

**Florida Power Corporation
St. Petersburg, Florida**

**Permit Application to Replace a
Combustion Turbine at the
University of Florida**



**ENSR Corporation
January 2001
Document Number 8733-024-APR**



AL, Florence
(256) 767-1210
AK, Anchorage
(907) 561-5700
AK, Fairbanks
(907) 452-5700
CA, Alameda
(510) 748-6700
CA, Camarillo
(805) 388-3775
CA, Glendale
(818) 546-2090
CA, Irvine
(949) 752-0403
CA, Sacramento
(916) 362-7100
CO, Ft. Collins
(970) 493-8878
Ft. Collins Tox Lab
(970) 416-0916
CT, Stamford
(203) 323-6620
CT, Willington
(860) 429-5323
FL, St. Petersburg
(727) 898-9591
FL, Tallahassee
(850) 385-5006
GA, Norcross
(770) 209-7167
GA, Savannah
(912) 898-0015
IL, Chicago
(630) 836-1700
LA, Lafayette
(337) 896-2430

ME, Portland
(207) 773-9501
MD, Columbia
(410) 884-9280
MA, Sagamore Beach
(508) 888-3900
MA, Westford
(978) 589-3000
MA, Woods Hole
(508) 457-7900
MN, Minneapolis
(952) 924-0117
NJ, Piscataway
(732) 457-0500
NY, Albany
(518) 453-6444
NY, Metro Area
(914) 347-4990
NY, Rochester
(716) 381-2210
NY, Syracuse
(315) 432-0506
NC, Raleigh
(919) 571-0669
OH, Cincinnati
(513) 985-9186
OR, Portland
(503) 224-7338
PA, Langhorne
(215) 757-4900
PA, Pittsburgh
(412) 261-2910
SC, Columbia
(803) 216-0003
TX, Austin
(512) 336-2425

TX, Dallas
(972) 509-2250
TX, Houston
(713) 520-9900
TX, San Antonio
(210) 590-8393
WA, Redmond
(425) 881-7700

ENSR International
U.S.A., MA, Westford
(978) 589-3000

Bolivia
Brazil
Bulgaria
Canada
China, Hong Kong
Czech Republic
Ecuador
France
Germany
Greece
Italy
Malaysia
Mexico
Spain
Turkey
United Kingdom
Venezuela

Internet
www.ensr.com

**Florida Power Corporation
St. Petersburg, Florida**

**Permit Application to Replace a
Combustion Turbine at the
University of Florida**

RECEIVED

JAN 29 2001

BUREAU OF AIR REGULATION

**ENSR Corporation
January 2001
Document Number 8733-024-APR**

CONTENTS

1.0 INTRODUCTION	1-1
1.1 Application Summary	1-1
1.2 General Applicant Information	1-4
1.2.1 Applicant's Address	1-4
1.2.2 Applicant's Contacts	1-4
1.3 Document Organization	1-5
2.0 PROJECT DESCRIPTION	2-1
3.0 PROJECT EMISSIONS	3-1
3.1 Combustion Turbine	3-1
4.0 APPLICABLE REGULATIONS AND STANDARDS	4-1
4.1 Prevention of Significant Deterioration	4-1
4.2 NSPS	4-2
4.3 NESHAPS	4-3
4.4 Acid Rain	4-3
4.5 CAA Operating Permit Program	4-3
4.6 State SIP Rules	4-4
5.0 PSD APPLICABILITY DETERMINATION	5-1

APPENDICES

- A FLORIDA DEP APPLICATION FORMS**
- B EMISSION CALCULATIONS**
- C SUPPORTING DOCUMENTATION**
- D STACK SAMPLING FACILITIES**
- E STARTUP/SHUTDOWN PROCEDURES**

LIST OF TABLES

Table 3-1 Emission Summary (lb/hr) for the GE LM6000-PC-ESPRINT Combustion Turbine 3-2

Table 3-2 Annual Emission Summary for the GE LM6000-PC-ESPRINT Combustion Turbine¹ ... 3-2

Table 5-1 Emissions Netting Analysis..... 5-2

LIST OF FIGURES

Figure 1-1 Site Plan 1-2
Figure 1-2 Site Plot 1-3
Figure 2-1 Process Flow Diagram..... 2-2

1.0 INTRODUCTION

1.1 Application Summary

Florida Power Corporation's (FPC) University of Florida Cogeneration (UF Cogen) Facility currently consists of one Combustion Turbine (CT), one Duct Burner (DB) with a Heat Recovery Steam Generator (HRSG) and two Steam Boilers (No. 4 and No. 5). The steam boilers are used only as back-up sources. This application is submitted to support the proposed replacement of the existing CT (GE LM6000-PA) with a more efficient model (GE LM6000-PC-ESPRINT). FPC desires to commence construction in May 2001 and begin commercial operation no later than May 1, 2002 (pending receipt of all necessary local and environmental approvals).

The existing GE LM6000-PA CT has a generator rating of 43 MW and a maximum heat input rating of 399 MMBtu/hr (LHV) while firing natural gas and 384 MMBtu/hr (LHV) while firing No. 2 fuel oil. The NO_x emissions are controlled with steam injection. The DB can only fire natural gas and can only be operated while the CT is being operated. Low NO_x burners have been installed to control emissions. The DB has a maximum heat input rate of 187 MMBtu/hr (LHV). These emissions units began commercial service in 1994.

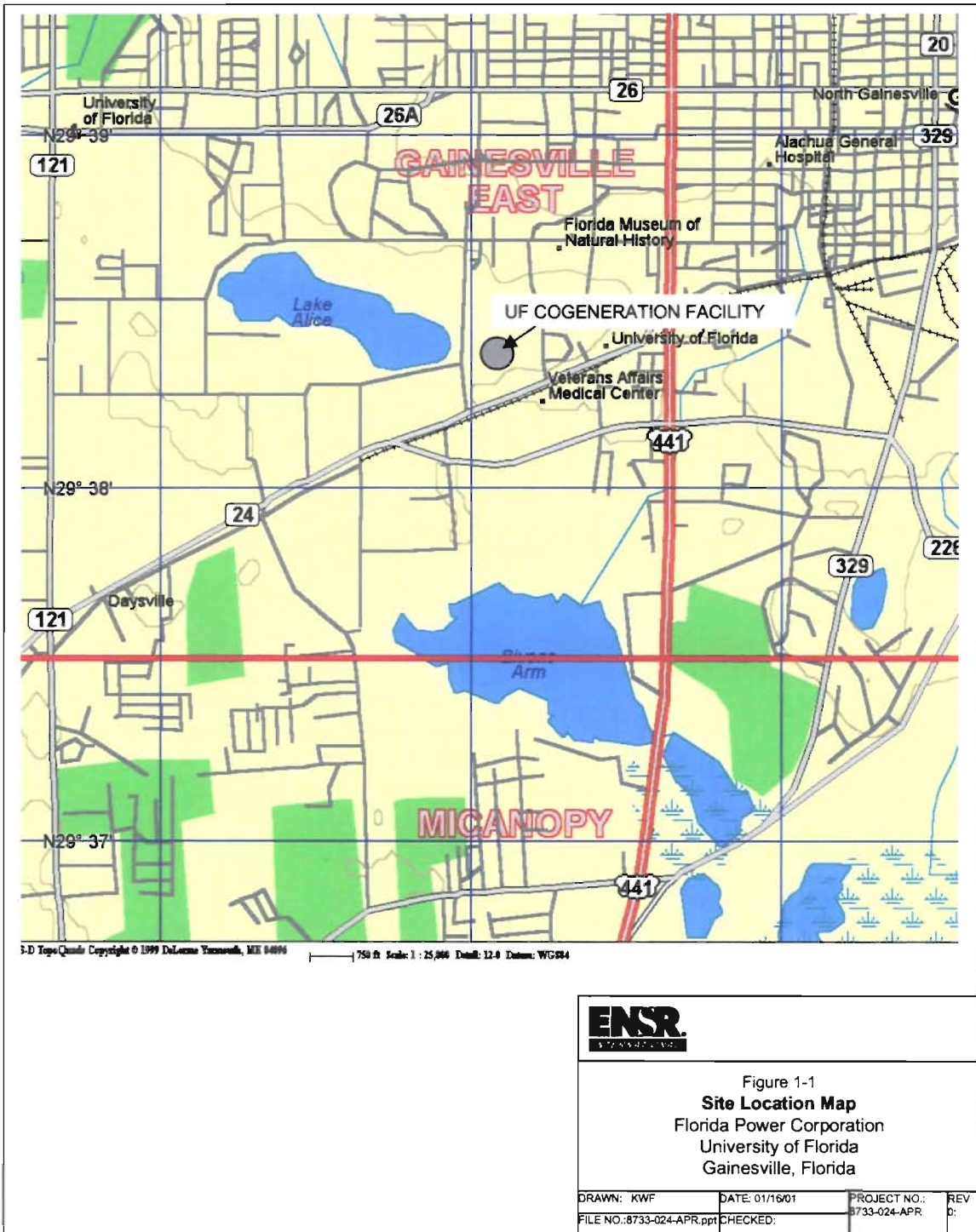
The CT and associated DB were permitted under the "source obligation" rule regarding NO_x emissions by retiring existing boilers onsite and taking a net increase less than the applicable 40 TPY significant emission rate. That permitting action (PSD-FL-181, dated August 17, 1992) resulted in NO_x emission caps of 194.3 TPY for the entire facility, 174.6 TPY for the CT and DB combined, and 142.7 TPY for the CT only. The existing facility was subject to PSD review for emissions of CO.

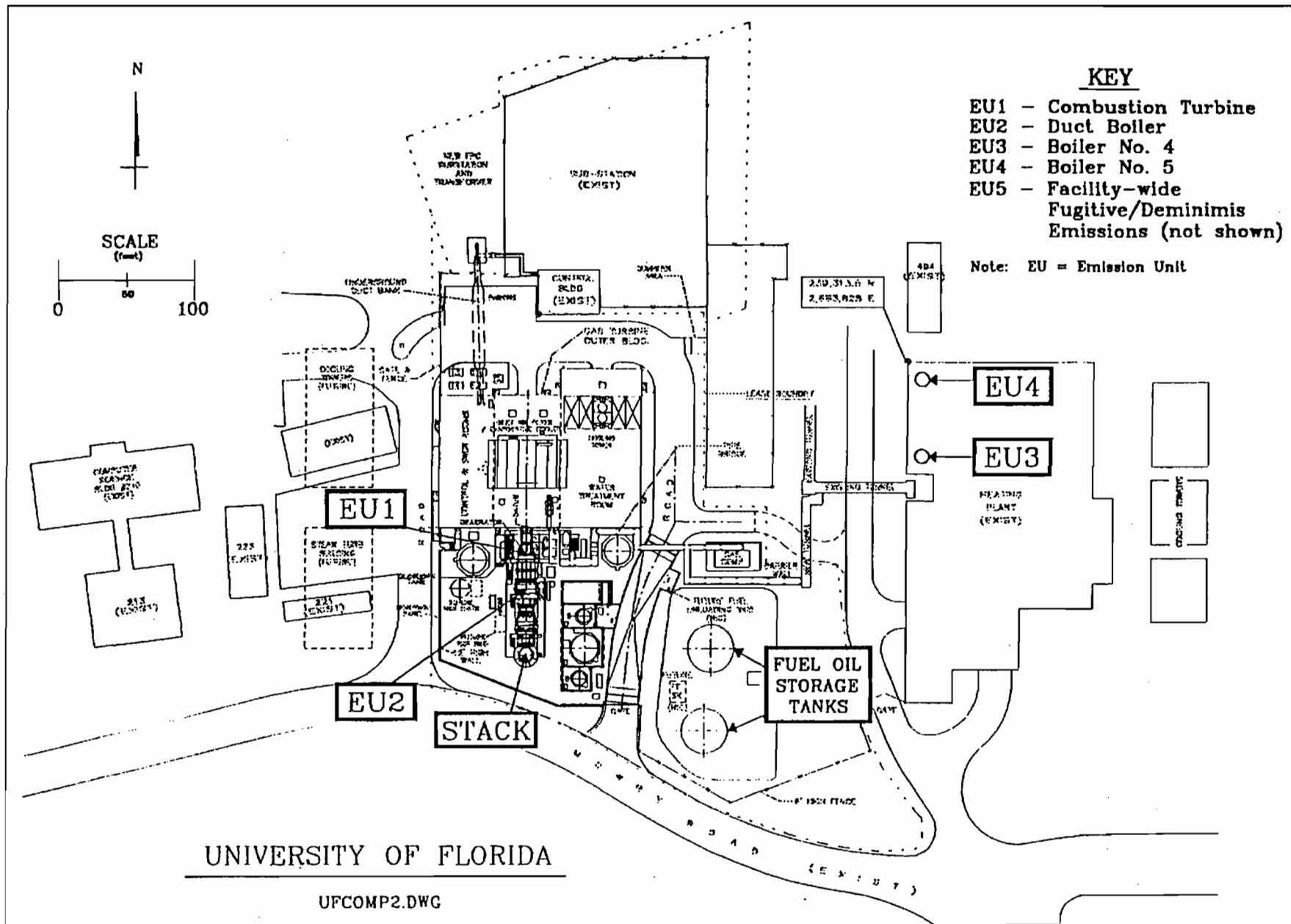
The back-up boilers (Nos. 4 and 5) began commercial operation in 1976. These boilers may be operated as necessary for back-up to the CT and DB, as long as the total NO_x emissions from this facility do not exceed 194.3 TPY. The maximum heat input rate for the No. 4 steam boiler is 69.6 MMBtu/hr. This is based on permitted firing limits of 68,000 cubic feet of natural gas per hour and 444 gallons per hour of No. 2 fuel oil. The maximum heat input rate for the No. 5 steam boiler is 168 MMBtu/hr. The maximum heat input is based on permit firing limits of 164,000 cubic feet of natural gas per hour and 1,067 gallons per hour of No. 2 fuel oil.

The existing facility site plan and plot plan are presented in Figures 1-1 and 1-2, respectively.

FPC is applying to the Florida Department of Environmental Protection (FDEP) for a State Air Construction Permit to allow for the replacement of the existing CT with a more efficient model. This application provides technical analyses and supporting data for a permit to construct the facility under the state construction permit program.

Figure 1-1 Site Plan





UNIVERSITY OF FLORIDA

UFCOMP2.DWG

Figure 1-2. Plot Plan



DRAWN:	DATE:	PROJECT NO.:	REV:
FILE NO.:	CHECKED:		

This application addresses the air construction permitting requirements specified under the provision of Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. General information about the applicant is presented below. A more detailed discussion on the organization of this document is also presented. To facilitate FDEP's review of this document, individuals familiar with both the facility and the preparation of this application have been identified in the following section. FDEP should contact these individuals if additional information or clarification is required during the review process.

1.2 General Applicant Information

Listed below are the applicant's primary points of contact, and the address and phone number where they can be contacted. Since this permit application has been prepared by a third party under the direction of FPC, a contact has been included for the permitting consultant.

1.2.1 Applicant's Address

<u>Corporate Office</u>	Florida Power Corporation One Power Plaza, 263 13 th Ave., S. St. Petersburg, FL 33701
-------------------------	---------------------------------------------------------------------------------------------------------

<u>Project Site</u>	UF Cogen Facility Mowry Rd., Bldg. 82, UF Gainesville, FL 32611
---------------------	-----------------------------------------------------------------------

1.2.2 Applicant's Contacts

<u>Responsible Official</u>	Kris Edmondson Plant Manager Telephone: (352) 337-6900
-----------------------------	--------------------------------------------------------------

<u>Environmental Contact</u>	J. Michael Kennedy Manager, Air Program (727) 826-4334
------------------------------	--------------------------------------------------------------

<u>Permitting Consultant</u>	Scott Osbourn Project Manager, ENSR Telephone (727) 898-9591
------------------------------	--------------------------------------------------------------------

1.3 Document Organization

The balance of this document is divided into sections that address the major issues of a pre-construction air quality permit review. The outline below provides an overview of the contents of each of the remaining sections.

- **Section 2.0 - Project Description** provides an overview of the facility including major facility components.
- **Section 3.0 - Emissions Summary** presents a detailed review of the emissions that will be generated at the project site subsequent to the completion of project development, under normal operating conditions. The basis and methods used to calculate emissions from the project are presented.
- **Section 4.0 - Applicable Regulations and Standards** presents a detailed review of both Federal and State regulations. The focus of this section will be on establishing which regulations are directly applicable to the proposed project and for which compliance must be demonstrated.
- **Section 5.0 – PSD Applicability Determination.** Since the proposed project could result in a significant increase in the emission of certain criteria pollutants, as defined under PSD regulations, a detailed review of proposed project emissions and past actual emissions is presented in this section.

Appendices

- **Appendix A** contains the FDEP application forms
- **Appendix B** provides supporting emission calculations
- **Appendix C** provides supporting information such as fuel usage for 1999 and 2000, and performance test data for the existing LM6000-PA turbine.
- **Appendix D** contains the description of the current stack sampling facilities, which should not change with this project.
- **Appendix E** contains a summary of startup and shutdown procedures.

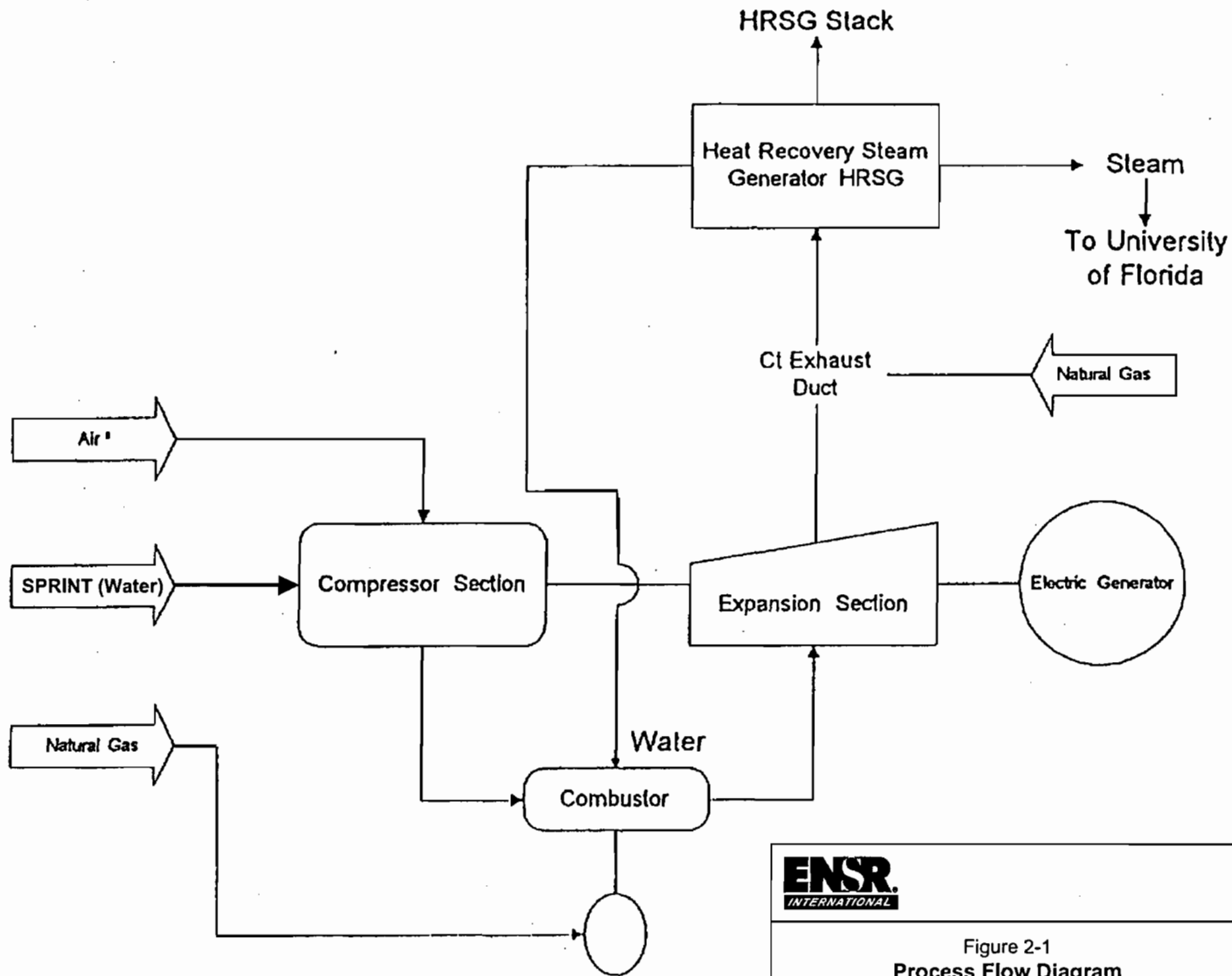
2.0 PROJECT DESCRIPTION

The following section provides an overview of the proposed project addressed by this permit application. The facility is owned and operated by Florida Power Corporation. A process flow diagram is depicted in Figure 2-1.

In 1998, an LM6000-PC design was introduced with water SPRay INTERcooling (SPRINT) between the low- and high-pressure compressors. An enhanced version is now available that provides water spray injection at the low-pressure compressor inlet as well, to further improve performance. Most gas turbines are limited by a maximum allowable firing temperature consistent with an operational design life of 50,000 hours between major overhauls. In the case of the LM6000, however, high-pressure compressor discharge temperatures (instead of firing temperature) is the limiting factor in maintaining design component life.

As ambient temperatures rise and the density of air decreases, the total mass flow into the turbine is reduced. Lower mass flows will limit the power output of a gas turbine. One solution for many plants has been to install a mechanical chiller or an evaporative cooler at the gas turbine inlet to cool the ambient air entering the compressor section. Spray intercooling increases mass flow by cooling the air during the compression process. For supplementary-fired cogeneration installations (such as this one), SPRINT can reduce fuel costs by reducing the amount of duct firing required to meet contract delivery requirements for process steam. This is an important consideration for this project, as the UF Cogen facility is committed to supply increasing amounts of process steam to the adjoining Shands Hospital complex.

Although the proposed modification will not be subject to Best Available Control Technology (BACT) requirements, as defined by U.S. EPA, efforts have been made to ensure that the project design minimizes air emissions. The project will not be a major source of hazardous air pollutants.



Notes:
 (a) cooled from ambient

Flow Diagram of Emission Unit



Figure 2-1
 Process Flow Diagram
 Combined Cycle Combustion Turbine
 Florida Power Corporation
 University of Florida

DRAWN: KWF	DATE: 01/17/01	PROJECT NO.: 8733-024	REV: 0
FILE NO.:	CHECKED:		

3.0 PROJECT EMISSIONS

This section discusses the basis and methods used to calculate emissions for the UF Cogeneration Facility. The calculation procedures used during the development of this application rely on process information developed by FPC for the operations conducted at the UF Cogen Facility, manufacturers' data, and methods presented by the U.S. EPA in the "Compilation of Air Pollution Emission Factor, AP-42".

Detailed emission calculations are presented in Appendix B.

3.1 Combustion Turbine

Criteria pollutant emissions are those that contribute to the formation of ambient air concentrations of pollutants for which the EPA has established National Ambient Air Quality Standards (NAAQS) based on health effects criteria. The PSD-regulated criteria pollutant emissions associated with natural gas combustion are CO, NO_x, VOC, SO₂, and Particulates (PM/PM₁₀).

Although there are four major emission sources at the UF Cogen Facility, this proposed modification (a physical replacement of the existing CT with a newer, more efficient model) will have no effect on the other three emission units (i.e., the DB and the two back-up boilers). This section presents the estimated emissions proposed for the new GE LM6000-PC-ESPRINT. Hourly emissions were calculated from manufacturers' operating parameters and guaranteed in-stack concentrations for CO, NO_x, and VOC. SO₂ emissions were calculated using the manufacturers' supplied fuel consumption data and fuel gas sulfur content. Particulate emissions include front-half and back-half particulate matter as measured by EPA Methods 5 and 202.

Maximum hourly emission rates for each compound are based on the type of fuel fired and the four inlet temperatures that represent the range of expected operating conditions. Annual emissions are based on the hourly emission rates for the worst-case loads during natural gas-firing at an inlet temperature of 49°F (the inlet temperature representing maximum output with evaporative cooling of the ambient air).

The data used in this analysis is presented in Appendix B. Table 3-1 presents a summary of worst-case hourly emissions for the combustion turbine. Table 3-2 presents a summary of the estimate of annual potential emissions. The estimated annual emissions from the proposed project will be compared to the actual emissions baseline and then evaluated for PSD applicability in Section 5.0.

Table 3-1 Emission Summary (lb/hr) for the GE LM6000-PC-ESPRINT Combustion Turbine

Compound	Ambient Temp	55	66.3	71.1	105
	Inlet Temp	49	59	63.2	93.4
	Load, %	Emissions for LM6000-PC-ESPRINT Turbine, lb/hr			
NOx	100	39.6	39.6	39.1	32.9
CO	100	35.8	34.1	31.3	12.0
VOC	100	5.6	5.4	5.3	4.6
SO2	100	1.2	1.2	1.2	1.0
PM	100	3.0	3.0	3.0	3.0
Notes:		The average inlet temperature during the year 2000 was 63.2 °F			

Table 3-2 Annual Emission Summary (TPY) for the GE LM6000-PC-ESPRINT Combustion Turbine¹

Turbine	NOx	CO	VOC	SO2	PM	PM ₁₀	Pb
Emissions for One Combustion Turbine (tons/year)¹							
GE LM6000-PC-ESPRINT, 49°F inlet, 8760 hr/yr ¹	173.4	156.8	24.5	5.3	13.1	13.1	0.000
GE LM6000-PC-ESPRINT, 49°F inlet, 7121hr/yr ¹	141.0	127.5	19.9	4.3	10.6	10.6	0.000
GE LM6000-PC-ESPRINT, 63.2°F inlet, 8760 hr/yr ²	171.3	137.1	23.2	5.3	13.1	13.1	0.000
GE LM6000-PC-ESPRINT, 63.2°F inlet, 7210.5 hr/yr	141.0	112.8	19.1	4.4	10.8	10.8	0.000
¹ These annual emission estimates are based on worst case hourly emissions and unlimited operation, i.e., inlet temperature of 49°F and natural gas operation of 8760 hrs/year, 100% load. ² The average inlet temperature for the year 2000 was 63.2°F. Emissions are at 100% load.							

4.0 APPLICABLE REGULATIONS AND STANDARDS

The following air regulations have been reviewed as they may apply to the proposed facility:

- Prevention of Significant Deterioration (PSD) pre-construction review under 40 CFR Part 52;
- New Source Performance Standards (NSPS) under 40 CFR Part 60;
- National Emissions Standards for Hazardous Air Pollutants (NESHAPs) under 40 CFR Part 63;
- Acid Rain Deposition Control Program under 40 CFR Parts 72, 73, and 75;
- CAA Operating Permit Program under 40 CFR Part 70; and
- State of Florida Air Resource Management Rules under Chapter 62 of the Florida Administrative Code.

These regulations are implemented by the FDEP through the federally-approved CAA State Implementation Plan (SIP) or by U.S. EPA-delegated authority. A review of the applicability criteria for these rules and the conclusions drawn relative to the proposed facility is presented below.

4.1 Prevention of Significant Deterioration

The Prevention of Significant Deterioration (PSD) rules are codified at 40 CFR Part 52 and incorporated as a SIP-approved program into Rule 62-212.400, F.A.C. The facility would be subject to PSD review for PSD-regulated pollutants, if it is a "major" source. New sources of air emissions are considered major sources if they have the "Potential-to-Emit" (PTE) more than the 100 tons/year for "listed" source categories or 250 tons/year for all other source categories. One of the 28 source categories listed in the PSD regulations is "fossil-fuel fired steam electric plants of more than 250 million Btu per hour heat input." Gas turbines used without heat recovery, such as simple cycle peaking units, have been determined to fall outside of the 28-source category list, and thus are subject to PSD review if potential emissions of any regulated pollutant exceed 250 tons/year. For existing facilities undergoing reconstruction or modification, PSD review is required for each pollutant emitted in excess of the Significant Emission Rates (SER) listed in Table 62-212.400-2 F.A.C.

The following requirements are encompassed by PSD review.

- Compliance with any applicable emission limitation under the State Implementation Plan (SIP);
- Compliance with any applicable NSPS or NESHAPS;

- Application of Best Available Control Technology (BACT), as defined by the PSD rules, to emissions of NO_x, CO, SO₂, and PM/PM₁₀ from all significant sources at the facility;
- A demonstration that the facility's potential emissions, and any emissions of regulated pollutants resulting from directly related growth of a residential, commercial or industrial nature, will neither cause nor contribute to a violation of the NAAQS or allowable PSD increments;
- An analysis of the impacts on local soils, vegetation and visibility resulting from emissions from the facility and emissions from directly related growth of a residential, commercial, or industrial nature;
- An evaluation of impacts on Visibility and Air Quality Related Values (AQRVs) in PSD Class I areas (if applicable); and
- At the discretion of FDEP, pre-construction and/or post-construction air quality monitoring for NO_x, CO, SO₂, and PM/PM₁₀.

Potentially applicable SIP limitations, NSPS and NESHAPs requirements are discussed below.

4.2 NSPS

The NSPS regulation that applies to combustion turbines is Subpart GG. This standard is applicable to stationary gas turbine units that have a heat input of greater than 10 MMBtu/hr. Under Subpart GG, units with a heat input at peak load greater than 100 MMBtu/hr and which supply more than one third of their electric generating capacity to a utility distribution system shall not emit NO_x in excess of:

$$\text{STD} = 0.0075(14.4/Y) + F$$

Where:

STD is the allowable NO_x emission, percent volume (corrected to 15 percent oxygen dry basis)

Y is rated heat rate at peak load, kilojoules/watt hour

F is NO_x emission allowance for fuel bound nitrogen, percent volume (for nitrogen content greater than 0.25 percent weight, F is 0.005 percent volume)

Applying the heat rate to the proposed General Electric LM6000-PC-ESPRINT turbine results in an applicable NSPS for NO_x emissions of approximately 110 ppmv on a dry basis, corrected to 15 percent oxygen, when firing natural gas. For distillate oil firing, the applicable NSPS limit is 102 ppm @ 15% oxygen.

Subpart GG also regulates the discharge of SO₂ by requiring compliance with one of the following two options:

- Limit SO₂ emissions to 0.015 percent or less by volume at 15 percent O₂ on a dry basis, or
- Limit the sulfur content of the fuel to 0.8 percent by weight or less.

The proposed project will readily meet the NSPS for SO₂ as both the proposed natural gas (1 grain/100 SCF) and distillate oil (<0.05 wt%) fuels will contain less than 0.8 percent sulfur content by weight.

4.3 NESHAPS

There is currently no NESHAPs for stationary gas turbines, although this is a source category scheduled for a determination of Maximum Achievable Control Technology (MACT) under 40 CFR Part 63. However, 40 CFR Part 63, Subpart B governs the construction or reconstruction of major sources of Hazardous Air Pollutants (HAPs) for which a NESHAP has not been promulgated. The rule requires new major sources of HAPs to install MACT for HAPs. MACT must be determined as a condition of pre-construction approval. A major source of HAPs is any stationary source that has the potential to emit 10 tons/year or more of a single HAP or 25 tons/year of combined HAPs.

The project is not a major HAP source, and, therefore, 40 CFR Part 63 Subpart B does not apply.

4.4 Acid Rain

The proposed facility meets the definition of "utility unit" and will be an affected Phase II unit under the Acid Rain Deposition Control Program pursuant to Title IV of the Clean Air Act. Title IV requirements for the proposed facility are currently included in the Title V permit. Title IV requires that the facility hold calendar-year allowances for each ton of SO₂ that is emitted and conduct emissions monitoring for SO₂ and NO_x pursuant to the requirements in 40 CFR Parts 72, 73, and 75.

4.5 CAA Operating Permit Program

FDEP administers the CAA Operating Permit Program under Rule 62-213 which has been approved by EPA under 40 CFR Part 70. A new major source must submit a Title V operating permit application to FDEP within 180 days after commencing operation. The Title V application will incorporate applicable emission limitations, monitoring, record keeping and reporting requirements from the construction permit.

4.6 State SIP Rules

In addition to the above regulations, the proposed facility is also subject to the Florida Air Pollution Control Regulations codified in Chapters 62-204 through 62-297 of the Florida Administrative Code (F.A.C.). The F.A.C. rules that are potentially applicable to the proposed project are as follows:

- **General Pollutant Emission Limiting Standards**

Rule 62-296.320 limits visible emissions from any activity not specifically addressed by another Florida Regulation in Chapter 62-296. The general visible emission standard for stacks limits opacity to 20%. Compliance with the visible emission standard must be done in accordance with U.S. EPA Method 9. A companion rule limits visible emissions from fugitive sources by requiring sources to take reasonable precautions to prevent such emissions. Fugitive emissions may occur during construction of the facility. Wet suppression or similar techniques will be used to control emissions as necessary during construction activities
- **General Construction Permitting Requirements**

Rule 62-210.310 requires that an air construction permit be obtained prior to commencing construction. The requirements for construction permits and approvals are contained in Rules 62-4.030, 62-4.050, 62-4.210, and 62-210.300(1). This document includes the general information required by the FDEP for a construction permit application.
- **Stack Height Policy**

Rule 62-210.550 specifies the stack height requirements and permissible dispersion techniques for permitting air emission sources. The facility will comply with the provisions of this regulation.
- **Excess Emissions**

Rule 62-210.700 provides allowances for excess emissions for emission units that may occur during periods of startup, shutdown, malfunction, and load changes (non steady-state operations). Excess emissions from the combustion turbines are expected to occur during startup and shutdowns. The facility will apply best operational practices to minimize the duration of excess emissions.
- **Annual Emissions Reporting**

Rule 62-210.370 requires Title V sources to submit an annual operating report that provides emissions information for the previous calendar year. The UF Cogen Facility will submit to the FDEP annual emissions reports by March 1 of each year.

5.0 PSD APPLICABILITY DETERMINATION

Since the subject facility is currently a major source of regulated air pollutants per Prevention of Significant Deterioration (PSD) regulations (40 CFR 52.21; F.A.C. 62-212.400), the applicant must determine if the proposed new construction will require new source review. This section demonstrates that the emissions from the proposed new construction, with certain restrictions, will not exceed the significant emission rates in 40 CFR 52.21. Accordingly, new source review requirements in 40 CFR 52.21, including BACT analysis (F.A.C. 62-212.500), do not apply to the proposed new construction.

The proposed new combustion turbine project will exceed the significant emission rates for NO_x and CO. 40 CFR 52.21 and F.A.C. 62-212.400 allow the facility to consider credits for contemporaneous net emissions increases, evaluating actual emissions for the previous two years of operation. The new combustion turbine replaces an existing combustion turbine, an LM6000-PA. The average emissions for 1999 and 2000 for NO_x and CO, based on fuel consumption and performance testing, were subtracted from the potential to emit NO_x and CO from the new LM6000-PC-ESPRINT. The resulting net emissions are lower than the significant emission rates for NO_x and CO. The netting exercise is summarized in Table 5-1 below.

Baseline actual emissions were calculated from fuel rate information in the 1999 and 2000 annual operating reports, and from performance test data. Emission factors for NO_x and CO in lb/MMBtu were developed from the performance test data. AP-42 emission factors were used for all other pollutants. The AP-42 emission factor for SO₂ is based on the 1 grain per 100 cubic feet of natural gas fuel specification. These factors were then applied to the fuel usage reported for the combustion turbine in the annual operating reports. The resulting estimated actual emissions were then averaged to form the baseline actual annual emissions for the existing LM6000-PA combustion turbine.

Emissions for the new LM6000-PC-ESPRINT combustion turbine were based on manufacturer's data provided for NO_x, CO, PM and VOC (as hydrocarbon) for a range of inlet conditions after evaporative cooling. AP-42 emission factors were used for all other pollutants. The AP-42 emission factor for SO₂ is based on the 1 grain per 100 cubic feet of natural gas fuel specification. Worst case emissions were based on the worst case rates over the range of conditions studied. Accordingly, actual emissions are generally anticipated to be lower than those reported. The worst case conditions are generally at the lower temperatures, however, so at peak winter demand periods emissions may approach the worst case conditions.

Table 5-1 Emissions Netting Analysis

PERMIT LIMITS	NOx	CO	SO2	PM	PM10	VOC
Existing Permit Limits, Facility, TPY	194.3					
Existing Permit Limits, EU01 & EU02, TPY	174.6	202.6				
Existing Permit Limits, EU01, lb/hr	39.6	38.8				
EU01 LM6000-PA, 43 MW, TPY, gas, if no oil is fired	150	165.7				
EU01 LM6000-PA, 43 MW, TPY, gas portion	142.7					
EU02 Duct burners for HRSG, TPY*	24.6	36.9				
EU03 No. 4 boiler, 70 MMBtu/hr, TPY*						
EU04 No. 5 boiler, 168 MMBtu/hr, TPY*						
*SO2 emissions are limited by a restriction of 0.5% Sulfur in Fuel Oil.						

PROPOSED PROJECT, ESTIMATED MAXIMUMS	NOx	CO	SO2	PM	PM10	VOC
new LM6000-PC-ESPRINT Hours	8760	8760	8760	8760	8760	8760
new LM6000-PC-ESPRINT lbs/hr, @49°F inlet, 100% load	39.6	35.8	1.200	3.000	3.000	5.600
new LM6000-PC-ESPRINT tpy, @49°F inlet, 100% load	173.4	156.8	5.256	13.140	13.140	24.528

NETTING (Potential to Actual)	NOx	CO	SO2	PM	PM10	VOC
New CTG Emissions, Max, TPY	173.4	156.8	5.256	13.140	13.140	24.528
Existing CTG 2-Year Actuals (avg. 1999 & 2000), TPY	101.5	31.3	0.005	0.009	0.009	0.003
New CTG Emissions, Limited, TPY, 49°F inlet	141.0	127.5	4.273	10.682	10.682	19.939
Net Increase, TPY	39.5	96.1	4.268	10.672	10.672	19.936
Actual Emissions are based on average of emissions based on fuel use from 1999 and 2000 annual operating reports, performance test data and AP-42 emission factors.						

PROPOSED NEW LIMITS	NOx	CO	SO2	PM	PM10	VOC
Previous CTG Emissions, TPY	150	165.7				
New CTG Emissions, TPY	141.0	127.5				
Net Decrease in Allowable Emissions, TPY (150 - 141)	9.0	38.2				
New Limit for CTG plus Duct Burners, TPY	165.6	164.4				
New Facility Limits, TPY	185.3					

PSD/NSR DETERMINATION	NOx	CO	SO2	PM	PM10	VOC
Significant Emission Rate, TPY	40	100	40	25	15	40
Net Increase, TPY	39.5	96.1	4.3	10.7	10.7	19.9
Area Designation	BTNS	ATTAIN	BTNS	BTNS	BTNS	NA
Source Major for NAA?	NA	NA	NA	NA	NA	NA
Subject to NAA Review?	NO	NO	NO	NO	NO	NO
new CTG > SER?	YES	YES	NO	NO	NO	NO
Net Increase > SER?	NO	NO	NO	NO	NO	NO
BTNS: Better than National Standards ATTAIN: Attainment, or Unclassifiable NA: Not applicable						

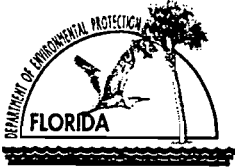
OPERATIONAL NOTES	
CTG Fuel Use 1999 (HV=1048 Btu/CF):	2,717.9 MMCF
CTG Fuel Use 2000 (HV=1036.5 Btu/CF):	3,010.2 MMCF

Proposed NOx Limit

The facility is proposing to accept a limit on NOx emissions of 39.6 lb/hr (the current limit) and 141 ton/yr from the new LM-6000-PC-ESPRINT turbine. The proposed new annual limit is 9 ton/yr less than the previous allowable for NOx under the current permit. This is equivalent to operating at full load for 7,211 hours per year at inlet temperatures of 63.2°F (the average inlet temperature during the year 2000), or burning 2,937.3 MMCF of natural gas per year at the same inlet conditions. The new combustion turbine may operate up to 8760 hours per year at a lower fuel rate and/or better conditions.

The NOx and CO rates vary significantly with inlet conditions, and the new LM6000-PC-ESPRINT is likely to perform better than manufacturer's guarantees. Accordingly, FPC proposes to adjust the facility NOx limit as well as the current limit for the combination of the duct burners and the CTG by the amount corresponding to the decrease in the allowable for the CTG. Thus, FPC proposes to demonstrate compliance with all NOx limits for the CTG and duct burners by recording total NOx emissions as reported by the continuous emissions monitoring system (CEMS).

APPENDIX A
FLORIDA DEP APPLICATION FORMS



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 Corporation	
2. Site Name: University of Florida Cogeneration Plant	
3. Facility Identification Number: 0010001 [] Unknown	
4. Facility Location: Street Address or Other Locator: Mowry Road, Building 82, University of Florida City: Gainesville County: Alachua Zip Code: 32611-2295	
5. Relocatable Facility? [] Yes [✓] No	6. Existing Permitted Facility? [✓] Yes [] No

Application Contact

1. Name and Title of Application Contact: J. Michael Kennedy, Manager Air Program, Environmental Services Department	
2. Application Contact Mailing Address: Organization/Firm: Florida Power Corporation Street Address: One Power Plaza, 263 13 th Ave., S. City: St. Petersburg State: FL Zip Code: 33701	
3. Application Contact Telephone Numbers: Telephone: (727) 826-4334 Fax: (727) 826-4216	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
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)

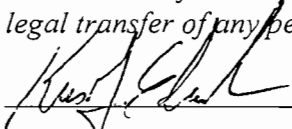
- Initial Title V air operation permit for an existing facility which is classified as a Title V source.
- Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a 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: _____
- 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: _____
Reason for revision: _____

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: Kris Edmondson, Plant Manager
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Florida Power Corporation Street Address: UF Cogen Plant, Mowry Rd., Bldg. 82, UF City: Gainesville State: FL Zip Code: 32611
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (352) 337-6900 Fax: (352) 337-6920
4. Owner/Authorized Representative or Responsible Official Statement: <i>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.</i>  _____ Signature 01/23/2001 _____ Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: Blair D. Burgess Registration Number: 45460
2. Professional Engineer Mailing Address: Organization/Firm: ENSR Street Address: 2809 West Mall Drive City: Florence State: AL Zip Code: 35630
3. Professional Engineer Telephone Numbers: Telephone: (256) 767-1210 Fax: (256) 767-1211

4. Professional Engineer Statement:

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

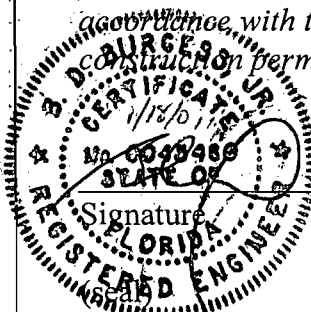
(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions 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 [], 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.



EMBOSSSED METALLIC

Signature _____

1/18/01
Date _____

* Attach any exception to certification statement.

Construction/Modification Information

1. Description of Proposed Project or Alterations:

Applicant is replacing the current LM6000-PA combustion turbine with a LM6000-PC-ESPRINT combustion turbine. Other described emission units, including the duct burner, will remain unchanged.

2. Projected or Actual Date of Commencement of Construction: May 2001

3. Projected Date of Completion of Construction: May 2002

Application Comment

For clarity, the application forms are divided into:

- Facility information
- Proposed new equipment
- Existing equipment

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: 17 East (km): 369.4 North (km): 3279.3			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 29° 38' 23" Longitude (DD/MM/SS): 82° 20' 55"			
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s):
7. Facility Comment (limit to 500 characters): The UF Cogeneration plant consists of a single combustion turbine (CT), heat recovery steam generator (HRSG), duct burners (DB) located between the CT and the HRSG, and two backup boilers.			

Facility Contact

1. Name and Title of Facility Contact: Kris Edmondson, Plant Manager			
2. Facility Contact Mailing Address: Organization/Firm: Florida Power Corporation Street Address: P.O. Box 112295 City: Gainesville State: FL Zip Code: 32611-2295			
3. Facility Contact Telephone Numbers: Telephone: (352) 337-6900 Fax: (352) 337-6920			

Facility Regulatory Classifications

Check all that apply:

1. <input type="checkbox"/> Small Business Stationary Source?	<input type="checkbox"/> Unknown
2. <input checked="" type="checkbox"/> Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. <input type="checkbox"/> Synthetic Minor Source of Pollutants Other than HAPs?	
4. <input type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)?	
5. <input type="checkbox"/> Synthetic Minor Source of HAPs?	
6. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS?	
7. <input type="checkbox"/> One or More Emission Units Subject to NESHAP?	
8. <input type="checkbox"/> Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters): CT – NSPS (40 CFR 60 Subpart GG) DBs – NSPS (40 CFR 60 Subpart Db)	

List of Applicable Regulations

Chapter 62-4	Permits
Rule 62-204.220	Ambient Air Quality Protection
Rule 62-204.240	Ambient Air Quality Standards
Rule 62-204.800	Federal Regulations Adopted by Reference
Rule 62-210.300	Permits Required
Rule 62-210.350	Public Notice and Comments
Rule 62-210.370	Reports
Rule 62-210.550	Stack Height Policy
Rule 62-210.650	Circumvention
Rule 62-210.700	Excess Emissions
Rule 62-210.900	Forms and Instructions
Rule 62-212.300	General Preconstruction Review Requirements
Rule 62-213	Operation Permits for Major Sources of Air Pollution
Rule 62-214	Federal Acid Rain Program
Rule 62-296.	General Pollutant Emission Limiting Standards
Rule 62-297.310	General Test Requirements
Rule 62-297.401	Compliance Test Methods
Rule 62-297.520	EPA Continuous Monitor Performance Specifications
40 CFR 60	Applicable sections of Subpart A, General Requirements, NSPS Subparts GG and Db
40 CFR 70	Title V Operating Permits
40 CFR 72	Acid Rain Permits
40 CFR 75	Monitoring
40 CFR 77	Acid Rain Program – Excess Emissions

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. <u>Requested Emissions Cap</u>		4. Basis for Emissions Cap	5. Pollutant Comment
		lb/hour	tons/year		
NOX	A		185.3	ESCPSD	Includes 001, 002, 003, 004
NOX	A		165.6	ESCPSD	Includes 001 & 002
CO	A				
SO2	A				
PM10	A				
VOC	A				

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: <input checked="" type="checkbox"/> Attached, Document ID: <u>Figure 1-1</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Facility Plot Plan: <input checked="" type="checkbox"/> Attached, Document ID: <u>Figure 1-2</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Process Flow Diagram(s): <input checked="" type="checkbox"/> Attached, Document ID: <u>Figure 2-1</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Fugitive Emissions Identification: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
6. Supplemental Information for Construction Permit Application: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
7. Supplemental Requirements Comment: PSD Netting is discussed in Section 5 of this application report.

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9. List of Equipment/Activities Regulated under Title VI: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Equipment/Activities On site but Not Required to be Individually Listed <input checked="" type="checkbox"/> Not Applicable
10. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
11. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Identification of Additional Applicable Requirements: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
13. Risk Management Plan Verification: <input type="checkbox"/> 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: _____) <input type="checkbox"/> Plan to be submitted to CEPPO (Date required: _____) <input checked="" type="checkbox"/> Not Applicable
14. Compliance Report and Plan: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
15. Compliance Certification (Hard-copy Required): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

III. EMISSIONS UNIT INFORMATION

LM6000-PC-ESPRINT

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

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input checked="" type="checkbox"/> 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).</p> <p><input type="checkbox"/> 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.</p> <p><input type="checkbox"/> 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.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>2. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Combustion Turbine (LM6000-PC-ESPRINT)</p>			
<p>4. Emissions Unit Identification Number: ID:</p>		<p><input checked="" type="checkbox"/> No ID <input type="checkbox"/> ID Unknown</p>	
<p>5. Emissions Unit Status Code: C</p>	<p>6. Initial Startup Date: June 2001</p>	<p>7. Emissions Unit Major Group SIC Code: 49</p>	<p>8. Acid Rain Unit? <input checked="" type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters) The new CT will replace the existing CT, which currently exhausts through a heat recovery steam generator (HRSG) and a single stack. There will be no other changes to the process configuration.</p>			

Emissions Unit Information Section 1 of 1

Emissions Unit Control Equipment

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

Steam injection.

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

Emissions Unit Details

1. Package Unit:		
Manufacturer: General Electric	Model Number: LM6000-PC-ESPRINT	
2. Generator Nameplate Rating: 48 MW @59°F 98% RH inlet conditions		
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:	392 mmBtu/hr LHV @59°F inlet	
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:	48 MW @59°F inlet temp	
5. Requested Maximum Operating Schedule:		
	24 hours/day	7 days/week
	52 weeks/year	8760 hours/year*
6. Operating Capacity/Schedule Comment (limit to 200 characters):		
	<p>Maximum heat input based on natural gas-firing, 950 Btu/CF (LHV).</p> <p>* The CT would not operate for 8,760 hr/yr at maximum firing rates; however, the CT may run at lower rates for more hours within annual fuel limits.</p>	

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

List of Applicable Regulations

40 CFR 60, Subpart A (General Provisions for New Source Performance Standards)	
40 CFR 60.332(a)(1) – NO_x standards for Stationary Gas Turbines	
40 CFR 60.333 – SO₂ standards for Stationary Gas Turbines	
40 CFR 60.334 – Monitoring Provisions for Stationary Gas Turbines	
40 CFR Part 70 – Operating Permit Program	
40 CFR Part 72 – Acid Rain Program Requirements Regulations	
40 CFR Part 73 – Acid Rain Program SO₂ Allowances System	
40 CFR Part 75 – Acid Rain Program Continuous Emissions Monitoring	
Rule 62-296.320(4)(b)1 – Visible emissions	
40 CFR 52.21 – Prevention of Significant Deterioration	
Rule 62-212.400 – Prevention of Significant Deterioration	

Emissions Unit Information Section 1 of 1

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? EU-1		2. Emission Point Type Code: 2	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Single stack for CT and DB			
3. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: EU-1 Combustion Turbine (LM6000-PC-ESPRINT) EU-2 Duct Burners			
4. Discharge Type Code: V	6. Stack Height: 93 feet	7. Exit Diameter: 9.8 feet	
8. Exit Temperature: 257 °F	9. Actual Volumetric Flow Rate: 365,700 acfm	10. Water Vapor: 10-12 vol%	
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): Items 8, 9, 10, 11 based on the CT only, at 59°F and 60% Relative Humidity at the inlet.			

Emissions Unit Information Section 1 of 1

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): Natural Gas Firing		
3. Source Classification Code (SCC): 2-01-002-01		3. SCC Units: Million Cubic Feet Burned
4. Maximum Hourly Rate: 0.425 (LHV)	5. Maximum Annual Rate: 3,725 (LHV)	6. Estimated Annual Activity Factor:
6. Maximum % Sulfur: 1 grain / 100 CF	8. Maximum % Ash:	9. Million Btu per SCC Unit: 950 (LHV)
10. Segment Comment (limit to 200 characters): Based on inlet conditions 49°F and 92.8% relative humidity, LHV.		

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):		

Emissions Unit Information Section 1 of 1

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

Potential/Fugitive Emissions

1. Pollutant Emitted: NOX	2. Total Percent Efficiency of Control:
3. Potential Emissions: 39.6 lb/hour 141 tons/year	4. Synthetically Limited? [<input checked="" type="checkbox"/>]
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 25 ppmvd @15% O2 Reference: Manufacturer's Data	7. Emissions Method Code: 2
8. Calculation of Emissions (limit to 600 characters): Calculations are in Appendix B.	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: ESCPD	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 39.6 lb/hr; 141 ton/yr	4. Equivalent Allowable Emissions: 39.6 lb/hour 141 tons/year
5. Method of Compliance (limit to 60 characters): Annual Compliance Test, EPA Method 20. CEMS data.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

Emissions Unit Information Section 1 of 1

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: 35.8 lb/hour 127.5 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/>
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 36 ppmvd @15% O2 Reference: Manufacturer's Data	7. Emissions Method Code: 2
8. Calculation of Emissions (limit to 600 characters): Calculations are in Appendix B.	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): PTE based on 100% load at 49°F inlet conditions.	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: ESCPD	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 35.8 lb/hr 127.5 tons/year	4. Equivalent Allowable Emissions: 35.8 lb/hr 127.5 tons/yr
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): Allowable based on 100% load at 49°F inlet conditions.	

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

Potential/Fugitive Emissions

1. Pollutant Emitted: PM10	2. Total Percent Efficiency of Control:
3. Potential Emissions: 3.0 lb/hour 13.1 tons/year	4. Synthetically Limited? []
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 3 lb/hr Reference: Manufacturer's Data	7. Emissions Method Code: 2
8. Calculation of Emissions (limit to 600 characters): Calculations are in Appendix B.	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

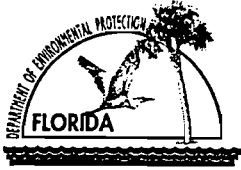
G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: VOC		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 5.6 lb/hour 24.5 tons/year		6. Synthetically Limited? []	
7. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 to tons/year			
6. Emission Factor: 3 lb/hr Reference: Manufacturer's Data		7. Emissions Method Code: 2	
8. Calculation of Emissions (limit to 600 characters): Calculations are in Appendix B.			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code:		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:		4. Equivalent Allowable Emissions: lb/hour tons/year	
5. Method of Compliance (limit to 60 characters):			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			



Department of Environmental Protection

Division of Air Resources Management

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

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: [<input type="checkbox"/>] Rule [<input checked="" type="checkbox"/>] Other
3. Requested Allowable Opacity: Normal Conditions: 10% Exceptional Conditions: 27% Maximum Period of Excess Opacity Allowed: 6 min/hour	
8. Method of Compliance: Annual Compliance Test using EPA Method 9	
9. Visible Emissions Comment (limit to 200 characters): VE standard established as part of construction permit. Rule 62-210.700 – Maximum period of excess opacity allowed for startup, shutdown, and malfunction – 2 hrs / 24 hours.	

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

Continuous Monitoring System: Continuous Monitor 1 of 3

1. Parameter Code: EM	2. Pollutant(s): NOX
3. CMS Requirement: [<input checked="" type="checkbox"/>] Rule [<input type="checkbox"/>] Other	
4. Monitor Information: Manufacturer: Teco/Enviroplan Model Number: 42 Serial Number: 42-45320-273	
5. Installation Date: 01 Dec 1995	6. Performance Specification Test Date: 01 Dec 1995
7. Continuous Monitor Comment (limit to 200 characters): NOx is monitored on a continuous basis for compliance with the lb/hr and TPY permit limits.	

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

Continuous Monitoring System: Continuous Monitor 2 of 3

1. Parameter Code: EM	2. Pollutant(s): EM
3. CMS Requirement:	[] Rule [<input checked="" type="checkbox"/>] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number: 2342B005-1992 and 93221879	
5. Installation Date: 01 Dec 1995	6. Performance Specification Test Date: 01 Dec 1995
7. Continuous Monitor Comment (limit to 200 characters): Fuel flow monitoring.	

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

Continuous Monitoring System: Continuous Monitor 3 of 3

1. Parameter Code: EM	2. Pollutant(s): CO2
3. CMS Requirement:	[] Rule [] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number: 41H-44967-273	
5. Installation Date: 01 Dec 1995	6. Performance Specification Test Date: 01 Dec 1995
7. Continuous Monitor Comment (limit to 200 characters):	

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

Supplemental Requirements

1. Process Flow Diagram <input checked="" type="checkbox"/> Attached, Document ID: <u>Figure 2-1</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input checked="" type="checkbox"/> Attached, Document ID: <u>Appendix C</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input checked="" type="checkbox"/> Attached, Document ID: <u>Appendix C</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously submitted, Date: <u>1999 and 2000</u> <input type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input checked="" type="checkbox"/> Attached, Document ID: <u>Appendix D</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
13. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
14. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
15. Acid Rain Part Application (Hard-copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Emissions Unit Information Section 1 of 3

III. EMISSIONS UNIT INFORMATION

EXISTING UNITS

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

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input checked="" type="checkbox"/> 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).</p> <p><input type="checkbox"/> 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.</p> <p><input type="checkbox"/> 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.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>7. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Duct Burner System associated with HRSG</p>			
<p>4. Emissions Unit Identification Number: ID:</p>		<p><input type="checkbox"/> No ID <input checked="" type="checkbox"/> ID Unknown</p>	
<p>5. Emissions Unit Status Code: A</p>	<p>6. Initial Startup Date:</p>	<p>7. Emissions Unit Major Group SIC Code: 49</p>	<p>8. Acid Rain Unit? <input type="checkbox"/></p>
<p>10. Emissions Unit Comment: (Limit to 500 Characters) This emission unit cannot operate unless the combustion turbine is operational.</p>			

Emissions Unit Information Section 1 of 3

Emissions Unit Control Equipment

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

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

Emissions Unit Details

1. Package Unit:	
Manufacturer: Colen	Model Number:
2. Generator Nameplate Rating:	
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:	188 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	8760 hours/year*
7. Operating Capacity/Schedule Comment (limit to 200 characters):	<p align="center">Maximum heat input based on natural gas-firing, 950 Btu/CF (LHV). These duct burners can only fire on natural gas.</p>	

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

List of Applicable Regulations

62-204.800(7)(b)3	NSPS Subpart Db
62-204.800(7)(d)	NSPS General Provisions
62-210.650	Circumvention
62-210.700(1)	Excess Emissions
62-210.700(4)	Excess Emissions
62-210.700(6)	Excess Emissions
62-297.310	Emissions Testing
40 CFR 60.7(b);(f)	Notification and Recordkeeping
40 CFR 60.8(e)	Performance tests
40 CFR 60.11(a)	Compliance
40 CFR 60.11(d)	Compliance (maintain control equipment)
40 CFR 60.44b(a)(4)(ii)	NOx
40 CFR 60.46b(a)	Compliance
40 CFR 60.46b(c)	NOx Performance tests
40 CFR 60.46b(f)	NOx for duct burners

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? EU-2		11. Emission Point Type Code: 2	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Single stack for CT and DB			
12. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: EU-1 Combustion Turbine (LM6000-PA) EU-2 Duct Burners			
13. Discharge Type Code: V	6. Stack Height: 93 feet	7. Exit Diameter: 9.8 feet	
8. Exit Temperature:	9. Actual Volumetric Flow Rate:	10. Water Vapor:	
11. Maximum Dry Standard Flow Rate:		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters): See emission point information for the new LM6000-PC-ESPRINT.			

Emissions Unit Information Section 1 of 3

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): Natural Gas Firing		
8. Source Classification Code (SCC): 2-01-002-01	3. SCC Units: Million Cubic Feet Burned	
9. Maximum Hourly Rate: 0.198 (LHV)	10. Maximum Annual Rate: 519 (LHV)	6. Estimated Annual Activity Factor:
11. Maximum % Sulfur: 1 grain / 100 CF	8. Maximum % Ash:	10. Million Btu per SCC Unit: 950 (LHV)
10. Segment Comment (limit to 200 characters):		

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
NOX			EL
CO			EL

Emissions Unit Information Section 1 of 3

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

Potential/Fugitive Emissions

1. Pollutant Emitted: NOX	2. Total Percent Efficiency of Control:
3. Potential Emissions: 18.7 lb/hour 24.6 tons/year	4. Synthetically Limited? [✓]
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 to tons/year	
6. Emission Factor: 0.1 lb/MMBtu Reference: Permit Limit	7. Emissions Method Code: 0
8. Calculation of Emissions (limit to 600 characters): Calculations are in Appendix B.	
8. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Emissions limited to 2,628 hr/yr operation at maximum fuel usage rate of 197.7 x 10 ³ cf/hr.	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
2. Requested Allowable Emissions and Units: 18.7 lb/hr	4. Equivalent Allowable Emissions: 18.7 lb/hour 24.6 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): Permit limit for DB.	

Emissions Unit Information Section 1 of 3

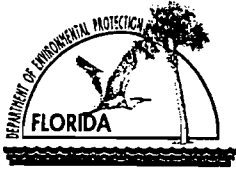
G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control:
3. Potential Emissions: 28.1 lb/hour 36.9 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/>
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 0.15 lb/MMBtu Reference: Permit Limit	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): Permit Limit.	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Emissions limited by hours of operation (2,628 hr/yr) at maximum fuel usage rate of 197.7 x 10 ³ cf/hr.	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 28.1 lb/hr	4. Equivalent Allowable Emissions: 28.1 lb/hour 36.9 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): Permit Limit for DB.	



Department of Environmental Protection

Division of Air Resources Management

H. VISIBLE EMISSIONS INFORMATION

(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: [<input type="checkbox"/>] Rule [<input checked="" type="checkbox"/>] Other
3. Requested Allowable Opacity: Normal Conditions: 10% Exceptional Conditions: 27% Maximum Period of Excess Opacity Allowed: 6 min/hour	
14. Method of Compliance:	
15. Visible Emissions Comment (limit to 200 characters): See requirements for new LM6000-PC-ESPRINT turbine (shared stack).	

I. CONTINUOUS MONITOR INFORMATION

(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 1 of 3

1. Parameter Code: EM	2. Pollutant(s): NOX
3. CMS Requirement: [<input checked="" type="checkbox"/>] Rule [<input type="checkbox"/>] Other	
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
8. Installation Date:	9. Performance Specification Test Date:
10. Continuous Monitor Comment (limit to 200 characters): See CEM data for LM-6000-PC-ESPRINT turbine.	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 1 of 3

(Regulated Emissions Units Only)

Supplemental Requirements

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

Emissions Unit Information Section 2 of 3

Emissions Unit Control Equipment

16. 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:

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:	70 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	8760 hours/year*
9. Operating Capacity/Schedule Comment (limit to 200 characters):	<p>Maximum heat input based on natural gas-firing, permit limit of 68,000 cf/hr, 1024 Btu/cf HHV. Max fuel input for oil is 444 gal/hr (20,140 Btu/lb- HHV; 7.2 lb/gal).</p>	

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

List of Applicable Regulations

62-210.700(1)	Malfunction only for FFGS
62-210.700(2)	Startup / Shutdown for FFGS
62-210.700(3)	Load Change / soot blowing
62-210.700(4)	Maintenance
62-210.700(6)	Excess Emissions
62-296.406(1), (2), (3)	VE; BACT
62-297.310	Emissions Testing

Emissions Unit Information Section 2 of 3

**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? EU-3		17. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Single stack			
18. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA			
19. Discharge Type Code: V	6. Stack Height: 82 feet	7. Exit Diameter: 5 feet	
8. Exit Temperature: 350 °F	9. Actual Volumetric Flow Rate: 13,500 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): Information for oil-firing.			

Emissions Unit Information Section 2 of 3

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): Natural Gas Firing		
13. Source Classification Code (SCC): 1-03-006-02		3. SCC Units: Million Cubic Feet Burned
14. Maximum Hourly Rate: 0.068 (LHV)	15. Maximum Annual Rate: 596 (LHV)	6. Estimated Annual Activity Factor:
16. Maximum % Sulfur: 1 grain / 100 CF	8. Maximum % Ash:	11. Million Btu per SCC Unit: 950 (LHV)
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Distillate fuel oil.		
2. Source Classification Code (SCC): 1-02-005-01		3. SCC Units: Thousand Gallons Burned
3. Maximum Hourly Rate: 0.444	4. Maximum Annual Rate: 3,889	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.5	8. Maximum % Ash: 0.1	9. Million Btu per SCC Unit: 145
10. Segment Comment (limit to 200 characters):		

Emissions Unit Information Section 2 of 1

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

Potential/Fugitive Emissions

1. Pollutant Emitted: SO ₂	H. Total Percent Efficiency of Control:
I. Potential Emissions: 32 lb/hour 140 tons/year	J. Synthetically Limited? []
K. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 0.5% Sulfur Reference:	7. Emissions Method Code:
6. Calculation of Emissions (limit to 600 characters): .Permit Limit	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.5% Sulfur	4. Equivalent Allowable Emissions: 32 lb/hour 140 tons/year
5. Method of Compliance (limit to 60 characters): Fuel Analysis	
6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): Based on fuel-oil firing.	

Emissions Unit Information Section 2 of 3

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

Visible Emissions Limitation: Visible Emissions Limitation 1 of 5

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: 10% Exceptional Conditions: 27% Maximum Period of Excess Opacity Allowed: 6 min/hour	
20. Method of Compliance: Annual Compliance Test using EPA Method 9	
21. Visible Emissions Comment (limit to 200 characters): VE standard established as part of construction permit. Gas-firing.	

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

Visible Emissions Limitation: Visible Emissions Limitation 2 of 5

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: 20% Exceptional Conditions: 60% Maximum Period of Excess Opacity Allowed: 60 min/hour	
22. Method of Compliance: EPA Method 9	
23. Visible Emissions Comment (limit to 200 characters): VE limit during soot-blowing and load changing for up to 3 hr in 24 hr. Rule 62-210.700(3).	

Emissions Unit Information Section 2 of 3

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

Visible Emissions Limitation: Visible Emissions Limitation 3 of 5

1. Visible Emissions Subtype: VE	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: Exceptional Conditions: 100% Maximum Period of Excess Opacity Allowed: 60 min/hour	
24. Method of Compliance: Best Operating Practices	
25. Visible Emissions Comment (limit to 200 characters): Not to exceed 2 hr in 24 hrs for malfunction. Rule 62-210.700(1).	

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

Visible Emissions Limitation: Visible Emissions Limitation 4 of 5

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: 20% Exceptional Conditions: 27% Maximum Period of Excess Opacity Allowed: 6 min/hour	
26. Method of Compliance: Annual Compliance Test using EPA Method 9	
27. Visible Emissions Comment (limit to 200 characters): VE standard established as part of construction permit for cogeneration unit. Oil-firing. Annual test not required if F.O. use < 400 hr/yr.	

Emissions Unit Information Section 2 of 3

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

Visible Emissions Limitation: Visible Emissions Limitation 5 of 5

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: Exceptional Conditions: 100% Maximum Period of Excess Opacity Allowed: 60 min/hour	
28. Method of Compliance: Best Operating Practices	
29. Visible Emissions Comment (limit to 200 characters): Excess emissions for startup, shutdown. Rule 62-210.700(2).	

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:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
11. Installation Date:	12. Performance Specification Test Date:
13. Continuous Monitor Comment (limit to 200 characters):	

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

Supplemental Requirements

1. Process Flow Diagram <input type="checkbox"/> Attached, Document ID:___ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID:___ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID:___ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID:___ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID:_____
<input type="checkbox"/> Previously submitted, Date:_____
<input type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID:___ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment:

Emissions Unit Information Section 2 of 3

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
13. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
14. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
15. Acid Rain Part Application (Hard-copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

III. EMISSIONS UNIT INFORMATION
BOILER NO. 5

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)			
<input checked="" type="checkbox"/> 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).			
<input type="checkbox"/> 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.			
<input type="checkbox"/> 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)			
<input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.			
<input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.			
17. Description of Emissions Unit Addressed in This Section (limit to 60 characters): No. 5 Steam Boiler			
4. Emissions Unit Identification Number: ID:		<input type="checkbox"/> No ID <input checked="" type="checkbox"/> ID Unknown	
5. Emissions Unit Status Code: A	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? <input type="checkbox"/>
12. Emissions Unit Comment: (Limit to 500 Characters)			

Emissions Unit Information Section 3 of 3

Emissions Unit Control Equipment

30. 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:

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:	168 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	8760 hours/year*
10. Operating Capacity/Schedule Comment (limit to 200 characters):	<p>Maximum heat input based on natural gas-firing, permit limit of 164,000 cf/hr, 1024 Btu/cf HHV. Max fuel input for oil is 1,067 gal/hr (20,140 Btu/lb- HHV; 7.2 lb/gal).</p>	

Emissions Unit Information Section 3 of 3

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? EU-4		31. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Single stack			
32. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA			
33. Discharge Type Code: V	6. Stack Height: 82 feet	7. Exit Diameter: 6 feet	
8. Exit Temperature: 400 °F	9. Actual Volumetric Flow Rate: 56,250 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): Information for oil-firing.			

Emissions Unit Information Section 3 of 3

**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): Natural Gas Firing		
18. Source Classification Code (SCC): 1-03-006-01		3. SCC Units: Million Cubic Feet Burned
19. Maximum Hourly Rate: 0.164 (LHV)	20. Maximum Annual Rate: 1,383 (LHV)	6. Estimated Annual Activity Factor:
21. Maximum % Sulfur: 1 grain / 100 CF	8. Maximum % Ash:	12. Million Btu per SCC Unit: 950 (LHV)
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment 2 of 2

5. Segment Description (Process/Fuel Type) (limit to 500 characters): Distillate fuel oil.		
6. Source Classification Code (SCC): 1-02-005-01		3. SCC Units: Thousand Gallons Burned
7. Maximum Hourly Rate: 1.067	8. Maximum Annual Rate: 9,347	6. Estimated Annual Activity Factor:
10. Maximum % Sulfur: 0.5	11. Maximum % Ash: 0.1	12. Million Btu per SCC Unit: 145
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
NOX			NS
SO2			EL
CO			NS
PM, PM10			NS

Emissions Unit Information Section 2 of 1

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

Potential/Fugitive Emissions

1. Pollutant Emitted: SO2	M. Total Percent Efficiency of Control:
N. Potential Emissions: 76.8 lb/hour 336.5 tons/year	O. Synthetically Limited? []
P. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 0.5% Sulfur Reference: Permit	8. Emissions Method Code: 0
7. Calculation of Emissions (limit to 600 characters): .Permit Limit	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 1 of 1

7. Basis for Allowable Emissions Code: OTHER	8. Future Effective Date of Allowable Emissions:
9. Requested Allowable Emissions and Units: 0.5% Sulfur	10. Equivalent Allowable Emissions: 76.8 lb/hour 336.5 tons/year
11. Method of Compliance (limit to 60 characters): Fuel Analysis	
12. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): Based on fuel-oil firing; permit condition.	

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

Visible Emissions Limitation: Visible Emissions Limitation 1 of 5

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: [] Rule [<input checked="" type="checkbox"/>] Other
3. Requested Allowable Opacity: Normal Conditions: 10% Exceptional Conditions: 27% Maximum Period of Excess Opacity Allowed: 6 min/hour	
34. Method of Compliance: Annual Compliance Test using EPA Method 9	
35. Visible Emissions Comment (limit to 200 characters): VE standard established as part of construction permit. Gas-firing.	

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

Visible Emissions Limitation: Visible Emissions Limitation 2 of 5

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: [<input checked="" type="checkbox"/>] Rule [] Other
3. Requested Allowable Opacity: Normal Conditions: 20% Exceptional Conditions: 60% Maximum Period of Excess Opacity Allowed: 60 min/hour	
36. Method of Compliance: EPA Method 9	
37. Visible Emissions Comment (limit to 200 characters): VE limit during soot-blowing and load changing for up to 3 hr in 24 hr. Rule 62-210.700(3).	

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

Visible Emissions Limitation: Visible Emissions Limitation 3 of 5

1. Visible Emissions Subtype: VE	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: Exceptional Conditions: 100% Maximum Period of Excess Opacity Allowed: 60 min/hour	
38. Method of Compliance: Best Operating Practices	
39. Visible Emissions Comment (limit to 200 characters): Not to exceed 2 hr in 24 hrs for malfunction. Rule 62-210.700(1).	

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

Visible Emissions Limitation: Visible Emissions Limitation 4 of 5

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: 20% Exceptional Conditions: 27% Maximum Period of Excess Opacity Allowed: 6 min/hour	
40. Method of Compliance: Annual Compliance Test using EPA Method 9	
41. Visible Emissions Comment (limit to 200 characters): VE standard established as part of construction permit for cogeneration unit. Oil-firing. Annual test not required if F.O. use < 400 hr/yr.	

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

Visible Emissions Limitation: Visible Emissions Limitation 5 of 5

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: Exceptional Conditions: 100% Maximum Period of Excess Opacity Allowed: 60 min/hour	
42. Method of Compliance: Best Operating Practices	
43. Visible Emissions Comment (limit to 200 characters): Excess emissions for startup, shutdown. Rule 62-210.700(2).	

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: <input type="checkbox"/> Rule <input type="checkbox"/> Other	
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
14. Installation Date:	15. Performance Specification Test Date:
16. Continuous Monitor Comment (limit to 200 characters):	

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

Supplemental Requirements

1. Process Flow Diagram <input type="checkbox"/> Attached, Document ID:___ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID:___ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID:___ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID:___ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID:_____
<input type="checkbox"/> Previously submitted, Date:_____
<input type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID:___ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
13. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
14. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
15. Acid Rain Part Application (Hard-copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

III.

APPENDIX B
EMISSION CALCULATIONS

Operational Data 1995-2000

Year	EU	NG, MMCF	NG, Btu/CF	FO, Mgal	FO, %S	FO, MMBtu/Mgal	HOURS	Startup	Max MMBtu/hr
1995	001	2455.491	1035.50				8284	1993	
1995	002	110.328	1035.50	44.646	0.046	127.25	1473	1972	70
1995	003	110.293	1035.50	44.394	0.046	138.88	4381	1977	168
1996	001	2824.464	1042.25				8423	1993	
1996	002	43.391	1042.25	3.948	0.035	139.39	8386	1972	
1996	003	43.387	1042.25	3.948	0.035	139.39	7981	1977	
1997	001	2902.330	1047.25				8426	1993	
1997	002	41.759	1047.25	0.420	0.035	136.00	8702	1972	
1997	003	41.692	1047.25	0.000	0.035	136.00	8006	1977	
1998	001	1199.820	1044.92				4524	1993	
1998	002	287.548	1044.92	46.494	0.035	136.00	8710	1972	
1998	003	299.049	1044.92	27.002	0.035	136.00	7957	1977	
1999	001	2717.920	1048.00				7964	1993	
1999	002	60.870	1048.00	16.000	0.060	136.00	7940	1972	
1999	003	0.000	1048.00	366.000	0.060	136.00	7811	1977	
2000	1	3,010.19	1036.5					1993	
2000								1972	
2000								1977	

EU001: Combustion Gas Turbine

EU002: Boiler #4

EU003: Boiler #5

Fuel use for 2000 not yet available for EU002 and EU003.

Factors, lb/MMCF, natural gas								
Year	EU	NOx	CO	SO2	PM	PM10	VOC	Comment
1995	001	30.12	3.57	0.003196	6.60E-03	6.60E-03	2.10E-03	NOX, CO, lb/hr test data
1995	002	100	84	0.03	7.6	7.6	5.5	Pre-NSPS
1995	003	280	84	0.03	7.6	7.6	5.5	Pre-NSPS
1996	001	30.12	3.57	0.003196	6.60E-03	6.60E-03	2.10E-03	NOX, CO, lb/hr test data
1996	002	100	84	0.03	7.6	7.6	5.5	Pre-NSPS
1996	003	280	84	0.03	7.6	7.6	5.5	Pre-NSPS
1997	001	25.36	7.91	0.003196	6.60E-03	6.60E-03	2.10E-03	NOX, CO, lb/hr test data
1997	002	100	84	0.03	7.6	7.6	5.5	Pre-NSPS
1997	003	280	84	0.03	7.6	7.6	5.5	Pre-NSPS
1998	001	0.068	0.021	0.003196	6.60E-03	6.60E-03	2.10E-03	NOX, CO, lb/MMBtu test data
1998	002	100	84	0.03	7.6	7.6	5.5	Pre-NSPS
1998	003	280	84	0.03	7.6	7.6	5.5	Pre-NSPS
1999	001	0.068	0.020	0.003196	6.60E-03	6.60E-03	2.10E-03	NOX, CO, lb/MMBtu test data
1999	002	100	84	0.03	7.6	7.6	5.5	Pre-NSPS
1999	003	280	84	0.03	7.6	7.6	5.5	Pre-NSPS
2000	001	0.066	0.013	0.003196	6.60E-03	6.60E-03	2.10E-03	NOX, CO, lb/MMBtu test data
2000	002	100	84	0.03	7.6	7.6	5.5	Pre-NSPS
2000	003	280	84	0.03	7.6	7.6	5.5	Pre-NSPS

Sulfur content per Title V application 0.043 gr/MCF, max 0.1 gr/MCF. Max used.

Factor = $0.6 * 0.1 * 1M / 2000 = 0.03$ lb/MMCF.

Factors, lb/Mgal, oil							
EU	NOx	CO	SO2 / %S	PM	PM10	VOC	
002	20	5	142	3.3	3.3	0.2	
003	24	5	157	3.3	3.3	0.2	

Emissions, TPY							
Year	EU	NOx	CO	SO2	PM	PM10	VOC
1995	001	124.8	14.8	0.00	0.01	0.01	0.00
1995	002	6.0	4.7	0.15	0.49	0.49	0.31
1995	003	16.0	4.7	0.16	0.49	0.49	0.31
1996	001	126.9	15.0	0.00	0.01	0.01	0.00
1996	002	2.2	1.8	0.01	0.17	0.17	0.12
1996	003	6.1	1.8	0.00	0.17	0.17	0.12
1997	001	106.8	33.3	0.00	0.01	0.01	0.00
1997	002	2.1	1.8	0.00	0.16	0.16	0.11
1997	003	5.8	1.8	0.00	0.16	0.16	0.11
1998	001	42.6	13.2	0.00	0.00	0.00	0.00
1998	002	14.8	12.2	0.12	1.17	1.17	0.80
1998	003	42.2	12.6	0.00	1.18	1.18	0.83
1999	001	96.8	29.9	0.00	0.01	0.01	0.00
1999	002	3.2	2.6	0.07	0.26	0.26	0.17
1999	003	4.4	0.9	0.00	0.60	0.60	0.04
2000	001	106.1	32.8	0.00	0.01	0.01	0.00
2000	002	0.0	0.0	0.00	0.00	0.00	0.00
2000	003	0.0	0.0	0.00	0.00	0.00	0.00

Year 2000 data for EU002 and EU003 unavailable.

Annual Totals	NOx	CO	SO2	PM	PM10	VOC	
1995	146.7	24.3	0.31	0.99	0.99	0.62	
1996	135.2	18.7	0.02	0.35	0.35	0.24	
1997	114.8	36.8	0.01	0.33	0.33	0.23	
1998	99.7	38.0	0.13	2.35	2.35	1.62	
1999	104.4	33.4	0.07	0.87	0.87	0.21	
2000*	106.1	32.8	0.0	0.0	0.0	0.0	

Year 2000 data for EU002 and EU003 unavailable.

AVERAGE 2-YEAR ACTUALS (1999 & 2000), TPY

EU	NOx	CO	SO2	PM	PM10	VOC	
EU01	101.5	31.3	0.00	0.01	0.01	0.00	

CALCULATIONS AND COMPUTATIONS

Project: Florida GE LM6000-PC-ESPRINT
 Project Number: 8733-024-PRM
 Subject: Gas Turbine Emission Calculations - GE LM6000-PC 100 % Load Conditions

Computed by: K. Field Date: 1/5/00
 Checked by: _____ Date: _____

Design Parameters	Units	Design Data				Comments
Turbine Load	(%)	100				Manufacturer Supplied Data
Stack Diameter	(Feet)	9.8				Current Permit Application
Fuel Type		Natural Gas Only				Proposed Design Specification
Fuel Heating Value	(Btu/SCF, LHV)	950				Manufacturer Supplied Data
Fuel Sulfur Content	(Grains/SCF)	0.01				Manufacturer Supplied Data
Conditioning		EVAP	EVAP	EVAP	EVAP	Manufacturer Supplied Data
Ambient Temperature	(F)	55	66.3	71.1	105	Manufacturer Supplied Data
Ambient Relative Humidity	(%)	60	60	60	60	Manufacturer Supplied Data
Inlet Temperature	(F)	49	59	63.2	93.4	Manufacturer Supplied Data
Inlet Relative Humidity	(%)	92.9%	92.8%	92.7%	92.5%	Manufacturer Supplied Data
CTG - Gross Power Output	(kW)	49,075	47,136	46,210	35,958	Manufacturer Supplied Data
Heat Input Rate	(MMBtu/Hr, LHV)	404.0	392.0	387.0	324.0	Manufacturer Supplied Data
Fuel Feed Rate	(SCF/Hr)	425,263	412,632	407,368	341,053	Calculated
Exhaust Temperature	(F)	839	842	843	855	Manufacturer Supplied Data
Exhaust Velocity	(F/S)	137.2	134.2	132.8	117.5	Calculated
Exhaust Analysis	Argon	mol%	0.96	0.96	0.96	39.948 lb/lb mol Ar
	Nitrogen	mol%	71.23	71.05	70.95	28.0134 lb/lb mol N ₂
	Oxygen	mol%	13.12	13.10	13.09	31.998 lb/lb mol O ₂
	Carbon Dioxide	mol%	3.12	3.10	3.09	44.009 lb/lb mol CO ₂
	Water	mol%	11.68	11.90	12.01	18.0148 lb/lb mol H ₂ O
	CHECKSUM	mol%	100.11	100.11	100.11	100.12 mol% check sum
Exhaust Molecular Weight	(Lbs/Lb-Mol)	28.01	27.99	27.97	27.84	Calculated
Exhaust Flow Rate	(Lbs/Hr, Wet)	1,099,901	1,072,983	1,060,250	925,381	Manufacturer Supplied Data
	(ACFW)	37,244,976	36,443,379	36,066,052	31,914,687	Calculated
	(ACFMW)	620,750	607,390	601,101	531,911	Calculated
	(ACFHD)	32,893,906	32,106,617	31,733,146	27,714,299	Calculated
	(ACFMD)	548,232	535,110	528,886	461,905	Calculated
	(SCFW)	15,133,218	14,775,659	14,606,963	12,809,620	Calculated
	(SCFMW)	252,220	246,261	243,449	213,494	Calculated
	(SCFHD)	13,365,310	13,017,356	12,852,111	11,123,707	Calculated
	(SCFMD)	222,755	216,956	214,202	185,395	Calculated
Exhaust Moisture	(%)	11.68	11.90	12.01	13.16	Manufacturer Supplied Data
Exhaust O ₂ Dry	(%)	14.86	14.87	14.88	15.06	Calculated
Concentration of NO _x in Exhaust	(ppmvd@15% O ₂)	25.00	25.00	25.00	25.00	Manufacturer Supplied Data
	(ppmvd)	25.6	25.5	25.5	24.7	Calculated
Concentration of CO in Exhaust	(ppmvd)	36.9	36.1	33.5	14.8	Calculated
	(ppmvd @ 15% O ₂)	36.0	35.3	32.8	15.0	Manufacturer Supplied Data
Concentration of VOC in Exhaust	(ppmw)	8.83	8.81	8.80	8.68	Calculated
	(ppmvd)	10.00	10.00	10.00	10.00	Manufacturer Supplied Data (HC)
	(ppmvd @ 15% O ₂)	9.8	9.8	9.8	10.1	Calculated

Note:

CALCULATIONS AND COMPUTATIONS

Project: Florida GE LM6000-PC-ESPRINT
 Project Number: 8733-024-PRM
 Subject: Gas Turbine Emission Calculations - GE LM6000-PC 100 % Load Conditions

Computed by: K. Field Date: 1/5/00
 Checked by: _____ Date: _____

OXIDES OF NITROGEN

$$\text{Lbs/Hr} = \frac{(\text{NOx Concentration, ppmvd}) * (\text{Exhaust Flow Rate, SCFMD}) * (\text{Mol Wt. NOx, Lbs/Lb-Mol}) * 60 \text{ Min/Hr}}{(385 \text{ SCF/Lb-Mol}) * (1,000,000)}$$

Oxides of Nitrogen Emissions Summary

Inlet Temperature, °F	49	59	63.2	93.4
	Emission Per Combustion Turbine Unit			
Lbs/Hr =	39.6	39.6	39.1	32.9

CARBON MONOXIDE

$$\text{Lbs/Hr} = \frac{(\text{CO Concentration, ppmvd}) * (\text{Exhaust Flow Rate, SCFMD}) * (\text{Mol Wt. CO, Lbs/Lb-Mol}) * 60 \text{ Min/Hr}}{(385 \text{ SCF/Lb-Mol}) * (1,000,000)}$$

Carbon Monoxide Emission Summary

Inlet Temperature, °F	49	59	63.2	93.4
	Emission Per Combustion Turbine Unit			
Lbs/Hr =	35.8	34.1	31.3	12.0

VOLATILE ORGANIC COMPOUNDS

$$\text{Lbs/Hr} = \frac{(\text{VOC Concentration as Methane, ppmvw}) * (\text{Exhaust Flow Rate, SCFMW}) * (\text{Mol Wt. VOC, Lbs/Lb-Mol}) * 60 \text{ Min/Hr}}{(385 \text{ SCF/Lb-Mol}) * (1,000,000)}$$

Volatile Organic Compounds Emission Summary

Inlet Temperature, °F	49	59	63.2	93.4
	Emission Per Combustion Turbine Unit			
Lbs/Hr =	5.6	5.4	5.3	4.6

CALCULATIONS AND COMPUTATIONS

Project: Florida GE LM6000-PC-ESPRINT
 Project Number: 8733-024-PRM
 Subject: Gas Turbine Emission Calculations - GE LM6000-PC 100 % Load Conditions

Computed by: K. Field Date: 1/5/00
 Checked by: _____ Date: _____

SULFUR DIOXIDE

Lbs/Hr =
$$\frac{\text{(Expected Fuel Gas Sulfur Content, Grains/SCF)} * \text{(Fuel Feed Rate, SCF/Hr)} * \text{(64 Lbs SO}_2\text{/32 Lbs S)}}{7,000 \text{ Grains/Lbs}}$$

Sulfur Dioxide Emissions Summary

Inlet Temperature, °F	49	59	63.2	93.4
	Emission Per Combustion Turbine Unit			
Lbs/Hr =	1.2	1.2	1.2	1.0

Note:

Sulfur emissions calculated based on Natural Gas sulfur content of 0.01 grains of sulfur/SCF Natural Gas

PARTICULATE MATTER

Particulate Matter Emissions Summary

Inlet Temperature, °F	49	59	63.2	93.4
	Emission Per Combustion Turbine Unit			
Lbs/Hr =	3	3	3	3

Combustion Turbine Hourly Emissions Rate Summary
University of Florida
Natural Gas Firing

Compound	Ambient Temp	55	66.3	71.1	105	MAX
	Inlet Temp	49	59	63.2	93.4	
	Load, %	Emissions for LM6000-PC-ESPRINT Turbine, lb/hr				lb/hr
NOx	100	39.6	39.6	39.1	32.9	39.6
CO	100	35.8	34.1	31.3	12.0	35.8
VOC	100	5.6	5.4	5.3	4.6	5.6
SO2	100	1.2	1.2	1.2	1.0	1.2
PM	100	3.0	3.0	3.0	3.0	3.0
Notes:	The average inlet temperature during the year 2000 was 63.2 °F					

Combustion Turbine Annual Emission Summary
University of Florida

Turbine	NOx	CO	VOC	SO2	PM	PM ₁₀	Pb
Emissions for One Combustion Turbine (tons/year) ¹							
GE LM6000-PC-ESPRINT, 49°F inlet, 8760 hr/yr ¹	173.4	156.8	24.5	5.3	13.1	13.1	0.000
GE LM6000-PC-ESPRINT, 49°F inlet, 7121hr/yr ¹	141.0	127.5	19.9	4.3	10.6	10.6	0.000
GE LM6000-PC-ESPRINT, 63.2°F inlet, 8760 hr/yr ²	171.3	137.1	23.2	5.3	13.1	13.1	0.000
GE LM6000-PC-ESPRINT, 63.2°F inlet, 7210.5 hr/yr	141.0	112.8	19.1	4.4	10.8	10.8	0.000

¹These annual emission estimates are based on worst case hourly emissions and unlimited operation, i.e., inlet temperature of 49°F and natural gas operation of 8760 hrs/year, 100% load.
²The average inlet temperature for the year 2000 was 63.2°F. Emissions are at 100% load.

**University of Florida
Estimated NSPS NO_x Emission Standard**

Turbine: General Electric Model LM6000-PC-ESPRINT Natural Gas Firing	
Nominal Maximum Electrical Capacity	47.136 MW
Maximum Energy Input	392 MMBtu/hr (LHV) 413,795,200 kJ/hr
Heat Rate	8,316 Btu/kWh 8.8 kJ/Wh
NSPS Subpart GG NO _x Limit	0.0123% Volume % NO _x @ 15% O ₂ 123 ppmvd @ 15% O ₂

Calculations and Computations
HAP Emissions from Simple Cycle CTG Facility

Project: Florida GE LM6000-PC-ESPRINT
 Project Number: 8733-024-PRM
 Subject: Natural Gas Turbine Non-Criteria
Regulated Pollutant Emissions

Computed by: K. Field Date: 1/5/00
 Checked by: _____ Date: _____

Pollutant	Type ^(a)	Emission Factor			CTG Natural Gas Combustion		Natural Gas Fired CTG Emissions		Facility		Facility
		AP-42 Section 3.1 04/00 - Combustion Turbine Natural Gas			Maximum Heat Input, per turbine (MMBtu/Hr) ^(b)	Average Heat Input, per turbine (MMBtu/Hr) ^(c)	Emission Rate, Per Turbine		Emission Rate All Turbines		Major Source (Y/N)
		(lb/10 ⁶ scf)	(lb/MMBtu) ^(d)	Rating			Hourly ^(e) (lb/hr)	Annual ^(f) (tpy)	Hourly ^(g) (lb/hr)	Annual ^(g) (tpy)	
1,3-Butadiene	HAP		4.50E-07	D	364.0	440.4	1.64E-04	8.68E-04	1.64E-04	8.68E-04	No
Acetaldehyde	HAP		4.19E-05	C	364.0	440.4	1.52E-02	8.08E-02	1.52E-02	8.08E-02	No
Acrolein	HAP		6.70E-06	C	364.0	440.4	2.44E-03	1.29E-02	2.44E-03	1.29E-02	No
Benzene ^(h)	HAP	1.36E-02	1.27E-05	B	364.0	440.4	4.64E-03	2.46E-02	4.64E-03	2.46E-02	No
Ethylbenzene	HAP		3.35E-05	C	364.0	440.4	1.22E-02	6.46E-02	1.22E-02	6.46E-02	No
Formaldehyde ^(h)	HAP	2.72E-01	2.54E-04		364.0	440.4	9.26E-02	4.91E-01	9.26E-02	4.91E-01	No
Naphthalene	HAP		1.36E-06	C	364.0	440.4	4.95E-04	2.62E-03	4.95E-04	2.62E-03	No
PAHs	HAP		2.30E-06	C	364.0	440.4	8.38E-04	4.44E-03	8.38E-04	4.44E-03	No
Propylene Oxide	HAP		3.03E-05	D	364.0	440.4	1.10E-02	5.85E-02	1.10E-02	5.85E-02	No
Toluene ^(h)	HAP	7.10E-02	6.66E-05	B	364.0	440.4	2.42E-02	1.28E-01	2.42E-02	1.28E-01	No
Xylene	HAP		6.70E-05	C	364.0	440.4	2.44E-02	1.29E-01	2.44E-02	1.29E-01	No
<p align="right">Hours of Operation Natural Gas CTG 8,760 Number of Turbines 1</p> <p align="right">Total HAPs 0.2 1.0 No Maximum Individual HAP 0.1 0.5 No</p> <p>Natural Gas Heating Value ^(h) 1067.4 Btu/SCF (HHV) 950 Btu/SCF (LHV)</p>											
<p>Notes: (a) Type = NC for Non-Criteria Pollutants, HAP/POM for compounds included as polycyclic organic matter or HAP for Hazardous Air Pollutant. (b) Maximum heat input rate for turbine is based on HHV data at ambient temperature of 55°F and 100% load operating conditions. (c) Average heat input rate is based on HHV data at an average ambient temperature of 55°F and 100% load operating conditions. (d) Emission Factor (lb/MMBtu) = (Emission Factor, lb/10⁶ scf) / (Btu/scf) (e) Hourly Emission Rate (lb/hr) = (Heat Input Rate (MMBtu/Hr) * Emission Factor (lb/MMBtu)) (f) Annual Emission Rate (tpy) = (Average Hourly Emission Rate, lb/hr) * (hr/yr) / (2,000 lb/ton) (g) Emission Factors from CARB CATEF emission factor database for natural gas fired combustion turbines. (h) Modified from AP-42 Section 3.1 emissions database for large turbines.</p>											

Calculations and Computations

Project: Florida GE LM6000-PC-ESPRINT
 Project Number: 8733-024-PRM
 Subject: Formaldehyde Emission Factor

Computed by: L. Sherburne
 Checked by: M. Griffin

Date: 7/19/00
 Date: 9/21/00

Facility	Manufacturer	Model	Rating (MW)	AP-42 1998	Large
				Draft (lb/Mmcuft)	Turbines (>70 MW) (lb/Mmcuft)
Gilroy Energy Co./Gilroy, CA	General Electric	Frame 7	87	0.722160	0.722160
Sithe Energies, 32nd St. Naval S/San Diego, CA	General Electric	MS6000	44	0.110160	
SD Gas & Electric Co./San Diego, CA	General Electric	5221	17	0.483480	
Modesto Irrigation District/Mclure/Modesto, CA	General Electric	Frame 7B	50	0.135660	
Willamette Industries, Inc./Oxnard, CA	General Electric	LM2500-PE	67.4	0.044982	
Sycamore Cogen. Co./Bakersfield, CA	General Electric	Frame 7	75	0.085884	0.085884
Calpine / Agnews Cogen./San Jose, CA	General Electric	LM5000	23.33	0.063036	
Dexzel Inc./Bakersfield, CA	General Electric	LM2500	29.1	0.026520	
Procter & Gamble Manufacturing/Sacramento, CA	General Electric	LM2500	20.5	0.088434	
Chevron Inc./Gaviota, CA	Allison	K501	2.5	3.570000	
EII / Stewart & Stevenson/Berkeley, CA	General Electric	LM2500	25	0.480420	
Calpine Corp./Sumas, WA	General Electric	MS7001EA	87.83	0.006834	0.006834
Sargent Canyon Cogen/Bakersfield, CA	General Electric	Frame 6	42.5	0.059568	
Watsonville Cogen, Partnership/Watsonville, CA	General Electric	LM 2500	24	0.091596	
Southern Cal. Edison Co./Long Beach, CA	Brown-Boveri-Sulzer	11-D	61.75	1.326000	
NR/NR	General Electric	Frame 3	7.7	0.265200	
NR/NR	General Electric	Frame 3	7.7	0.427380	
NR/NR	Solar	T12000	9.4	0.015810	
NR/NR	Solar	T12000	9.4	9.618600	
NR/NR	General Electric	LM1500	10.6	4.273800	
NR/NR	General Electric	LM1500	10.6	25.908000	
Southern Cal. Edison Co./Coolwater, CA	Westinghouse	PACE520	63	38.964000	
Southern Cal. Edison Co./Coolwater, CA	Westinghouse	PACE520	63	0.350880	
Imperial Irrigation D / Choachella/Imperial, CA	General Electric	NS5000P	46.3	0.306000	
Bonneville Pacific Corp./Somis, CA	Solar	Mars	9	0.743580	
WSPA/SWEPI GT/Bakersfield, CA	Allison	501 KB5	4	0.013872	
Mean (lb/Mmcuft)				3.39	0.27

Note: The AP-42 1998 Draft document calculates the proposed Formaldehyde Emission factor as an average of all of the test data present in the data base. For the purposes of calculating an appropriate emission factor for the Big Cajun One Expansion Project only the data presented for large turbines has been used.

APPENDIX C
SUPPORTING DOCUMENTATION

ATTACHMENT UF-EU3-L2
FUEL ANALYSIS

Natural Gas Analysis

<u>Parameter</u>	<u>Typical Value</u>	<u>Max Value</u>
Relative density	0.58 (compared to air)	
heat content	950 - 1140 Btu/cu ft.	
% sulfur	0.43 grains/CCF ¹	1 grain/100 CF
% nitrogen	0.8% by volume	
% ash	negligible	

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

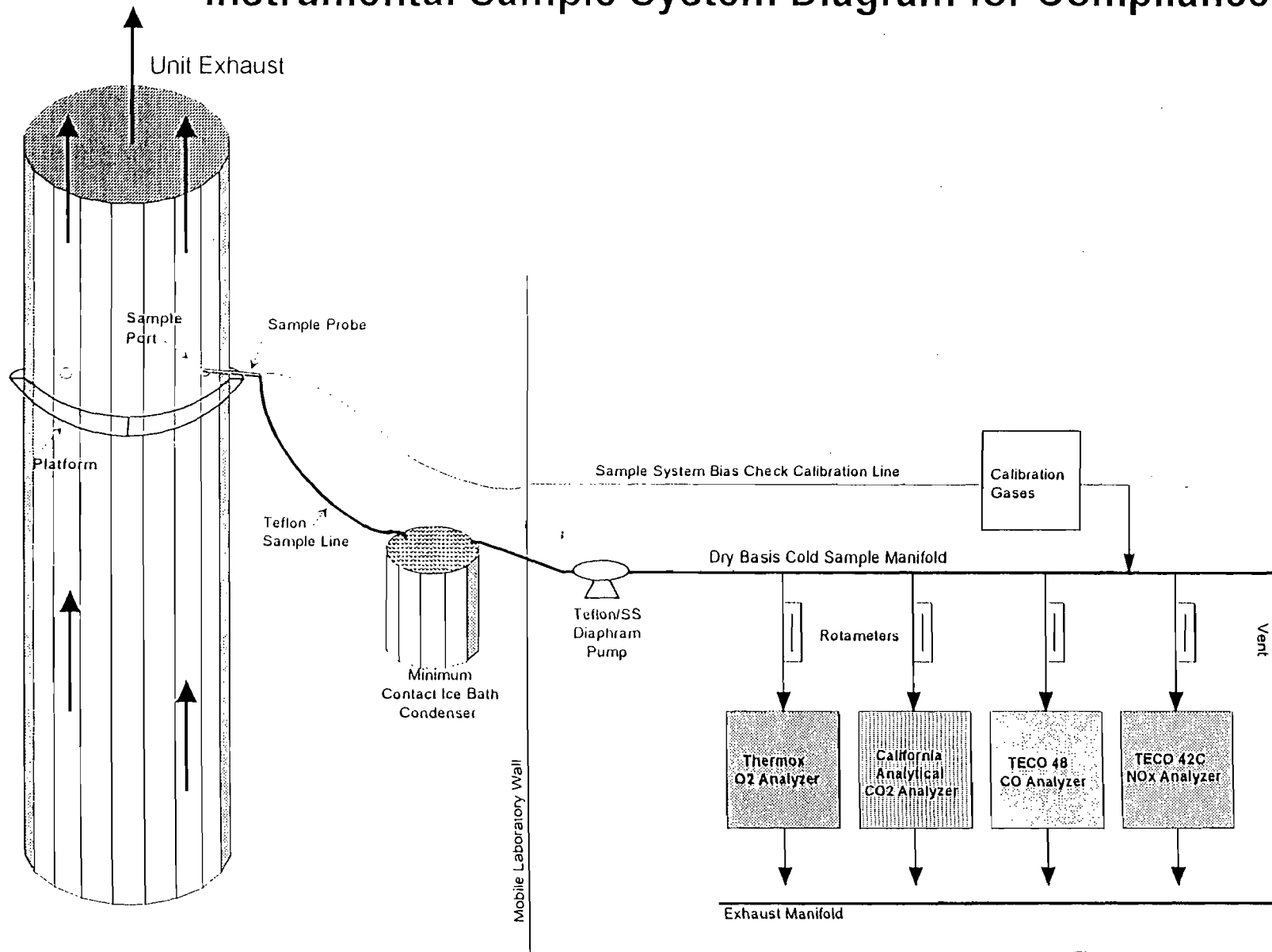
¹Data from laboratory analysis

CTG FUEL USE DATA 1995-2000

Year	Nat. Gas, MMCF	Nat. Gas, Btu/CF	HOURS
1995	2,455.5	1,035.5	8,284
1996	2,824.5	1,042.3	8,423
1997	2,902.3	1,047.3	8,426
1998	1,199.8	1,044.9	4,524
1999	2,717.9	1,048.0	7,964
2000	3,010.2	1,036.5	

APPENDIX D
STACK SAMPLING FACILITIES

Instrumental Sample System Diagram for Compliance Testing



APPENDIX E
STARTUP/SHUTDOWN PROCEDURES

STARTUP/SHUTDOWN PROCEDURES

Startup operations commence with the first ignition of fuel within the combustion turbine (CT). The unit is then ramp-loaded over a brief period of time to safely bring the CT and the HRSG to base load conditions in a manner required by the equipment manufacturers' warranties and recommendations. 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 to a minimum level, opening the breaker (which disconnects the unit from the electrical system grid), shutting off the fuel supply and coasting down to a stop. The CT is then put on "turning gear" to prevent possible distortion of the turbine components.