. Therefore, each modification to this facility resulting in emissions increases greater than the Significant Emissions Rates specified in Table 62-212.400-2 also requires a PSD review and Best Available Control Technology (BACT) determination. For this project, emissions of CO, NOx, PM/PM_{10}, and SAM/SO_2 are significant and this permit establishes the Best Available Control Technology (BACT) for each pollutant.

The facility is not believed to be a Title III major source of hazardous air pollutants. The facility and project are subject to the applicable Title IV acid rain provisions. The facility is classified as a Title V "major" source of air pollution because emissions of at least one regulated air pollutant, such as CO, NOx, PM/PM_{10}, SO_2, and/or VOC exceeds 100 tons per year.

This project is subject to regulation under the New Source Performance Standards (NSPS), 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines.

RELEVANT DOCUMENTS

- Application received 11/26/01 and all related correspondence.
- Original air permit No. PSD-FL-268 issued 12/9/99.

SECTION II. ADMINISTRATIVE REQUIREMENTS

GENERAL AND ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (DEP), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and phone number 850/488-0114.

2. Compliance Authority: All documents related compliance activities such as reports, tests, and notifications should be submitted to the Central District Office, Florida Department of Environmental Protection, 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. The phone number is 407/894-7555 and the fax number is 407/897-2966.

3. Terminology: The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. *Appendix A* lists frequently used abbreviations and explains the format used to cite rules and regulations in this permit.

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

5. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-17, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and the Title 40, Parts 52, 60, 72, 73, and 75 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

6. PSD Expiration: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [40 CFR 52.21(r)(2)]

7. Permit Expiration: For good cause, the permittee may request that this PSD air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, and 62-210.300(1), F.A.C.]

8. BACT Determination: In conjunction with extension of the 18-month period to commence or continue construction, phasing of the project, or an extension of the permit expiration date, the permittee may be required to demonstrate the adequacy of any previous determination of Best Available Control Technology (BACT) for the source. [Rule 62-212.400(6)(b), F.A.C. and 40 CFR 52.166(j)(4)]

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

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

SECTION II. ADMINISTRATIVE REQUIREMENTS

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

12. Title V Permit: This permit authorizes construction of the permitted emissions unit and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for and receive a Title V operation permit prior to expiration of this permit. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Bureau of Air Regulation and a copy to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

This permit addresses the following new emissions units.

ARMS EU ID No.	EMISSION UNIT DESCRIPTION
018 019 020	**Peaking Units P12, P13, and P14:** This permit authorizes the installation of three new peaking gas turbines. Each gas turbine consists of a General Electric Model No. PG7121 (7EA) dual-fuel, simple-cycle combustion turbine with electrical generator set. Each unit has a nominal power production capacity of 91 MW. The new units may employ an evaporative cooling system and will use the existing infrastructure including natural gas connections, oil storage and auxiliary equipment. Dry low-NOx (DLN) combustion technology will control nitrogen oxide emissions when firing the primary fuel of pipeline natural gas. Water injection will control NOx emissions when firing low sulfur distillate oil as a backup fuel. Combustion design and clean fuels will minimize emissions of CO, PM/PM_{10}, SAM, SO_2, and VOC. Exhaust gases from each combustion turbine will exit a 56 feet high stack at approximately 1000°F with a volumetric flow rate of 1,436,000 acfm.

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: This emissions unit is subject to Best Available Control Technology (BACT) determinations for carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM_{10}), sulfuric acid mist (SAM), and sulfur dioxide (SO_2). [Rule 62-212.400(BACT), F.A.C.]

2. NSPS Requirements: Each combustion turbine shall comply with all applicable requirements of 40 CFR 60, adopted by reference in Rule 62-204.800(7)(b), F.A.C.

   (a) **Subpart A, General Provisions**, including:

   - 40 CFR 60.7, Notification and Record Keeping
   - 40 CFR 60.8, Performance Tests
   - 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
   - 40 CFR 60.12, Circumvention
   - 40 CFR 60.13, Monitoring Requirements
   - 40 CFR 60.19, General Notification and Reporting Requirements

   (b) **Subpart GG, Standards of Performance for Stationary Gas Turbines**, identified in *Appendix GG* of this permit. These provisions include a requirement to correct test data to ISO conditions; however, such correction is not used for compliance determinations with the BACT standards.

PERFORMANCE RESTRICTIONS

3. Permitted Capacity: Each combustion turbine shall operate only in simple-cycle mode and generate a nominal 91 MW of electrical power. Operation of each unit shall not exceed 905 mmBTU per hour of heat input from firing natural gas or 978 mmBTU per hour of heat input from firing low sulfur distillate oil. Excluding startup and shutdown, operation below 50% base load is prohibited. The maximum heat inputs are based on the lower heating value (LHV) of each fuel, an inlet air temperature of 59°F, a relative humidity of 60%, an ambient air pressure of 14.7 psi, and 100% of base load. Therefore, heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Compliance shall be determined by data compiled from the Speedtronic™ Control System adjusted for these parameters. Manufacturer's performance curves, corrected for site conditions or equations for correction to other ambient conditions, shall be provided to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Initial compliance with this requirement

may be demonstrated by compiling data during the initial NSPS tests performed at various load conditions. [Design, Rule 62-210.200(PTE), F.A.C.]

4. Simple Cycle Operation Only: The combustion turbines shall operate only in simple cycle mode. This requirement is based on the permittee's request, which formed the basis of the NOx BACT determination and resulted in the emission standards specified in this permit. Specifically, the NOx BACT determination eliminated several control alternatives based on technical considerations and costs due to the elevated temperatures of the exhaust gas. Any request to convert these units to combined cycle operation by installing a new heat recovery steam generator or connecting to an existing heat recovery steam generator shall require the permittee to perform a new, current NOx BACT analysis and the approval of the Department through a permit modification. The results of this analysis may validate the initial BACT determination or result in the submittal of a full PSD permit application, new control equipment, and new emissions standards. [Rule 62-212.400(6)(b), F.A.C.]

5. Allowable Fuels: Each combustion turbine shall be fired by pipeline natural gas containing no more than 1 grain of sulfur per 100 dry standard cubic feet of gas. As a backup fuel, each combustion turbine may be fired with No. 2 distillate oil (or a superior grade) containing no more than 0.05% sulfur by weight. Each unit shall be capable of firing natural gas. Compliance with the limits on fuel sulfur content shall be demonstrated by the record keeping requirements and/or the conditions of the Alternate Monitoring Plan specified in this permit. It is noted that these limitations are much more stringent than the NSPS sulfur dioxide limitation and assure compliance with 40 CFR 60.333 and 60.334. [Applicant Request, Rule 62-210.200(PTE), F.A.C.]

6. Hours of Operation: The following limits apply to this group of three combustion turbines.

   (a) **Installation of One Gas Turbine**: When one gas turbine is installed, the total turbine operating hours shall not exceed 3390 hours during any consecutive 12 months.

   (b) **Installation of Two Gas Turbines**: When two gas turbines are installed, the total turbine operating hours shall not exceed 6780 hours during any consecutive 12 months.

   (c) **Installation of Three Gas Turbines**: When all three gas turbines are installed, the total turbine operating hours shall not exceed 10,170 hours during any consecutive 12 months.

   (d) **Oil Firing**: Each gas turbine is limited to no more than 1000 turbine operating hours of oil firing during any consecutive 12 months. In addition, the group of three gas turbines is limited to no more than 2500 turbine operating hours of oil firing during any consecutive 12 months.

   Total turbine operating hours are the sum of operating hours when firing gas and operating hours when firing oil. The permittee shall install, calibrate, operate and maintain meters to measure and accumulate the amount of each fuel fired and hours of operation for each combustion turbine. [Applicant Request; Rules 62-212.400(BACT) and 62-210.200(PTE), F.A.C.]

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

8. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the Compliance Authority as soon as possible, but at least within one (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the

problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations. [Rule 62-4.130, F.A.C.]

EMISSIONS CONTROLS

9. Automated Control System: In accordance with the manufacturer's recommendations, the permittee shall install, calibrate, tune, operate, and maintain the General Electric Speedtronic™ Gas Turbine Control System for each unit. Each system shall be designed and operated to monitor and control the gas turbine combustion process and operating parameters including, but not limited to: fuel distribution and staging, turbine speed, load conditions, combustion temperatures, water injection, and fully automated startup, shutdown, and cool-down. [Design; Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

10. Combustion Controls: The permittee shall employ "good operating practices" in accordance with the manufacturer's recommended operating procedures to control CO, NOx, and VOC emissions. Prior to the initial emissions performance tests, the dry low-NOx (DLN) combustors and Speedtronic™ control system on each gas turbine shall be tuned to optimize the reduction of CO, NOx, and VOC emissions. Thereafter, these systems shall be maintained and tuned, as necessary, to minimize pollutant emissions. [Design, Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

11. DLN Combustion Technology: To control NOx emissions when firing natural gas, the permittee shall install, tune, operate and maintain a dry low-NOx (DLN) combustion system for each combustion turbine in accordance with the manufacturer's recommendations. The permittee shall provide manufacturer's emissions performance versus load diagrams for the specific DLN system as part of the Title V permit application. Compliance with this requirement may be demonstrated by compiling data during the initial NSPS tests performed at various load conditions. [Design, Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

12. Water Injection: To control NOx emissions when firing low sulfur distillate oil, the permittee shall install, calibrate and operate an automated water injection system for each combustion turbine in accordance with the manufacturer's recommendations. Each water injection system shall be maintained and adjusted to minimize NOx emissions. The permittee shall provide manufacturer's emissions performance versus load diagrams for the specific water injection system as part of the Title V permit application. Compliance with this requirement may be demonstrated by compiling data during the initial NSPS tests performed at various load conditions. [Design, Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

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

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

EMISSIONS STANDARDS

15. Emissions Standards Summary: The following table summarizes the emissions standards specified in this permit.

EU-018, 019, and 020: GE Model 7EA Combustion Turbines (P12, P13, and P14)		
Pollutant	**Fuels and Controls[a]**	**Emission Standards[b]**
CO	Gas Firing W/DLN	20.0 ppmvd @ 15% O2, 3-hour test avg. 43.0 pounds per hour, 3-hour test avg.
	Oil Firing W/Wet Injection	20.0 ppmvd @ 15% O2, 3-hour test avg. 44.0 pounds per hour, 3-hour test avg.
NOx	Gas Firing W/DLN Compliance by Annual Testing at Base Load	9.0 ppmvd @ 15% O2, 3-hour test avg. 33.0 pounds per hour, 3-hour test avg.
	Continuous Compliance by CEM	10.0 ppmvd @ 15% O2, 24-hour avg.
	Oil Firing W/Wet Injection Compliance by Annual Testing at Base Load	42.0 ppmvd @ 15% O2, 3-hour test avg. 169.0 pounds per hour, 3-hour test avg.
	Continuous Compliance by CEM	42.0 ppmvd @ 15% O2, 24-hour avg.
PM/PM10	Fuel Sulfur Specifications and Combustion Design	Visible emissions ≤ 10% opacity (PM estimated at 0.002 grains/dscf)
SAM/SO2	Natural Gas Sulfur Specification	≤ 1 grain per 100 SCF of gas
	Low Sulfur Distillate Oil Sulfur Specification	0.05% sulfur by weight
VOC	Gas Firing W/Combustion Design	2.0 ppmvw as methane 2.0 pounds per hour
	Oil Firing W/Combustion Design	4.0 ppmvw as methane 5.0 pounds per hour

[a] Oil firing is limited to 1000 hours per year per gas turbine and 2500 hours per year for all three gas turbines combined. DLN means dry low-NOx controls.

[b] The mass emission limits (pounds per hour) were based on 100% base load, 59° F, and 60% relative humidity.

[Design, Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

16. Carbon Monoxide (CO)

(a) **Gas Firing:** When firing natural gas in a combustion turbine, CO emissions shall not exceed 43.0 pounds per hour nor 20.0 ppmvd corrected to 15% oxygen based on a 3-hour test average.

(b) **Oil Firing**: When firing low sulfur distillate oil in a combustion turbine, CO emissions shall not exceed 44.0 pounds per hour nor 20.0 ppmvd based on a 3-hour test average.

The permittee shall demonstrate compliance with these standards by conducting tests in accordance with EPA Method 10 and the performance testing requirements of this permit. [Design; Rule 62-212.400(BACT), F.A.C.]

17. Nitrogen Oxides (NOx)

(a) **Gas Firing**: When firing natural gas in a combustion turbine, NOx emissions shall not exceed 33.0 pounds per hour nor 9.0 ppmvd corrected to 15% oxygen based on an annual 3-hour compliance test average. In addition, NOx emissions shall not exceed 10.0 ppmvd corrected to 15% oxygen based on a 24-hour block average of all valid data collected from the continuous NOx emissions monitor during actual operation.

(b) **Oil Firing**: When firing low sulfur distillate oil in a combustion turbine, NOx emissions shall not exceed 169.0 pounds per hour nor 42.0 ppmvd corrected to 15% oxygen based on an annual 3-hour compliance test average. In addition, NOx emissions shall not exceed 42.0 ppmvd corrected to 15% oxygen based on a 24-hour block average of all valid data collected from the continuous NOx emissions monitor during actual operation. The permittee shall set up the automated control system for water injection to reduce NOx emissions below 42.0 ppmvd corrected to 15% oxygen.

NOx emissions are defined as emissions of oxides of nitrogen measured as NO_2. The permittee shall demonstrate compliance by conducting tests in accordance with EPA Methods 7E, 20 and the performance testing requirements of this permit. Compliance with the 24-hour block averages shall be demonstrated by collecting and reporting data in accordance with the conditions for the NOx continuous emissions monitor specified by this permit. [Rule 62-212.400(BACT), F.A.C.]

18. Particulate Matter (PM/PM_{10}), Sulfuric Acid Mist (SAM) and Sulfur Dioxides (SO_2)

(a) **Fuel Specifications**: Emissions of PM, PM_{10}, SAM, and SO_2 shall be limited by the good combustion techniques and the fuel sulfur limitations specified in this permit. The permittee shall demonstrate compliance with the fuel sulfur limits by maintaining records of the sampling and analysis required by this permit and/or as specified in the provisions of the Alternate Monitoring Plan. [Rule 62-212.400(BACT), F.A.C.]

(b) **VE Standard**: As a surrogate for PM/PM_{10} emissions, visible emissions from the operation of a combustion turbine shall not exceed 10% opacity, based on a 6-minute average. The permittee shall demonstrate compliance with this standard by conducting tests in accordance with EPA Method 9 and the performance testing requirements of this permit. [Rule 62-212.400(BACT), F.A.C.]

19. Volatile Organic Compounds (VOC)

(a) **Gas Firing**: When firing natural gas in a combustion turbine, VOC emissions shall not exceed 2.0 pounds per hour nor 2.0 ppmvd based on a 3-hour test average.

(b) **Oil Firing**: When firing low sulfur distillate oil in a combustion turbine, VOC emissions shall not exceed 5.0 pounds per hour nor 4.0 ppmvd based on a 3-hour test average.

The VOC emissions shall be measured and reported as methane. The permittee shall demonstrate compliance with these standards by conducting tests in accordance with EPA Methods 18, 25, and/or 25A and the performance testing requirements of this permit. [Application; Design; Rule 62-4.070(3), F.A.C.]

STARTUP, SHUTDOWN, AND MALFUNCTION

20. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. Such preventable emissions shall be included in the

calculation of the 24-hour averages compiled by the continuous NOx emissions monitor. [Rule 62-210.700, F.A.C.]

21. Alternate Standards and NOx CEMS Data Exclusion: The following permit conditions establish alternate standards or allow the exclusion of monitoring data for specifically defined periods of startup, shutdown, and documented malfunction of a gas turbine. These conditions apply only if operators employ the best operational practices to minimize the amount and duration of emissions during such episodes.

(a) **Opacity**: During startup and shutdown, visible emissions excluding water vapor shall not exceed 20% opacity for up to 2.0 hours in any 24-hour period.

(b) **NOx CEMS Data Exclusion**: For the following identified operational periods, 1-hour NOx emissions rate values may be excluded from the 24-hour block compliance averages in accordance with the corresponding requirements.

(1) *Startup, Shutdown, and Malfunction*: No more than 1 hourly emission rate value due to startup shall be excluded per cycle. No more than 1 hourly emission rate value due to shutdown shall be excluded per cycle. No more than 2 hourly emission rate values shall be excluded in a 24-hour period due to malfunction. No more than 4 hourly emission rate values shall be excluded in a 24-hour period due to all startups, shutdowns, and malfunctions. Note: A fuel-switch is not considered "startup".

(2) *Tuning*: If the permittee provides at least five days advance notice prior to a major tuning session performed by the manufacturer's representative, hourly NOx emissions rate values during tuning may be excluded from the 24-hour block compliance averages. Data excluded due to tuning shall not count towards the limit on total excluded data in a 24-hour period. {Permitting Note: As an example, a major tuning session would occur after a combustor change-out. A tuning session may take a several hours each day over a few days. No more than two major tuning sessions would be expected during any year. Major tuning sessions are intended to return the unit to manufacturer's specifications for efficient operation and should result in lower actual emissions.}

As provided by the authority in Rule 62-210.700(5), F.A.C., the above requirements are established in lieu of the provisions of Rule 62-210.700(1), F.A.C. [Design; Rules 62-210.700(5), 62-4.130, and Rule 62-212.400(BACT), F.A.C.]

EMISSIONS PERFORMANCE TESTING

22. Combustion Turbine Testing Capacity: Testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum heat input rate allowed by the permit, corrected for the average air inlet air temperature during the test (with 100 percent represented by a curve depicting heat input vs. air inlet temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. However, subsequent operation is limited by adjusting the entire heat input vs. air inlet temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for inlet temperature) and 110 percent of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Emissions performance tests shall meet all applicable requirements of Chapters 62-204 and 62-297, F.A.C. [Rule 62-297.310(2), F.A.C.]

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

24. Applicable Test Procedures

(a) **Required Sampling Time.**

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. [Rule 62-297.310(4)(a)1, F.A.C.]

2. The minimum observation period for a visible emissions compliance test shall be thirty (30) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur. [Rule 62-297.310(4)(a)2, F.A.C.]

(b) **Minimum Sample Volume.** Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet. [Rule 62-297.310(4)(b), F.A.C.]

(d) **Calibration of Sampling Equipment.** Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C. [Rule 62-297.310(4)(d), F.A.C.]

25. Determination of Process Variables

(a) **Required Equipment.** The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards. [Rule 62-297.310(5)(a), F.A.C.]

(b) **Accuracy of Equipment.** Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value. [Rule 62-297.310(5)(b), F.A.C.]

26. Sampling Facilities: The permittee shall design the combustion turbine stack to accommodate adequate testing and sampling locations in order to determine compliance with the applicable emission limits specified by this permit. Permanent stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C. [Rules 62-4.070 and 62-204.800, F.A.C., and 40 CFR 60.40a(b)]

27. Performance Test Methods: Compliance tests shall be performed in accordance with the following reference methods as described in 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-204.800, F.A.C.

(a) **EPA Method 7E**, "Determination of Nitrogen Oxide Emissions from Stationary Sources".

(b) **EPA Method 9**, "Visual Determination of the Opacity of Emissions from Stationary Sources".

(c) **EPA Method 10**, "Determination of Carbon Monoxide Emissions from Stationary Sources". All CO tests shall be conducted concurrently with NOx emissions tests.

(d) **EPA Method 20**, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines."

(e) **EPA Methods 18, 25 and/or 25A**, "Determination of Volatile Organic Concentrations."

No other test methods may be used for compliance testing unless prior DEP approval is received, in writing, from the DEP Emissions Monitoring Section Administrator in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C.

28. Test Notification: The permittee shall notify the Compliance Authority in writing at least 30 days prior to initial performance tests and at least 15 days prior to any other required tests. [Rule 62-297.310(7)(a)9, F.A.C.; 40 CFR 60.7 and 60.8]

29. Initial Tests Required: Initial compliance with the allowable emission standards specified in this permit shall be determined within 60 days after achieving the maximum permitted capacity, but not later than 180 days after initial operation of the emissions unit. Initial tests for emissions from the combustion turbine shall be conducted for CO, NOx, VOC, and visible emissions individually for firing natural gas and for firing low sulfur distillate oil. Initial NOx performance test data shall also be converted into the units of the corresponding NSPS Subpart GG emissions standards to demonstrate compliance (see Appendix GG). {Permitting Note: These initial tests are required after completing the minor upgrade to achieve increased heat inputs and power generation.} [Rule 62-297.310(7)(a)1, F.A.C.]

30. Annual Performance Tests: Annual emissions performance tests for CO, NOx, and visible emissions from each combustion turbine shall be conducted when firing natural gas. If conducted at permitted capacity, the annual NOx continuous monitor RATA required pursuant to 40 CFR 75 may be substituted for the annual compliance stack test. An annual performance test for VOC emissions is not required as long as the unit remains in compliance with the CO and visible emissions limits specified by this permit.

If a combustion turbine operates more than 200 hours of oil firing during any federal fiscal year, the permittee shall schedule and conduct annual emissions performance tests for CO, NOx, and visible emissions when firing low sulfur distillate oil. For oil firing, compliance with the NOx standards may be determined by the continuous monitor data collected during the required CO test. An annual performance test for VOC emissions is not required as long as the unit remains in compliance with the CO and visible emissions limits specified by this permit for oil firing.

Tests required on an annual basis shall be conducted at least once during each federal fiscal year (October 1st to September 30th). [Rule 62-297.310(7)(a)4, F.A.C.]

31. Tests Prior to Permit Renewal: Prior to renewing the air operation permit, the permittee shall also conduct emissions performance tests for CO, NOx, VOC, and visible emissions when firing natural gas and when firing low sulfur distillate oil. These tests shall be conducted within the 12-month period prior to renewing the air operation permit. For pollutants required to be tested annually, the permittee may submit the most recent annual compliance test to satisfy the requirements of this provision. [Rule 62-297.310(7)(a)3, F.A.C.]

32. Tests After Substantial Modifications: All performance tests required for initial startup shall also be conducted after any substantial modification and appropriate shakedown period of air pollution control equipment including the replacement of dry low-NOx combustors. Shakedown periods shall not exceed 100 days after re-starting the combustion turbine. [Rule 62-297.310(7)(a)4, F.A.C.]

33. VE Tests After Shutdown: Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions (VE) compliance test once per each five-year period, coinciding with the term of its air operation permit. [Rule 62-297.310(7)(a)8, F.A.C.]

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

CONTINUOUS MONITORING REQUIREMENTS

35. NOx CEMS Requirements: For each gas turbine, the permittee shall install, calibrate, maintain, and operate continuous emissions monitors (CEMS) to measure and record emissions of nitrogen oxides (NOx) and oxygen (O_2) in a manner sufficient to demonstrate compliance with the standards of this permit. A monitor for carbon dioxide (CO_2) may be used in place of the oxygen monitor, but the system shall be capable of correcting the emissions to 15% oxygen.

(a) **Performance Specifications**. Each monitor shall be installed in a location that will provide emissions measurements representative of actual stack emissions. Each CEMS shall comply with the corresponding performance specifications that identify location, installation, design, performance, and reporting requirements.

(1) Each NOx monitor shall be certified pursuant to 40 CFR Part 75 and shall be operated and maintained in accordance with the applicable requirements of 40 CFR Part 75, Subparts B and C. Record keeping and reporting shall be conducted pursuant to 40 CFR Part 75, Subparts F and G. The RATA tests required for the NOx monitor shall be performed using EPA Method 7E or 20 as defined in Appendix A of 40 CFR 60. The NOx monitor shall have dual span capability with a low span (gas) no greater than 30 ppmvd corrected to 15% O_2 and a high span (oil) no greater than 200 ppmvd corrected to 15% O_2.

(2) Each O_2 (or CO_2) CEMS shall comply with Performance Specification 3 in Appendix B of 40 CFR 60. The O_2 reference method for the annual RATA shall be EPA Method 3A Appendix A of 40 CFR 60.

(b) **Data Collection**. Each CEMS shall be designed and operated to sample, analyze, and record emissions data evenly spaced over a 1-hour period during all periods of operation. Each 1-hour average shall be computed using at least one data point in each fifteen minute quadrant of the 1-hour block during which the unit combusted fuel. Notwithstanding this requirement, each 1-hour average shall be computed from at least two data points separated by a minimum of 15 minutes. All valid measurements or data points collected during a 1-hour block shall be used to calculate the 1-hour emission averages. If the NOx CEMS measures concentration on a wet basis, the permittee shall use approved methods for correction of measured emissions to a dry basis (0% moisture). The O_2 (or CO_2) CEMS shall express the 1-hour emission rate values in terms of "percent oxygen by volume". The NOx CEMS shall express the 1-hour emission averages in terms of "ppmvd corrected to 15% oxygen".

(c) **Compliance Averages**. Compliance with the 24-hour block NOx emissions standards shall be based on data collected by each required CEMS. The 24-hour block shall start at midnight of each operating day and consist of 24 consecutive 1-hour blocks. For purposes of determining compliance with the emission standards of this permit, missing data shall not be substituted. Instead the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block. If a unit operates continuously throughout the day, the 24-hour block average shall be the average of 24 consecutive 1-hour emission averages. If a unit operates less than 24

hours during the day, the 24-hour block average shall be the average of the available valid 1-hour emission averages collected during actual operation If monitoring data is authorized for exclusion (due to startup, shutdown, malfunction, or tuning), the 24-hour block average shall be the average of the remaining valid 1-hour emission averages collected during actual operation. In cases of reduced operation or data exclusion, the compliance average will be based on less than 24, 1-hour emission averages. Upon completion of each 24-hour block, the permittee shall determine separate compliance averages for gas firing and oil firing. A 1-hour emissions average that includes any amount of oil firing shall only be included in the compliance average for oil firing. Upon a request from the Department, the NOx emission rate shall be corrected to ISO conditions to demonstrate compliance with the applicable standards of 40 CFR 60.332.

(d) **Data Exclusion**. Except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, each CEMS shall record emissions data at all times including episodes of startup, shutdown, and malfunction. Emissions data recorded during periods of startup, shutdown, or malfunction may only be excluded from the compliance averages in accordance with the requirements previously specified in this permit. To the extent practicable, the permittee shall minimize the duration of data excluded for startup, shutdown and malfunctions. Data recorded during startup, shutdown or malfunction shall not be excluded if the episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented. Best operational practices shall be used to minimize hourly emissions that occur during startup, shutdown and malfunction. Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented, shall be prohibited. Excluded emissions data shall be summarized in the required quarterly report.

(e) **Reporting**: If a CEMS reports NOx emissions in excess of a standard, the permittee shall notify the Compliance Authority within one working day with a preliminary report of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Compliance Authority may request a written summary report of the incident.

(f) **Monitor Availability**. Monitor availability shall not be less than 95% in any calendar quarter. In the event 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit.

[Rules 62-204.800, 62-210.700, 62-4.130, 62-4.160(8), F.A.C.; 40 CFR 60.7]

COMPLIANCE DEMONSTRATIONS

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

37. Fuel Records

(a) Natural Gas: The permittee shall demonstrate compliance with the SO_2 standards of this permit and in 40 CFR 60.333 by complying with the requirements in 40 CFR 75 Appendix D.

(b) Low Sulfur Distillate Oil: For all bulk shipments of low sulfur distillate oil received at this facility, the permittee shall obtain an analysis identifying the sulfur content. An analysis provided by the fuel vendor is acceptable. Methods for determining the sulfur content of the distillate oil shall be ASTM D129-91, D2622-94, or D4294-90 or equivalent methods. Records shall specify the test method used and shall comply with the requirements of 40 CFR 60.335(d).

[Rules 62-4.070(3) and 62-4.160(15), F.A.C.]

38. Alternate Monitoring Plan: Subject to EPA approval, the following alternate monitoring may be used to demonstrate compliance.

(a) The NOx CEM data may be used in lieu of the monitoring system for water-to-fuel ratio and the reporting of excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG. Subject to EPA approval, the calibration of the water-to-fuel ratio-monitoring device required in 40 CFR 60.335(c)(2) will be replaced by the 40 CFR 75 certification tests of the NOx CEMS.

(b) The NOx CEM data shall be used in lieu of the requirement for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG.

(c) When requested by the Department, the CEMS emission rates for NOx on this unit shall be corrected to ISO conditions to demonstrate compliance with the NOx standard established in 40 CFR 60.332.

(d) A *custom fuel monitoring schedule* pursuant to 40 CFR 75 Appendix D for natural gas may be used in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2) provided the following conditions are met.

(1) The permittee shall apply for an Acid Rain permit within the deadlines specified in 40 CFR 72.30.

(2) The permittee shall submit a monitoring plan, certified by signature of the Authorized Representative, that commits to using a primary fuel of pipeline supplied natural gas containing no more than 1 grain of sulfur per 100 SCF of gas pursuant to 40 CFR 75.11(d)(2);

(3) Each unit shall be monitored for SO_2 emissions using methods consistent with the requirements of 40 CFR 75 and certified by the U.S. EPA.

This custom fuel-monitoring schedule will only be valid when pipeline natural gas is used as a primary fuel. If the primary fuel for these units is changed to a higher sulfur fuel, SO_2 emissions must be accounted for as required pursuant to 40 CFR 75.11(d).

[40 CFR 60, Subpart GG; Applicant Request]

39. Monthly Operations Summary: By the fifth calendar day of each month, the owner or operator shall record the following information in a written or electronic log summarizing the previous month of operation and the previous 12 months of operation: hours of gas firing; million cubic feet of gas fired; hours of oil firing; and gallons of oil fired. The information shall be recorded for each gas turbine and for the group of three gas turbines. Information may be recorded and stored as an electronic file, but

must be available for inspection and/or printing at the request of the Compliance Authority. [Rule 62-4.160(15), F.A.C.]

REPORTS

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

41. Quarterly Excess Emissions Reports: If excess emissions occur due to malfunction, the owner or operator shall notify the Compliance Authority within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Following the NSPS format (40 CFR 60.7, Subpart A) periods of startup, shutdown, malfunction, shall be monitored, recorded, and reported as excess emissions when emission levels exceed the standards specified in this permit. Within thirty (30) days following each calendar quarter, the permittee shall submit a report on any periods of excess emissions that occurred during the previous calendar quarter to the Compliance Authority. This quarterly report shall follow the format provided in Appendix XS of this permit and summarize periods of excluded NOx emissions data. [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7]

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

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[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.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[X] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Facility-Wide Fugitive/De Minimis Emissions

4. Emissions Unit Identification Number: [ ] No ID
ID: [X] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A		**49**	[ ]

9. Emissions Unit Comment: (Limit to 500 Characters)

See Attachment IC-EU5-A9.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):
2. Control Device or Method Code(s):

Emissions Unit Details

1. Package Unit: Manufacturer:	Model Number:	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information:		
	Dwell Temperature:	°F
	Dwell Time:	seconds
	Incinerator Afterburner Temperature:	°F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:				mmBtu/hr
2. Maximum Incineration Rate:		lb/hr		tons/day
3. Maximum Process or Throughput Rate:				
4. Maximum Production Rate:				
5. Requested Maximum Operating Schedule:				
	24	hours/day	**7**	days/week
	52	weeks/year	**8,760**	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):				
This emission unit consists of numerous fugitive sources.				

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram?	2. Emission Point Type Code: 4

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):

This EU consists of various activities generating fugitive emissions.

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:

5. Discharge Type Code: F	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %

11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet

13. Emission Point UTM Coordinates:

Zone: East (km): North (km):

14. Emission Point Comment (limit to 200 characters):

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Petroleum and Solvent Evaporation – Petroleum Product Storage – Fugitive Emissions – Fuel Oil (Storage)**		
2. Source Classification Code (SCC): **4-03-888-01**	3. SCC Units: **Thousand Gallons Stored**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor: **12,490**
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): **Segment refers to combined storage capacity of various petroleum product storage tanks contained in the emission unit at the time of this permit application submittal. See Attachment IC-EU5-A9.**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Petroleum and Solvent Evaporation – Petroleum Product Storage – Fugitive Emissions – Fuel Oil (Throughput)**		
2. Source Classification Code (SCC): **4-03-999-99**	3. SCC Units: **Thousand Gallons Throughput**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor: **440,615**
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): **Segment refers to combined throughput of various petroleum product storage tanks contained in the emission unit. See Attachment IC-EU5-A9.**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code

ATTACHMENT IC-EU5-A9

EMISSION UNIT COMMENT
TRIVIAL ACTIVITIES

ATTACHMENT IC-EU5-A9
EMISSIONS UNIT COMMENT – TRIVIAL ACTIVITIES

The trivial activities identified in this application are provided for information only and are identified as examples of, but not limited to, the trivial activities identified by the Division of Air Resources Management's (DARM's) guidance. It is understood that such activities do not have to be included in with the Title V Application. The trivial activities identified herein are consistent, in terms of amounts of emissions and types, with those listed in DARM's guidance.

EMISSIONS UNIT COMMENT – NOTIFICATION OF TEMPORARY EXEMPTIONS

Pursuant to Rule 62-210.300(3)(b)1., notice is herein provided that the emission units listed in this attachment are not subject to a permit issued by the Department of Environmental Protection and are exempt from permitting until a final determination is made under the Title V permitting requirements (Rule 62-213 F.A.C.). These units would not have triggered review under Rules 62-212.400 or 62-212.500 or any new source performance standard listed in Rule 62-204.800, F.A.C.

Attachment IC-EU5-A9
General Emissions Unit Information for Unregulated Emissions Unit

Table 1. Florida Power, Intercession City Plant, Unregulated Emissions Unit

Area	Emission Unit Description	Status
Offices	Office equipment operation	TR
	Routine repairs	TR
	Heating & cooling systems	TR (except Part 82)
Parking Lot	Vehicles	TR/ER
Maintenance shop	Sand blaster, welding, lathes, hand-held tools, etc.	ER/TR
	Cabinets with solvents, oils, flammables, etc.	TR
	Routine maintenance	TR
	Parts washer- Safety Kleen	TR
	Air compressors	TR
	Cylinders (acetylene, N2, O2, argon, CO2., etc.)	TR
	Golf carts	TR
Oil/ water separator area	Oil/water separator (2)	TR
Fire pump building (north maintenance shop)	Diesel generator - 182 hp; 1,760 hp	ER/UR
	Diesel oil tank (inside vent at bunker top)	UR
Water storage tanks	Fire water tanks (2)	ER
Gas turbine cleaner building	On-line cleaner for gas turbine (clean for compressor efficiency); degreaser added; stored in 55 gal. drums (2)	TR
	Electric motor (115v/230)	TR
Water treatment building - Ecolochem (leased from FPC)		
	Sno-glow bleach- 55 gal. drums (3)- sealed diluted sulfuric acid- 55 gal. drums (2)- sealed diluted sulfuric acid- tank (1)- sealed	TR
	Work bench area	TR
	Electric motors (2)	TR
	Welding equipment	ER/TR
	Fire equipment	ER/TR
Combustion turbines- P10, P8 (north); - P9, P7 (south)	Lube oil vent with demister	ER

Attachment IC-EU5-A9
General Emissions Unit Information for Unregulated Emissions Unit

Table 1. Florida Power, Intercession City Plant, Unregulated Emissions Unit

Area	Emission Unit Description	Status
	False Start Drain Tank	TR
	Hydrogen venting & purge	TR
	CO_2 tank (liquid)/ purge	TR
	Fire System	ER/TR
	Cyclone coolers (2 electric motors)	TR
	Vacuum condenser	TR
Oil storage tanks (3)- south of CTs	No. 2 oil/ 100,000 bbl capacity each	UR
Combustion turbine peaking units- P1, P2, P3, P4, P5, P6	Lube oil vent with demister	ER
	Overhead drain tank vent (same as false start) Underground drain tank (2 per unit)- 550 gal.	ER
	Hydrogen venting & purge	TR
	CO_2 tank (liquid)/ purge	TR
	Fire System	TR
	Air compressors	TR
	Oil/water collection- mostly water	TR
	Waste oil tank (50,000 gal; 1200 bbl)	UR
	55 gal. drums, sealed (near waste oil tank)- oily rags/ water, dirt	ER
Old Adm. bldg/ store room	Office equipment operation	TR
	Routine repairs	TR
	Heating & cooling systems	TR (except Part 82)
Substation	Transformers and associated equipment	TR
General Site	Surface coating < 6.0 gal/day	ER
	Brazing, soldering or welding	ER/TR
	Plant grounds maintenance	TR
	Routine maintneance	TR
	Oil water separators	TR
	CEM equipment & calibration gas venting	TR

Attachment IC-EU5-A9
General Emissions Unit Information for Unregulated Emissions Unit

Table 1. Florida Power, Intercession City Plant, Unregulated Emissions Unit

Area	Emission Unit Description	Status
	Compressed air system & miscellaneous compresors	TR
	Non-halogenerated solvents	TR/ER
	Fire water tank	ER/TR
	Plant vehicles/ Fugitive PM	ER

Status Key: ER = Exempt by Rule 62-210.300(3)(a)
TR = Trivial
UR = Unregulated

Attachment IC-EU5-A9
General Emissions Unit Information

Table 2. Florida Power, Intercession City Plant, Petroleum Product Storage and Throughput Operations

FPC Tank No.	Storage Product	Storage Tank Size (gallons)	Potential Annual Throughput (gallons)	
No. 1	No. 2 fuel oil	4,209,072	211,183,000	(a)
No. 2	No. 2 fuel oil	4,209,072	211,183,000	(a)
No. 3	No. 2 fuel oil	3,999,996	18,137,926	(b)
P1A	Waste oil	150	3,000	
P1B	Waste oil	150	3,000	
P2A/P2B to P6A/P6B	Waste oil (same as P1A/P1B)	1,500	30,000	
Waste Oil Tank	Waste oil	50,000	50,000	
P7	Waste oil	2,016	3,000	
P8, P9, P10 (P8 to P10)	Waste oil (same as P7)	6,048	9,000	
P11	Waste oil	2,500	3,000	
P12, P13, P14 (P12 to P14)	Waste oil (same as P11)	7,500	9,000	
Gasoline Tank	Unleaded gas	250	1,000	
	TOTAL	12,488,254	440,614,926	

(a) Based on total fuel consumption from CT Units 1-11 operating at maximum pemitted rates; fuel amount equally divided between Tank Nos. 1 and 2.

(b) Based on total fuel consumption from CT Units 12-14 operating at maximum pemitted rates.