Memorandum

Florida Department of Environmental Protection

TO: Michael G. Cooke, Division of Air Resource Management

THRU: Trina Vielhauer, Bureau of Air Regulation

FROM: Jeff Koerner, Air Permitting North

DATE: May 23, 2005

SUBJECT: Air Permit No. 0830070-005-AC
Florida Gas Transmission Company – Compressor Station 17
Revised CO/VOC Emissions

The Final Permit for this project is attached for your approval and signature. Florida Gas Transmission Company operates existing natural gas compressor Station 17, which is located approximately 17 miles northeast of Silver Springs on County Highway 314 in Marion County, Florida. The final permit modifies the original air construction permit to: change the CO emissions standard; change the expected equivalent maximum VOC emission rate; incorporate recent changes to NSPS Subpart GG regarding the monitoring of the nitrogen and sulfur contents of pipeline natural gas; and include a provision for like-kind component replacements. The requested revisions are minor in nature and do not trigger any new regulatory requirements. The permit will be issued as a revised air construction permit that supersedes the previous air construction permit.

The Department distributed an "Intent to Issue Permit" package on March 3, 2005. The applicant published the "Public Notice of Intent to Issue" in the Ocala Star-Banner on March 30, 2005. The Department received the proof of publication on May 11, 2005. No petitions for administrative hearings or extensions of time to petition for an administrative hearing were filed.

Day #90 is July 14, 2005. I recommend your approval of the attached Final Permit for this project.

Attachments

FINAL DETERMINATION

PERMITTEE

Mr. Rick Craig, V.P. of Southeastern Operations
Florida Gas Transmission Company
P.O. Box 4657
Houston, TX 77210-4657

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation, Air Permitting South Program
2600 Blair Stone Road, MS #5505
Tallahassee, Florida, 32399-2400

PROJECT

Air Permit No. 0830070-005-AC
Florida Gas Transmission Company – Compressor Station 17
CO/VOC Permit Revision for Engine 1706

This permit modification: revises the CO emissions standard; revises the expected equivalent maximum VOC emission rate; incorporates recent changes to NSPS Subpart GG regarding the monitoring of the nitrogen and sulfur contents of pipeline natural gas; and includes a provision for like-kind component replacements.

NOTICE AND PUBLICATION

The Department distributed an "Intent to Issue Permit" package on March 3, 2005. The applicant published the "Public Notice of Intent to Issue" in the Ocala Star-Banner on March 30, 2005. The Department received the proof of publication on May 11, 2005. No petitions for administrative hearings or extensions of time to petition for an administrative hearing were filed.

COMMENTS

No comments on the Draft Permit were received from the public, the Department's Central District Office, or the Orange County Environmental Protection Division. The applicant commented that testing between 50% and 60% of base load (Condition 8, Section 3) is no longer necessary because the CO emission standard was revised to cover all authorized load ranges (50% - 100%). The Department agrees that this was an error and made this correction.

CONCLUSION

Only minor revisions were made to correct typographical errors. The final action of the Department is to issue the permit with the changes described above.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Florida Gas Transmission Company
P.O. Box 4657
Houston, TX 77210-4657

Authorized Representative:
Mr. Rick Craig, V.P. of Southeastern Operations

Air Permit No. 0830070-005-AC
Facility ID No. 0830070
Compressor Station 17
CO/VOC Revision
Marion County, Florida

Enclosed is Final Air Permit No. 0830070-005-AC, which revises the current CO and VOC emission standards for Engine 1706. This is an existing unit installed at Compressor Station 17, which is located approximately 17 miles northeast of Silver Springs on County Highway 314 in Marion County, Florida. As noted in the attached Final Determination, only minor changes and clarifications were made. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty (30) days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Trina L Vielhauer

Trina Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 5/27/05 to the persons listed:

Mr. Rick Craig, FGTC*
Mr. James Fleak, FGTC
Mr. David Holmes Parham, FGTC

Mr. V. Duane Pierce, AQMcs
Mr. Len Kozlov, CD

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Mary F. Harris (Clerk) 5/27/05 (Date)

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

PERMITTEE:

Florida Gas Transmission Company
1400 Smith Street
Houston, TX 77002

Authorized Representative:
Rick Craig, V.P. of Southeast Operations

Marion Compressor Station No. 17
Air Permit No. 0830070-005-AC
Facility ID No. 0830070
SIC No. 4922
Permit Expires: October 1, 2005

PROJECT AND LOCATION

Original Permit No. 0830070-003-AC authorized the construction of a new 15,700 bhp gas turbine compressor engine (Engine 1706) and the modification of one existing reciprocating internal combustion compressor engine (Engine 1704). The equipment is installed at Compressor Station No. 17, which is located approximately 17 miles northeast of Silver Springs on County Highway 314 in Marion County, Florida. The UTM coordinates are Zone 17, 418.84 km East, and 3240.90 km North. This permit is a revision to: change the CO emissions standard; change the expected equivalent maximum VOC emission rate; incorporate recent changes to NSPS Subpart GG regarding the monitoring of the nitrogen and sulfur contents of pipeline natural gas; and include a provision for like-kind component replacements.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and Title 40, Part 60 of the Code of Federal Regulations. The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department. This permit revision supersedes previous Permit No. 0830070-003-AC, as modified.

CONTENTS

Michael G. Cooke, Director
Division of Air Resource Management

Effective Date

FACILITY AND PROJECT DESCRIPTION

The existing facility operates as a compressor station in Marion County for the Florida Gas Transmission Company's natural gas pipeline. The project will add a new 15,700 bhp gas turbine compressor engine (No. 1706) and modify one existing reciprocating internal combustion compressor engine (No. 1704). After the project is complete, the facility will consist of the following emissions units.

ID	Emission Unit Description
001	**FGT No. 1701**: One 2000 bhp natural gas-fired reciprocating internal combustion engine (Cooper-Bessemer Model No. LS-8-SG) was installed as a compressor engine in 1966.
002	**FGT No. 1702**: One 2000 bhp natural gas-fired reciprocating internal combustion engine (Cooper-Bessemer Model No. LS-8-SG) was installed as a compressor engine in 1966.
003	**FGT No. 1703**: One 2000 bhp natural gas-fired reciprocating internal combustion engine (Cooper-Bessemer Model No. LS-8-SG) was installed as a compressor engine in 1966.
004	**FGT No. 1704**: One 2000 bhp natural gas-fired reciprocating internal combustion engine (Cooper-Bessemer Model No. LS-8-SG) was installed as a compressor engine in 1966.
005	**FGT No. 1705**: One 2400 bhp natural gas-fired reciprocating internal combustion engine (Dresser-Rand Model No. 412KVSRA) was installed as a compressor engine in 1991 (subject to PSD).
008	**FGT No. 1706**: A new 15,700 bhp gas turbine (Nuovo Pignone Model No. PGT-10B) was installed as a compressor engine in 2001.
009	**Miscellaneous Unregulated Emissions Units**

{Note: Emissions units 006 and 007 are "inactive". These were the old full-time electrical generators, which have been retired.}

REGULATORY CLASSIFICATION

Title III: The facility is a potential major source of hazardous air pollutants (HAP).

Title IV: The facility operates no units subject to the acid rain provisions of the Clean Air Act.

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.

PSD: The facility is a PSD-major facility in accordance with Chapter 62-212, F.A.C.

NSPS: The gas turbine is subject to the New Source Performance Standards in 40 CFR 60, Subpart GG.

RELEVANT DOCUMENTS

The permit application and additional information received to make it complete are not a part of this permit; however, the information is specifically related to this permitting action and is on file with the Department.

{Permitting Note: This permit is being "re-issued" to: change the CO emissions standard; change the expected equivalent maximum VOC emission rate; incorporate recent changes to NSPS Subpart GG regarding the monitoring of the nitrogen and sulfur contents of pipeline natural gas; and include a provision for like-kind component replacements. The units covered are existing units and the initial requirements have already been met including initial compliance tests and reports.}

1. Permitting Authority: All documents related to applications for permits to construct or modify emissions units that require a PSD netting analysis shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP) at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All documents related to applications for minor source construction permits or a Title V operation permit shall be submitted to the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767 and phone number 407/894-7555.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767 and phone number 407/894-7555.

3. Appendices: The following Appendices are attached as part of this permit.

   - Appendix CF: Citation Format
   - Appendix GC: General Conditions [Rule 62-4.160, F.A.C.]
   - Appendix GG: NSPS Subpart GG Requirements for Gas Turbines
   - Appendix SC: Standard Conditions [applicable requirements from Chapters 62-4, 62-210, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.).]

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and Title 40, Part 60 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Bureau of Air Regulation, and copies to each Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

A. Engine 1704, Modified Reciprocating Compressor Engine (EU-004)

This section of the permit addresses the following modified emissions unit.

Emissions Unit No. 004 (FGT No. 1704) **Modified Reciprocating Compressor Engine**
Description: The modified reciprocating internal combustion engine is a Cooper-Bessemer Model No. LS-8-SG installed in 1966 as a compressor engine for the natural gas pipeline.
Fuel: The engine fires only pipeline-quality natural gas (SCC No 2-02-002-54) at a maximum rate of approximately 15,900 cubic feet per hour based on a heat content of 1040 BTU per SCF of gas.
Capacity: At 16.5 mmBTU per hour of heat input, each engine produces approximately 2000 bhp. After initial startup, the engine is intended to operate at or near capacity.
Controls: The efficient combustion of pipeline-quality natural gas at high temperatures minimizes emissions of CO, PM/PM10, SO_2, and VOC. Modifications to the engine turbocharger increase the air manifold pressure and airflow to each cylinder, which reduces NOx emissions.
Stack Parameters: When operating at capacity, exhaust gases exit a 28 feet tall stack that is 1.44 feet in diameter with a flow rate of approximately 11,600 acfm at 700° F.

{Permitting Note: The existing natural gas compressor station is a major source with respect to the PSD preconstruction review program. The compressor engine was installed prior to implementation of the PSD program. However, specific modifications are being made in this project to obtain actual emissions decreases for use in a netting analysis that shows the total project to be minor with respect PSD. Therefore, the control techniques, fuel specifications, operational restrictions, emissions standards, monitoring provisions, and reporting requirements of this section are established in accordance with Rule 62-212.400, F.A.C.}

EQUIPMENT

1. Engine Turbocharger Modifications: The permittee is authorized to physically modify the turbocharger of the reciprocating compressor engine in order to increase the air manifold pressure and airflow to each cylinder. The purpose of this modification is to increase the air-to-fuel mixture and decrease the cylinder temperatures, which will result in lower NOx emissions. Each control system shall be readjusted to include the new engine performance parameters and operating set points. The permittee shall tune, maintain, and operate the modified engine and control system to preserve the reduced NOx emissions. [Applicant Request]

PERFORMANCE RESTRICTIONS

2. Permitted Capacity: The maximum heat input rate to the modified reciprocating compressor engine shall not exceed 16.5 mmBTU per hour while producing approximately 2000 bhp based on a higher heating value (HHV) of 1040 BTU per SCF for natural gas. [Rule 62-210.200(PTE), F.A.C.]
3. Authorized Fuel: The modified reciprocating compressor engine shall fire only pipeline-quality natural gas. The current pipeline tariff specifies a maximum of 10 grains of sulfur per 100 standard cubic feet of natural gas. Therefore, no fuel sulfur monitoring is required. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]
4. Restricted Operation: The hours of operation of the modified reciprocating compressor engine are not limited (8760 hours per year). [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

A. Engine 1704, Modified Reciprocating Compressor Engine (EU-004)

EMISSIONS STANDARDS

5. Emissions Standards: Emissions from the modified reciprocating compressor engine shall not exceed the following limits for carbon monoxide (CO), nitrogen oxides (NOx), opacity, particulate matter (PM), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

Pollutant	Standards	Equivalent Maximum Emissions [f]		Rule Basis [g]
		lb/hour	TPY	
CO [a]	2.0 gram/bhp-hour	8.8	38.54	Avoid Rule 62-212.400, F.A.C.
NOx [b]	8.0 gram/bhp-hour	35.3	154.61	Avoid Rule 62-212.400, F.A.C.
SO_2 [c]	10 grains of sulfur per 100 SCF of gas	0.5	2.19	Avoid Rule 62-212.400, F.A.C.
Opacity [d]	10% opacity, 6-minute average	Not Applicable		Avoid Rule 62-212.400, F.A.C.
PM [e]	Good combustion practices (Factor: 0.00999 lb/mmBTU)	0.2	0.88	Avoid Rule 62-212.400, F.A.C.
VOC [e]	Good combustion practices (Factor: 0.1 gram/bhp-hour)	0.4	1.75	Avoid Rule 62-212.400, F.A.C.

a. The CO standards are based on 3-hour test averages as determined by EPA Method 10.

b. The NOx standards are based on 3-hour test averages as determined EPA Method 7E.

c. The fuel sulfur specification is based on the maximum limit specified by Federal Energy Regulatory Commission (FERC) and effectively limits the potential SO_2 emissions. Expected fuel sulfur levels are less than 1 grain per 100 SCF of natural gas from the pipeline. Compliance is by record keeping.

d. The opacity standard is based on a 6-minute average, as determined by EPA Method 9.

e. For both PM and VOC, the efficient combustion of clean fuels is indicated by compliance with opacity and CO standards. There are no pollutant-specific limits and no testing required.

f. The equivalent maximum hourly emissions are based on permitted capacity, the corresponding emissions standard (CO, NOx, and SO_2), an emission factor from EPA's AP-42 reference document (PM), and vendor test data (VOC). The equivalent maximum annual emissions are based on 8760 hours of operation per year and the specified restrictions.

g. The conditions of this permit ensure that the project does not trigger the PSD preconstruction review requirements of Rule 62-212.400, F.A.C. The project includes emissions increases and decreases from emissions units 004, 008, and 009.

EMISSIONS PERFORMANCE TESTING

6. Initial Compliance Tests: The modified reciprocating compressor engine shall be tested to demonstrate initial compliance with the emissions standards for CO, NOx, and opacity. The initial tests shall be conducted within 60 days after achieving at least 90% of the maximum permitted capacity, but not later than 180 days after initial operation of the modified engine. CO and NOx performance tests shall be conducted concurrently at permitted capacity. SO_2 emissions shall be calculated based on fuel flow and vendor analysis of fuel sulfur content. [Rule 62-297.310(7)(a)1, F.A.C.]

7. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), the modified reciprocating compressor engine shall be tested to demonstrate compliance with the emissions standards for

CO, NOx, and opacity. CO and NOx performance tests shall be conducted concurrently at permitted capacity. SO_2 emissions shall be calculated based on fuel flow and vendor analysis of fuel sulfur content. [Rule and 62-297.310(7)(a)4, F.A.C. and to avoid Rule 62-212.400, F.A.C.]

8. Test Notification: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. [Rule 62-297.310(7)(a)9, F.A.C.]

9. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Note: The method shall be based on a continuous sampling train.}
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)

Tests shall also be conducted in accordance with the requirements specified in Section 4, Appendix SC of this permit. The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for compliance testing unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

RECORDS AND REPORTS

10. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Section 4, Appendix SC of this permit. For each test run, the report shall also indicate the natural gas firing rate (cubic feet per hour), the heat input rate (mmBTU per hour), and the power output (bhp). [Rule 62-297.310(8), F.A.C.]

11. Operational Data: The permittee shall adequately monitor the fuel consumption rate and hours of operation for use in submittal of the required Annual Operating Report. At least once per calendar quarter, a trained engine analyst shall inspect each modified engine, estimate the exhaust CO and NOx concentration with a portable analyzer, and adjust engine performance as necessary. These inspections shall be recorded in a permanent log and made available for inspection upon request of the Department. [Rule 62-4.070(3), F.A.C.]

B. Engine 1706, Pignone Gas Turbine Compressor Engine (EU-008)

This section of the permit addresses the following new emissions unit.

Emissions Unit No. 008 (FGT No. 1706): New Gas Turbine Compressor Engine
Description: The new 15,700 bhp gas turbine is a Pignone Model No. PGT-10B to be used as a compressor engine for the natural gas pipeline.
Fuel: The gas turbine fires only pipeline-quality natural gas (SCC No 2-02-002-01) at a maximum rate of approximately 129,600 cubic feet per hour based on a heat content of 1040 BTU per SCF of gas.
Capacity: At 134.8 mmBTU per hour of heat input, the gas turbine produces approximately 15,700 bhp. After initial startup, the gas turbine is intended to operate between 50% and 100% of base load.
Controls: The efficient combustion of pipeline-quality natural gas at high temperatures minimizes emissions of carbon monoxide (CO), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC). NOx emissions are reduced with dry low-NOx combustion technology.
Stack Parameters: When operating at capacity, exhaust gases exit a 7.6 feet diameter stack that is 61.5 feet tall with a flow rate of approximately 215,200 acfm at 910° F.

APPLICABLE STANDARDS AND REGULATIONS

{Permitting Note: The existing natural gas compressor station is a major source with respect to the PSD preconstruction review program. The project includes adding a new gas turbine (FGT No. 1706) to increase the compressor station capacity. As such, it is part of the netting analysis that shows the project to be minor with respect to PSD. Therefore, the control systems and techniques, fuel specifications, operational restrictions, emissions standards, monitoring provisions, and reporting requirements of this section are established in accordance with Rule 62-212.400, F.A.C.}

1. NSPS Requirements: The new gas turbine shall comply with the New Source Performance Standards (NSPS) of Subpart GG in 40 CFR 60. The applicable NSPS requirements are provided in Appendix GG of this permit. The Department determines that the conditions in this section are at least as stringent as, or more stringent than, the NSPS requirements of Subpart GG. [Rule 62-4.070(3), F.A.C.; 40 CFR 60, Subpart GG]

EQUIPMENT

2. New Gas Turbine (FGT No. 1706): The permittee is authorized to install, tune, operate, and maintain a new Pignone Model No. PGT-10B gas turbine to be used as a compressor engine for the natural gas pipeline. The gas turbine design shall incorporate dry low-NOx combustion technology to reduce emissions of nitrogen oxides below the permitted limits. Ancillary equipment includes an automated gas turbine control system, an inlet air filtration system, and a 7.6 feet diameter stack that is 61.5 feet tall. The permittee identifies the new gas turbine compressor engine as FGT No. 1706. [Applicant Request; Design]

PERFORMANCE RESTRICTIONS

3. Permitted Capacity: The maximum heat input rate to the gas turbine shall not exceed 134.8 mmBTU per hour while producing approximately 15,700 bhp based on a compressor inlet air temperature of 59° F, 100% load, and a higher heating value (HHV) of 1040 BTU per SCF for natural gas. Heat input rates will vary depending upon gas turbine characteristics, load, and ambient conditions. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Performance data shall be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(PTE), F.A.C.]

4. Authorized Fuel: The gas turbine shall fire only pipeline-quality natural gas with a maximum of 10 grains of sulfur per 100 standard cubic feet of natural gas. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

5. Restricted Operation: The total hours of operation for the gas turbine are not limited (8760 hours per year). Except for startup and shutdown, operation below 50% of base load is prohibited. [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

6. Emissions Standards: Emissions from the gas turbine shall not exceed the following limits for carbon monoxide (CO), nitrogen oxides (NOx), opacity, particulate matter (PM), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

Pollutant	Standards		Equivalent Maximum Emissions [f]		Rule Basis [g]
	Load	Standards	lb/hour	TPY	
CO [a]	50-100%	21.0 ppmvd @ 15% O_2	7.03	30.79	Avoid Rule 62-212.400, F.A.C.
NOx [b]	50-100%	25.0 ppmvd @ 15% O_2	14.1	61.76	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
SO_2 [c]	50-100%	10.0 grains of sulfur per 100 SCF of natural gas	3.7	16.21	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
Opacity [d]	50-100%	10% opacity, 6-minute average	Not Applicable		Avoid Rule 62-212.400, F.A.C.
PM [e]	50-100%	Good combustion practices	0.9	3.94	Avoid Rule 62-212.400, F.A.C.
VOC [e]	50-100%	Good combustion practices	1.5	6.57	Avoid Rule 62-212.400, F.A.C.

a. The CO standards are based on 3-hour test averages as determined by EPA Method 10.

b. The NOx standards are based 3-hour test averages as determined EPA Method 20.

c. The fuel sulfur specification is based on the maximum limit specified by Federal Energy Regulatory Commission (FERC) and effectively limits the potential SO_2 emissions. Expected fuel sulfur levels are less than 1 grain per 100 SCF of natural gas from the pipeline.

d. The opacity standard is based on a 6-minute average, as determined by EPA Method 9.

e. For both PM and VOC, the efficient combustion of clean fuels is indicated by compliance with opacity and CO standards. There are no pollutant-specific limits and no testing required.

f. The equivalent maximum hourly emissions are based on permitted capacity, a compressor inlet air temperature of 59° F, the corresponding emissions standard (CO, NOx, and SO_2), an emission factor from EPA's AP-42 reference document (PM), and vendor test data (VOC). The equivalent maximum annual emissions are based on 8760 hours of operation per year and the specified restrictions. Each test report shall include measured mass emission rates for CO, NOx and SO_2. Mass emission rates for SO_2 shall be calculated based on actual fuel sulfur content and fuel flow rate. For comparison purposes, the permittee shall provide a reference table with the initial compliance test report of CO and NOx mass emission rates versus the compressor inlet temperatures. For tests conducted at 59° F or greater, measured CO and NOx mass emission rates shall be compared to the equivalent maximum emissions above. For tests conducted below 59° F, measured mass emission rates shall be compared

to the tabled mass emission rates provided by the manufacturer based on compressor inlet temperatures.

g. The conditions of this permit ensure that the project does not trigger the PSD preconstruction review requirements of Rule 62-212.400, F.A.C. The project includes emissions increases and decreases from emissions units 004, 008, and 009.

EMISSIONS PERFORMANCE TESTING

7. Initial Compliance Tests: The gas turbine shall be tested to demonstrate initial compliance with the emission standards for CO, NOx, and opacity. The initial tests shall be conducted within 60 days after achieving at least 90% of the maximum permitted capacity, but not later than 180 days after initial operation of the gas turbine. The initial CO and NOx performance tests shall be conducted at approximately four evenly spaced points between the minimum normal operating load and 100% of peak load. Each of the three low-load CO and NOx performance tests shall consist of three, 20-minute test runs. The peak load CO and NOx performance test shall consist of three, 1-hour test runs. The CO performance tests shall be conducted concurrently with the NOx performance tests. SO_2 emissions shall be calculated based on fuel flow and vendor analysis of fuel sulfur content. [Rule 62-297.310(7)(a)1, F.A.C.; 40 CFR 60.8 and 60.335]

8. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), the gas turbine shall be tested to demonstrate compliance with the emission standards for CO, NOx, and opacity. CO and NOx emissions shall be tested concurrently at permitted capacity. SO_2 emissions shall be calculated based on fuel flow and vendor analysis of fuel sulfur content. [Rule and 62-297.310(7)(a)4, F.A.C. and to avoid Rule 62-212.400, F.A.C.]

9. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Note: The method shall be based on a continuous sampling train.}
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Gas Turbines

Tests shall also be conducted in accordance with the requirements specified in Section 4, Appendix SC of this permit. The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for compliance testing unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

10. Test Notification: The permittee shall notify the Compliance Authority in writing at least 30 days prior to any initial NSPS performance tests and at least 15 days prior to any other required tests. [Rule 62-297.310(7)(a)9, F.A.C.; 40 CFR 60.7 and, 60.8]

RECORDS AND REPORTS

11. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Section 4, Appendix SC of this permit. In addition, NOx emissions shall be corrected to ISO ambient atmospheric conditions and compared to the NSPS Subpart GG standard identified in Appendix GG of this permit for each required test. For each run, the test report shall also indicate the natural gas firing rate (cubic feet per hour), heat input rate (mmBTU per hour), the power output (bhp), percent base load, and the compressor inlet air temperature. [Rule 62-297.310(8), F.A.C.; 40 CFR 60.332]

12. Fuel Monitoring: The permittee shall not claim the allowance for fuel-bound nitrogen in establishing the NSPS NOx standard. Only pipeline quality natural gas shall be fired. The current pipeline tariff specifies the maximum sulfur content as 10 grains of sulfur per 100 cubic feet of natural gas. Therefore, no fuel nitrogen or fuel sulfur monitoring is required. The fuel monitoring provisions were revised pursuant to the final July 2004 amendments to Subpart GG. See Appendix GG.} [Rule 62-4.070(3); 40 CFR 60.334]

13. Operational Data: Using the automated gas turbine control system, the permittee shall monitor and record heat input (mmBTU), power output (bhp), and hours of gas turbine operation Within at least 5 business days of an agency request, the permittee shall summarize the following information: average heat input (mmBTU per hour); average power output (bhp); and total hours of gas turbine operation. The average heat input for the month shall be based on the contracted heat content (mmBTU per SCF) of the natural gas for the given month. This information shall also be used for submittal of the required Annual Operating Report. [Rule 62-4.070(3), F.A.C.]

14. Component Replacements: For the replacement of gas turbine components to facilitate prompt repair and return the unit to its original specifications, the permittee shall comply with the following notification and testing requirements.

    a. Components shall only be replaced with functionally equivalent "like-kind" equipment. Replacement components may consist of improved or newer equipment, but such components shall not change operation or increase the capacity (heat input and power output rates) of the gas turbine. Replacement components that affect emissions shall be designed to achieve the emissions standards specified in all valid air permits and shall achieve these standards or better. After a component replacement, the gas turbine compressor engine remains subject to the standards of all valid air permits. [Rule 62-210.200(169), F.A.C.]

    b. The permittee shall notify the Compliance Authority within seven days after beginning any replacement of the gas generator component of the compressor engine. Within seven days of first fire on a replacement gas generator, the permittee shall submit the following information to the Compliance Authority: date of first fire and certification from the vendor that the replacement gas generator is a functionally equivalent "like-kind" component. The vendor certification shall also identify the make, model number, maximum heat input rate (MMBtu/hour), power output (bhp) at ISO conditions, and that the permitted emission rates are achievable with the replacement component. This notification may be made by letter, fax, or email. A copy of the information shall be kept on site at the compressor station. Within 60 days of restarting the unit after a gas generator replacement, the permittee shall conduct stack tests to demonstrate compliance with the applicable emission standards. The permittee shall notify the Compliance Authority in writing at least 15 days prior to conducting these tests. The permittee shall comply with all permit requirements for test notification, test methods, test procedures, and reporting. [Rules 62-4.130, 62-4.160(2), (6), and (15) and 62-297.310(7)(b), F.A.C.]

    c. After investigation and for good cause, the Department may require special compliance tests pursuant to Rule 62-297.310(7)(b), F.A.C.

C. Miscellaneous Unregulated Emissions Units (EU-009)

This permit recognizes the following unregulated emissions units.

Emissions Unit No. 009: Miscellaneous Unregulated Emissions Units	
004	Support equipment includes: • One 585 bhp Waukesha Model No. H24GL lean burn emergency generator fired exclusively with natural gas and identified by the permittee as "GEN03"; • Compressor building and control building; • Lube oil and used oil storage tanks; • Miscellaneous fugitive emission leaks from valves, flanges, etc.

The emergency generator is exempt from air construction permitting requirements in accordance with the following rule.

Rule 62-210.300, F.A.C. Permits Required.

(3) Exemptions.

(c) Categorical Exemptions

20. One or more emergency generators located within a single facility provided:

a. None of the emergency generators is subject to the Federal Acid Rain Program; and

b. Total fuel consumption by all such emergency generators within the facility is limited to 32,000 gallons per year of diesel fuel, 4,000 gallons per year of gasoline, 4.4 million standard cubic feet per year of natural gas or propane, or an equivalent prorated amount if multiple fuels are used.

CONTENTS

SECTION 4. APPENDIX CF
CITATION FORMAT

The following examples illustrate the format used in the permit to identify applicable permitting actions and regulations.

REFERENCES TO PREVIOUS PERMITTING ACTIONS

Old Permit Numbers

Example: Permit No. AC50-123456 or Air Permit No. AO50-123456

Where: "AC" identifies the permit as an Air Construction Permit
"AO" identifies the permit as an Air Operation Permit
"123456" identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: "099" represents the specific county ID number in which the project is located
"2222" represents the specific facility ID number
"001"identifies the specific permit project
"AC" identifies the permit as an air construction permit
"AF" identifies the permit as a minor federally enforceable state operation permit
"AO" identifies the permit as a minor source air operation permit
"AV" identifies the permit as a Title V Major Source Air Operation Permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: "PSD" means issued pursuant to the Prevention of Significant Deterioration of Air Quality
"FL" means that the permit was issued by the State of Florida
"317" identifies the specific permit project

RULE CITATION FORMATS

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CRF 60.7]

Means: Title 40, Part 60, Section 7

GENERAL CONDITIONS

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

   a. Have access to and copy and records that must be kept under the conditions of the permit;
   b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
   c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

   Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

   a. A description of and cause of non-compliance; and

   b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

   The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida

Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

    a. Determination of Best Available Control Technology (NA);
    b. Determination of Prevention of Significant Deterioration (NA); and
    c. Compliance with New Source Performance Standards (X).

14. The permittee shall comply with the following:

    a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

    b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

    c. Records of monitoring information shall include:

        1) The date, exact place, and time of sampling or measurements;
        2) The person responsible for performing the sampling or measurements;
        3) The dates analyses were performed;
        4) The person responsible for performing the analyses;
        5) The analytical techniques or methods used; and
        6) The results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SECTION 4. APPENDIX GG

NSPS SUBPART GG REQUIREMENTS FOR GAS TURBINES

The following emissions unit is subject to the applicable requirements of Subpart A (General Provisions) and Subpart GG (Stationary Gas Turbines) established as New Source Performance Standards in 40 CFR 60 and adopted by reference in Rule 62-204.800(7)(b), F.A.C.

Emissions Unit 003: FGT Unit No. 1706, Gas Turbine Compressor
FGT No. 1706: A 15,700 bhp gas turbine (Nuovo Pignone Model No. PGT-10B) to be installed as a compressor engine.

NSPS GENERAL PROVISIONS

The emissions units are subject to the applicable General Provisions of the New Source Performance Standards including 40 CFR 60.7 (Notification and Record Keeping), 40 CFR 60.8 (Performance Tests), 40 CFR 60.11 (Compliance with Standards and Maintenance Requirements), 40 CFR 60.12 (Circumvention), 40 CFR 60.13 (Monitoring Requirements), and 40 CFR 60.19 (General Notification and Reporting Requirements). The General Provisions are not included in this permit, but can be obtained from the Department upon request.

40 CFR 60, SUBPART GG
STANDARDS OF PERFORMANCE FOR STATIONARY GAS TURBINES

{Note: Each gas turbine shall comply with all applicable requirements of 40 CFR 60, Subpart GG adopted by reference in Rule 62-204.800(7)(b), F.A.C. Inapplicable provisions have been deleted in the following conditions, but the numbering of the original rules has been preserved for ease of reference. The term "Administrator" when used in 40 CFR 60 shall mean the Department's Secretary or the Secretary's designee. Department notes and requirements related to the Subpart GG requirements are shown in bold immediately following the section to which they refer. The rule basis for the Department requirements specified below is Rule 62-4.070(3), F.A.C.}

Section 60.330 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities: All stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour), based on the lower heating value of the fuel fired.

Section 60.331 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(g) ISO standard day conditions means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

(i) Peak load means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.

(j) Base load means the load level at which a gas turbine is normally operated.

Section 60.332 Standard for nitrogen oxides.

(a) On and after the date of the performance test required by Section 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (c) of this section shall comply with:

(2) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0150 \frac{(14.4)}{Y} + F$$

where:

STD = allowable NOx emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt-hour.

F = NOx emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

(3) F shall be defined according to the nitrogen content of the fuel as follows:

Fuel-bound nitrogen (percent by weight)	F (NOx percent by volume)
N≤0.015	0
0.015<N≤0.1	0.04(N)
0.1<N≤0.25	0.004+0.0067(N–0.1)
N>0.25	0.005

where: N=the nitrogen content of the fuel (percent by weight).

Department Requirement: When firing natural gas, the "F" value shall be assumed to be 0.

{Note: The "Y" value provided by the manufacturer is approximately 11.0 for natural gas. The equivalent emission standard is 196 ppmvd at 15% oxygen. The emissions standards in Section III of this permit are more stringent than this requirement.}

(c) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired, shall comply with the provisions of paragraph (a)(2) of this section.

Section 60.333 Standard for sulfur dioxide.

On and after the date on which the performance test required to be conducted by Section 60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with:

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.

{Permitting Note: The gas turbines will exclusively fire natural gas, which contains less than 0.03% sulfur by weight assuming a density of 0.0455 lb/scf of natural gas.}

Section 60.334 Monitoring of operations.

(b) The owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

(2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with paragraph (b) of this section.

{Permitting Note: See 60.334(h) below.}

(c) For the purpose of reports required under Section 60.7(c), periods of excess emissions that shall be reported are defined as follows:

(1) Nitrogen oxides. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with Section 60.332 by the performance test required in Section 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in Section 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under Section 60.335(a).

{Permitting Note: Excess NOx emissions reporting requirements do not apply. The gas turbine uses "dry" lean premix combustors and not wet injection to control NOx emissions. As indicated above, the Subpart GG NOx standard is 196 ppmvd @ 15% oxygen. This is nearly eight times the NOx standard specified in the permit and

would be virtually impossible for this lean premix combustion turbine to exceed. As stated in the preamble to the July 2004 amendments, the rule changes do not impose any additional monitoring requirements for existing units.}

(2) Sulfur dioxide. Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent.

Department Requirement: In accordance with the custom fuel monitoring schedule, any period between two consecutive fuel sulfur analyses shall be reported as excess emissions if the results of the second analysis indicates failure to comply with the fuel sulfur limit of the permit.

(h) The owner or operator of any stationary gas turbine subject to the provisions of this subpart:

(2) Shall monitor the nitrogen content of the fuel combusted in the turbine, if the owner or operator claims an allowance for fuel bound nitrogen (*i.e.*, if an F-value greater than zero is being or will be used by the owner or operator to calculate STD in §60.332).

{Permitting Note: Because the nitrogen content of pipeline natural is negligible, the permittee does not claim an allowance for fuel bound nitrogen and will use "0" for the F-value when calculating the NOx standard in §60.332. The permit prohibits the permittee from claiming the allowance for fuel nitrogen. Therefore, no fuel nitrogen monitoring is required. The fuel monitoring provisions were revised pursuant to the final July 2004 amendments to Subpart GG.}

(3) May elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in §60.331(v), regardless of whether an existing custom schedule approved by the administrator for subpart GG requires such monitoring.

§60.331(v) states, "*Natural gas* means a naturally occurring fluid mixture of hydrocarbons (*e.g.*, methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 Btu per standard cubic foot. Natural gas does not include the following gaseous fuels: Landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value."

The permittee elects not to monitor the sulfur content of natural gas based on §60.334(h)(3)(i), which states that, "The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less." The current tariff sheet specifies that natural gas delivered by the pipeline system shall contain not more than 10 grains of total sulfur per 100 cubic feet of gas. Therefore, the pipeline natural gas meets the above definition.

{Permitting Note: The permit requires the gas turbine to fire only pipeline natural gas with a maximum sulfur content of 10 grains of sulfur per 100 cubic feet of gas. Therefore, no fuel sulfur monitoring is required and no periodic reports of excess SO2 emissions are required. The fuel monitoring provisions were revised pursuant to the final July 2004 amendments to Subpart GG.}

Section 60.335 Test methods and procedures.

(a) To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.

(b) In conducting the performance tests required in Section 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided for in Section 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.

(c) The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in Sections 60.332 and 60.333(a) as follows:

(1) The nitrogen oxides emission rate (NOx) shall be computed for each run using the following equation:

$NOx = (NOxo)\ (Pr/Po)^{0.5}\ e^{19(Ho - 0.00633)}\ (288°K/Ta)^{1.53}$

where:

NOx = emission rate of NOx at 15 percent O2 and ISO standard ambient conditions, volume percent.
NOxo = observed NOx concentration, ppm by volume.
Pr = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.
Po = observed combustor inlet absolute pressure at test, mm Hg.
Ho = observed humidity of ambient air, g H2O/g air.
e = transcendental constant, 2.718.
Ta = ambient temperature, °K.

Department Requirement: The permittee is required to correct NOx emissions to ISO ambient atmospheric conditions for each required emissions performance test and compare to the NOx standard specified in 40 CFR 60.332.

(2) The monitoring device of Section 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with Section 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.

Department Requirement: The initial NOx performance tests shall be conducted at approximately four evenly spaced points between the minimum normal operating load and 100% of peak load.

{Note: The dry low-NOx controls are only effective above a minimum load, which will be identified during initial testing.}

(3) Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NOx emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.

Department requirement: The span value shall be no greater than 75 ppm of nitrogen oxides due to the low NOx emission levels of the gas turbine.

(d) The owner or operator shall determine compliance with the sulfur content standard in Section 60.333(b) as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels (incorporated by reference--see Section 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.

(e) To meet the requirements of Section 60.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

{Permitting Note: The permit prohibits the permittee from claiming the allowance for fuel nitrogen. The permit also requires the gas turbine to fire only pipeline natural gas with a maximum sulfur content of 10 grains of sulfur per 100 cubic feet of gas. Therefore, no fuel nitrogen or fuel sulfur monitoring is required. The fuel monitoring provisions were revised pursuant to the final July 2004 amendments to Subpart GG.}

SECTION 4. APPENDIX SC
STANDARD CONDITIONS

{Permitting Note: The following conditions apply to all emissions units and activities at this facility.}

EMISSIONS AND CONTROLS

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]

2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]

3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]

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

5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permitee shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]

6. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]

7. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and62-210.200(203), F.A.C.]

8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. [Rule 62-296.320(4)(b)1, F.A.C.]

9. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

TESTING REQUIREMENTS

10. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]

11. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]

12. Calculation of Emission Rate: For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

13. Test Procedures: Tests shall be conducted in accordance with all applicable requirements of Chapter 62-297, F.A.C.

    a. *Required Sampling Time.* Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be thirty (30) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur.

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

    c. *Calibration of Sampling Equipment.* Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.

    [Rule 62-297.310(4), F.A.C.]

14. Determination of Process Variables

    a. *Required Equipment.* The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

    b. *Accuracy of Equipment.* Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

    [Rule 62-297.310(5), F.A.C.]

15. Sampling Facilities: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C.

16. Test Notification: The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9, F.A.C.]

17. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

18. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide

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

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops; total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

RECORDS AND REPORTS

19. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]

20. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Richard Craig, V.P. of Southeastern Operations
Florida Gas Transmission Company
Post Office Box 4657
Houston, TX 77101-4657

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) J. SALAZAR C. Date of Delivery MAR 1 2001

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7001 0320 0001 3692 3104

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

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CERTIFIED MAIL RECEIPT
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Postmark Here

Mr. Richard Craig, V.P. of Southeastern Operations
Florida Gas Transmission Company
Post Office Box 4657
Houston, TX 77101-4657

PS Form 3800, January 2001 See Reverse for Instructions

Florida Gas Transmission Company
601 South Lake Destiny Road, Suite 450, Maitland, FL 32751
Post Office Box 945100, Maitland, FL 32794-5100
407.838.7000 Fax 407.838.7001

May 10, 2005

Mr. Jeff Koerner
Bureau of Air Regulation
Florida Dept. of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Proof of Publication Notice Affidavit
Unit 1706 Heat Rate Revision, Silver Springs Compressor Station No. 17
Air Construction Permit No. 0830070-005-AC

Dear Mr. Koerner:

Florida Gas Transmission Company (FGT) submits the required proof of publication affidavit for the draft construction permit 0830070-005-AC related to Unit 1706 located at FGT's Silver Springs Compressor Station No. 17.

The required notice was published March 30, 2005 in the Ocala Star-Banner. The original affidavit and legal notice column was received from the publisher on May 9, 2005 and is enclosed for your use. As you know from my status updates, it took an extended amount of time to obtain this from the publisher and I apologize for the delay.

If you have any questions or need further information, please call me at (407)838-7057.

Sincerely,

James E. Fleak, P.E.
Sr. Environmental Specialist

Cc: Silver Springs Team, Envision 203.1.20
Mr. Len Kozlov, P.E., FDEP Central District, 3319 Maguire Blvd., Suite 232, Orlando, FL 32803

Recd 5/9/05
FGT

PROOF OF PUBLICATION

STAR-BANNER Published—Daily

OCALA, MARION COUNTY, FLORIDA

STATE OF FLORIDA,
COUNTY OF MARION

Before the undersigned authority personally appeared **Gloria Thomas** who on oath says that she is an authorized employee of the Star-Banner, a daily newspaper published at Ocala, in Marion County, Florida; that the attached copy of advertisement, being a notice in the matter of_

Ad #688266 LEGAL AD

_____in the_____ Court.

was published in said newspaper in the issues of_____

MARCH 30, 2005

Affiant further says that the said STAR-BANNER is a daily newspaper published at Ocala, in said Marion County, Florida, and that the said newspaper has heretofore been continuously published in said Marion County, Florida, daily, and has been entered as second class mail matter at the post office in Ocala, in said Marion County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Gloria Thomas

Sworn to and subscribed before me this 4TH day

of MAY A.D. 2005

CARRIE HAUGABROOK NOTARY PUBLIC STATE OF FLORIDA
Seal
My Comm. Expires August 15, 2006
No. CD 142654

Carrie Haugabrook
Notary Public

Carrie Haugabrook
(Print, Type or Stamp Name of Notary Public)

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT
Florida Department of Environmental Protection
Draft Air Permit
No 0830070-005-AC
Florida Gas Transmission Company - Station 17
Marion County, Florida

Applicant: The applicant for this project is the Florida Gas Transmission Company. The applicant's authorized representative and mailing address is Mr. Rick Craig, V.P. of Southeastern Operations, P.O. Box 4657, Houston, TX 77210-4657.

Facility Location: Florida Gas Transmission Company operates existing natural gas compressor Station 17, which is located approximately 17 miles northeast of Silver Springs on County Highway 314 in Marion County, Florida.

Project: The applicant proposes the following air construction permit revisions: This permit is a revision to: change the CO emissions standard; change the expected equivalent maximum VOC emission rate: incorporate recent changes to NSPS Subpart GG regaurding the monitoring of the nitrogen and sulfur contents of pipeline natural gas; and include a provision for like-kind component replacements. The Department agrees that the requested revisions are minor in nature and do not trigger any new regulatory requirement. The permit will be issued as a revised air construction permit that supersedes the previous air construction permit.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to preform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority;s project review engineer for additional information at the address or phone number listed above. A copy of the complete project file is also available at the Air Resources Section of the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. The telephone number is 407/894-7555.

Notice of Intent to Issue Air Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of fourteen (14) days from the date of publication of this Public Notice. Written comments must be provided to the Permitting Authority at the above address. Any written comments filed will be made available for public inspection. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by any person other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name and address and telephone number of the petitioner; the name address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial rights will be affected by the agency determination; (c) A statement of how and when the petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or

modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petitin means that the Permitting Authority's final actoin may be different from the position taken by it in this Public Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available for this proceeding.

No. 688266 - March 30, 2005.

Memorandum

Florida Department of Environmental Protection

TO: Trina Vielhauer, Chief
Bureau of Air Regulation

THROUGH: Al Linero, Manager
Air Permitting South Program

FROM: Jeff Koerner, Air Permitting South Program

DATE: March 2, 2005

SUBJECT: Draft Air Permit No. 0830070-005-AC
Florida Gas Transmission Company – Station 17
CO/VOC Revision for Engine 1706

Attached for your review are the following items:

- Intent to Issue Permit and Public Notice Package;
- Technical Evaluation and Preliminary Determination;
- Draft Permit; and
- PE Certification

Florida Gas Transmission Company operates existing natural gas compressor Station 17, which is located approximately 17 miles northeast of Silver Springs on County Highway 314 in Marion County, Florida. The applicant proposes the following air construction permit revisions: change the CO emissions standard; change the expected equivalent maximum VOC emission rate; incorporate recent changes to NSPS Subpart GG regarding the monitoring of the nitrogen and sulfur contents of pipeline natural gas; and include a provision for like-kind component replacements. The Department agrees that the requested revisions are minor in nature and do not trigger any new regulatory requirements. The permit will be issued as a revised air construction permit that supersedes the previous air construction permit.

The Technical Evaluation and Preliminary Determination provides a detailed description of the project, rule applicability, and emissions standards. The P.E. certification briefly summarizes the proposed project. Day #74 is April 7, 2005. I recommend your approval of the attached Draft Permit for this project.

Attachments

TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

PROJECT

Draft Air Construction Permit No. 0830070-005-AC
CO/VOC Revision

COUNTY

Marion County

APPLICANT

Florida Gas Transmission Company
ARMS Facility ID No. 0830070
Existing Marion Compressor Station No. 17

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
New Source Review Section

March 2, 2005

{Filename: TEPD - 0830070-005-AC}

1. GENERAL PROJECT INFORMATION

Florida Gas Transmission Company operates the existing facility as a compressor station for the natural gas pipeline serving Florida (SIC No. 4922). Compressor Station No. 17 is located approximately 17 miles northeast of Silver Springs on County Highway 314 in Marion County, Florida. This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to a National Ambient Air Quality Standard (NAAQS). The existing gas pipeline compressor station consists of four 2000 bhp reciprocating compressor engines, one 2400 bhp reciprocating compressor engine, one 15,700 bhp gas turbine compressor engine, and miscellaneous support equipment. All units fire natural gas exclusively. The facility is subject to the following regulatory categories.

Title III: The facility is a potential major source of hazardous air pollutants (HAP).

Title IV: The facility operates no units subject to the acid rain provisions of the Clean Air Act.

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.

PSD: The facility is a PSD-major facility in accordance with Chapter 62-212, F.A.C.

NSPS: The gas turbine is subject to the New Source Performance Standards in 40 CFR 60, Subpart GG.

On January 24, 2005, the applicant submitted a complete application to revise Permit No. 0830070-003-AC, which authorized construction of the 15,700 bhp gas turbine. The application requests the following changes:

1. The current permit limits CO emissions to the following:
   - 50-90% Load: 75.0 ppmvd @ 15% oxygen (22.5 lb/hour)
   - 90-100% Load: 15.0 ppmvd @ 15% oxygen (5.1 lb/hour)
   - Operation between 50% and 90% of base load is limited to no more than 5256 hours during any consecutive 12 months.
   - Equivalent maximum annual emissions are 68.07 tons per year.

   The applicant requests removal of the restriction on hours of operation between 50-90% load and a single CO limit of 52.0 ppmvd @ 15% oxygen (15.54 lb/hour). The annual emissions would remain at 68.07 tons per year.
2. The current permit specifies the equivalent maximum VOC emission rates as: 1.5 lb/hour (50-90% load), 0.3 lb/hour (90-100% load), and 4.47 tons per year. The applicant requests a single equivalent maximum VOC emission rate of 1.5 lb/hour (50-90% load), which would result in an annual emission rate of 6.57 tons per year.
3. The applicant requests the addition of the following permitting note:

   "The maximum heat input rates are based on the manufacturer's equipment specifications for each gas turbine. They are included to identify the capacity of each emissions unit for purposes of confirming that tests are conducted within 90% to 100% of the emission unit's rated capacity (or to limit future operation to 110% of the test load, if applicable), to establish appropriate emissions limits, and to aid in determining future rule applicability."
4. The applicant requests minor revisions to Appendix GG based on recent changes to NSPS Subpart GG regarding fuel sulfur and nitrogen monitoring requirements

2. APPLICABLE REGULATIONS

State Regulations

This project is subject to the applicable environmental laws specified in Section 403 of the Florida Statutes

(F.S.). The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the Florida Administrative Code (F.A.C.). This project is subject to the applicable rules and regulations defined in the following Chapters of the Florida Administrative Code.

Chapter	Description
62-4	Permitting Requirements
62-204	Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference
62-210	Required Permits, Public Notice, Reports, Circumvention, Excess Emissions, Forms and Instructions
62-212	Preconstruction Review, PSD Requirements, and BACT Determinations
62-213	Operation Permits for Major Sources of Air Pollution
62-296	Emission Limiting Standards
62-297	Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures

Federal Regulations

This project is also subject to the applicable federal provisions regarding air quality as established by the EPA in the following sections of the Code of Federal Regulations (CFR).

Title 40	Description
Part 60	Subpart A - General Provisions for NSPS Sources
	NSPS Subpart GG - Stationary Gas Turbines
	Applicable Appendices

General PSD Applicability

The Department regulates major air pollution sources in accordance with Florida's Prevention of Significant Deterioration (PSD) program, as approved by the EPA in Florida's State Implementation Plan and defined in Rule 62-212.400, F.A.C. A PSD review is required only in areas currently in attainment with the National Ambient Air Quality Standard (AAQS) or areas designated as "unclassifiable" for a given pollutant. A new facility is considered "major" with respect to PSD if it emits or has the potential to emit:

- 250 tons per year or more of any regulated air pollutant, or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the 28 PSD Major Facility Categories (Table 62-212.400-1, F.A.C.), or
- 5 tons per year of lead.

For new projects at PSD-major sources, each regulated pollutant is reviewed for PSD applicability based on emissions thresholds known as the Significant Emission Rates listed in Table 62-212.400-2, F.A.C. Pollutant emissions from the project exceeding these rates are considered "significant" and the applicant must employ the Best Available Control Technology (BACT) to minimize emissions of each such pollutant and evaluate the air quality impacts. Although a facility may be "major" with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants

3. DEPARTMENT'S REVIEW

Revised CO Standard

The applicant provided the following test results to support the request:

Table 3A. Actual CO Test Data

Test Date	Load	CO Emissions	
		ppmvd @ 15% O2	lb/hour
05/29/02	52.2	2.22	0.43
	60.3%	0.59	0.12
	68.4%	0.52	0.12
	75.8%	0.45	0.11
01/17/03	90.1	0.85	0.25
06/10/03	54.4	7.53	1.24
	70.1	5.62	1.16
	85.5	1.19	0.28
	100.0	2.29	0.62

The test results indicate that the gas turbine is capable of operating with very low CO emission levels (< 10 ppmvd @ 15% oxygen) throughout the specified range of operation (50-100% load). It is noted that the vendor specifies a maximum CO emission level of 15 ppmvd @ 15% oxygen at 100% load conditions, which will be the typical operation for this unit. For a previous similar request for Station 12 (Permit No. 1130037-008-AC), the applicant requested a revised CO permit standard of 21.0 ppmvd @ 15% oxygen based on actual test data. This is a more reasonable standard given the actual test data and request. The Department discussed this issue with the applicant. Based on the review of a "preliminary draft permit", the applicant offered no comments regarding the reduced CO standard.

The CO standard was revised to 21.0 ppmvd @ 15% oxygen (7.03 lb/hour) for load ranges between 50-100%. The equivalent maximum annual emission rate was reduced from 68.07 to 30.8 tons per year. The original project resulted in a net CO emissions increase of 91 tons per year. The requested change does not affect this analysis or trigger any new requirements and actually reduces potential CO emissions by more than 30 tons per year. In addition, the corresponding restriction on hours of operation at various load conditions was removed.

Revised Equivalent Maximum VOC Emission Rates

The current permit specifies the equivalent maximum VOC emission rates as: 1.5 lb/hour (50-90% load), 0.3 lb/hour (90-100% load), and 4.47 tons per year. The applicant requests a single equivalent maximum VOC emission rate of 1.5 lb/hour (50-90% load), which would result in an annual emission rate of 6.57 tons per year. Because VOC emissions were expected to be very low, no testing was required and no specific test data is available. However, based on the CO emissions test data, it is believed that VOC emissions are indeed very low. The original project resulted in a net VOC emissions increase of only 4 tons per year. The requested change does not affect this analysis or trigger any new requirements. The equivalent maximum VOC emission rate was changed as requested.

Permitting Note on Heat Input Rate

The requested permitting note on the maximum heat input rate was not included in the permit. The Department routinely specifies the maximum heat input rate for a variety of combustion sources. This rate is typically based on vendor information, but may also be based on actual performance data or experience and include a margin for peak operations. The specification is a valid condition that would typically be enforced when associated with specific emissions problems.

NSPS Subpart GG Requirements

There have been several recent revisions to Subpart GG. First, monitoring natural gas for the nitrogen content is not required if no allowance is being requested in establishing the NSPS NOx standard. Pipeline natural gas

contains negligible amounts of nitrogen and the applicant is not claiming the allowance. Similarly, natural gas contains negligible amounts of sulfur. The changes no longer require monitoring natural gas for the sulfur content if the tariff sheet specifies a maximum of 20 grains of sulfur per 100 scf of natural gas or less. The current tariff for the pipeline specifies a maximum of 10 grains of sulfur per 100 scf of natural gas. Therefore, no fuel sulfur monitoring is required. Based on these changes, the Department removed the custom fuel monitoring plan (Appendix FM) and revised Appendix GG accordingly.

Other Changes

1. Condition 13 for Engine 1706 currently requires the permittee to record a monthly summary of operation. The records were originally required to show compliance with the restrictions on hours of operation for the various load conditions. This revised permit removes the restrictions on hours of operation. Therefore, the applicant requests that the requirement to record this information "within the first ten days of each month" be replaced by "within at least 5 business days of an agency request". The condition was changed as requested.

2. Based on the removal of the custom fuel monitoring plan described above, the Department revised Condition 3 for Engine 1704 as follows: "The modified reciprocating compressor engine shall fire only pipeline-quality natural gas. *The current pipeline tariff specifies* ~~with~~ a maximum of 10 grains of sulfur per 100 standard cubic feet of natural gas. *Therefore, no fuel sulfur monitoring is required.* ~~The custom fuel monitoring plan for the gas turbine (FGT Unit No. 1706) shall also serve as the compliance demonstration for the fuel sulfur limit for this emissions unit.~~

3. The applicant subsequently requested that a provision be added for like-kind gas turbine component replacements. This has been done for a final permit issued for Station 18 and for a draft permit issued for Station 24. The Department added this provision as Condition 14 for Engine 1706. For a full discussion of component replacements, see the Technical Evaluation and Preliminary Determination issued for Project No. 0950190-006-AC.

4. The following permitting note was added to clarify the purpose of the permit, "*This permit is being "re-issued" to: change the CO emissions standard; change the expected equivalent maximum VOC emission rate; incorporate recent changes to NSPS Subpart GG regarding the monitoring of the nitrogen and sulfur contents of pipeline natural gas; and include a provision for like-kind component replacements. The units covered are existing units and the initial requirements have already been met including initial compliance tests and reports.*"

5. The expiration date was revised from December 31, 2003 to October 1, 2005 simply to allow time to submit a complete Title V revision.

The proposed revisions are minor in nature, do not affect the PSD applicability for the original project, and do not trigger any new permitting requirements.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. No air quality modeling analysis is required because the project does not result in a PSD significant increase in emissions. Jeff Koerner is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

March 3, 2005

Mr. Rick Craig, V.P. of Southeastern Operations
Florida Gas Transmission Company
P.O. Box 4657
Houston, TX 77210-4657

Re: Air Construction Permit No. 0830070-005-AC
Florida Gas Transmission Company, Station 17
CO/VOC Revision

Dear Mr. Craig:

On January 24, 2005, you submitted an application requesting several minor permit revisions including a revision of the CO emission standard for Engine 1706. Compressor Station No. 17 is located approximately 17 miles northeast of Silver Springs on County Highway 314 in Marion County, Florida. Enclosed are the following documents: "Technical Evaluation and Preliminary Determination", "Draft Permit", "Written Notice of Intent to Issue Air Permit", and "Public Notice of Intent to Issue Air Permit".

The "Technical Evaluation and Preliminary Determination" summarizes the Permitting Authority's technical review of the application and provides the rationale for making the preliminary determination to issue a Draft Permit. The proposed "Draft Permit" includes the specific conditions that regulate the emissions units covered by the proposed project. The "Written Notice of Intent to Issue Air Permit" provides important information regarding: the Permitting Authority's intent to issue an air permit for the proposed project; the requirements for publishing a Public Notice of the Permitting Authority's intent to issue an air permit; the procedures for submitting comments on the Draft Permit; the process for filing a petition for an administrative hearing; and the availability of mediation. The "Public Notice of Intent to Issue Air Permit" is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project.

If you have any questions, please contact the Project Engineer, Jeff Koerner, at 850/921-9536.

Sincerely,

for Trina Vielhauer, Chief
Bureau of Air Regulation

Enclosures

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

In the Matter of an
Application for Air Permit by:

Florida Gas Transmission Company
P.O. Box 4657
Houston, TX 77210-4657

Authorized Representative:
Mr. Rick Craig, V.P. of Southeastern Operations

Air Permit No. 0830070-005-AC
Facility ID No. 0830070
Compressor Station 17
CO/VOC Revision
Marion County, Florida

Facility Location: Florida Gas Transmission Company operates existing natural gas compressor Station 17, which is located approximately 17 miles northeast of Silver Springs on County Highway 314 in Marion County, Florida.

Project: The applicant proposes the following air construction permit revisions: change the CO emissions standard; change the expected equivalent maximum VOC emission rate; incorporate recent changes to NSPS Subpart GG regarding the monitoring of the nitrogen and sulfur contents of pipeline natural gas; and include a provision for like-kind component replacements. Details of the project are provided in the in the application and the enclosed "Technical Evaluation and Preliminary Determination".

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above. A copy of the complete project file is also available at the Air Resources Section of the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. The telephone number is 407/894-7555.

Notice of Intent to Issue Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Public Notice: Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed "Public Notice of Intent to Issue Air Permit" (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at above address or phone number. Pursuant to Rule 62-110.106(5), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within seven (7) days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of fourteen (14) days from the date of publication of the Public Notice. Written comments must be provided to the Permitting Authority at the above address. Any written comments filed will be made available for public

inspection. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this Written Notice of Intent to Issue Air Permit. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within fourteen (14) days of publication of the attached Public Notice or within fourteen (14) days of receipt of this Written Notice of Intent to Issue Air Permit, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when each petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

Executed in Tallahassee, Florida.

for Trina Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this "Written Notice of Intent to Issue Air Permit" package (including the Public Notice, the Technical Evaluation and Preliminary Determination, and the Draft Permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 3/3/05 to the persons listed below.

Mr. Rick Craig, FGTC*
Mr. James Fleak, FGTC
Mr. David Holmes Parham, FGTC

Mr. V. Duane Pierce, AQMcs
Mr. Len Kozlov, CD

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

(Clerk) 3/3/05 (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

Florida Department of Environmental Protection
Draft Air Permit No0830070-005-AC
Florida Gas Transmission Company – Station 17
Marion County, Florida

Applicant: The applicant for this project is the Florida Gas Transmission Company. The applicant's authorized representative and mailing address is Mr. Rick Craig, V.P. of Southeastern Operations, P.O. Box 4657, Houston, TX 77210-4657.

Facility Location: Florida Gas Transmission Company operates existing natural gas compressor Station 17, which is located approximately 17 miles northeast of Silver Springs on County Highway 314 in Marion County, Florida.

Project: The applicant proposes the following air construction permit revisions: This permit is a revision to: change the CO emissions standard; change the expected equivalent maximum VOC emission rate; incorporate recent changes to NSPS Subpart GG regarding the monitoring of the nitrogen and sulfur contents of pipeline natural gas; and include a provision for like-kind component replacements. The Department agrees that the requested revisions are minor in nature and do not trigger any new regulatory requirements. The permit will be issued as a revised air construction permit that supersedes the previous air construction permit.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above. A copy of the complete project file is also available at the Air Resources Section of the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. The telephone number is 407/894-7555.

Notice of Intent to Issue Air Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of fourteen (14) days from the date of publication of this Public Notice. Written comments must be provided to the Permitting Authority at the above address. Any written comments filed will be made available for public inspection. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within fourteen (14) days of receipt of that

(Public Notice to be Published in the Newspaper)

notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address and telephone number of the petitioner; the name address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial rights will be affected by the agency determination; (c) A statement of how and when the petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Public Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available for this proceeding.

DRAFT PERMIT

PERMITTEE:

Florida Gas Transmission Company
1400 Smith Street
Houston, TX 77002

Authorized Representative:
Rick Craig, V.P. of Southeast Operations

Marion Compressor Station No. 17
Air Permit No. 0830070-005-AC
Facility ID No. 0830070
SIC No. 4922
Permit Expires: ~~December 31, 2002~~ October 1, 2005

PROJECT AND LOCATION

Original Permit No. 0830070-003-AC authorized the construction of a new 15,700 bhp gas turbine compressor engine (Engine 1706) and the modification of one existing reciprocating internal combustion compressor engine (Engine 1704). The equipment is installed at Compressor Station No. 17, which is located approximately 17 miles northeast of Silver Springs on County Highway 314 in Marion County, Florida. The UTM coordinates are Zone 17, 418.84 km East, and 3240.90 km North. This permit is a revision to: change the CO emissions standard; change the expected equivalent maximum VOC emission rate; incorporate recent changes to NSPS Subpart GG regarding the monitoring of the nitrogen and sulfur contents of pipeline natural gas; and include a provision for like-kind component replacements.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and Title 40, Part 60 of the Code of Federal Regulations. The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department. This permit revision supersedes previous Permit No. 0830070-003-AC, as modified.

CONTENTS

Michael G. Cooke, Director
Division of Air Resource Management

Effective Date

FACILITY AND PROJECT DESCRIPTION

The existing facility operates as a compressor station in Marion County for the Florida Gas Transmission Company's natural gas pipeline. The project will add a new 15,700 bhp gas turbine compressor engine (No. 1706) and modify one existing reciprocating internal combustion compressor engine (No. 1704). After the project is complete, the facility will consist of the following emissions units.

ID	Emission Unit Description
001	**FGT No. 1701**: One 2000 bhp natural gas-fired reciprocating internal combustion engine (Cooper-Bessemer Model No. LS-8-SG) was installed as a compressor engine in 1966.
002	**FGT No. 1702**: One 2000 bhp natural gas-fired reciprocating internal combustion engine (Cooper-Bessemer Model No. LS-8-SG) was installed as a compressor engine in 1966.
003	**FGT No. 1703**: One 2000 bhp natural gas-fired reciprocating internal combustion engine (Cooper-Bessemer Model No. LS-8-SG) was installed as a compressor engine in 1966.
004	**FGT No. 1704**: One 2000 bhp natural gas-fired reciprocating internal combustion engine (Cooper-Bessemer Model No. LS-8-SG) was installed as a compressor engine in 1966.
005	**FGT No. 1705**: One 2400 bhp natural gas-fired reciprocating internal combustion engine (Dresser-Rand Model No. 412KVSRA) was installed as a compressor engine in 1991 (subject to PSD).
008	**FGT No. 1706**: A new 15,700 bhp gas turbine (Nuovo Pignone Model No. PGT-10B) to be installed as a compressor engine in 2001.
009	**Miscellaneous Unregulated Emissions Units**

{Note: Emissions units 006 and 007 are "inactive". These were the old full-time electrical generators, which have been retired.}

REGULATORY CLASSIFICATION

Title III: The facility is a potential major source of hazardous air pollutants (HAP).

Title IV: The facility operates no units subject to the acid rain provisions of the Clean Air Act.

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.

PSD: The facility is a PSD-major facility in accordance with Chapter 62-212, F.A.C.

NSPS: The gas turbine is subject to the New Source Performance Standards in 40 CFR 60, Subpart GG.

RELEVANT DOCUMENTS

The permit application and additional information received to make it complete are not a part of this permit; however, the information is specifically related to this permitting action and is on file with the Department.

{Permitting Note: This permit is being "re-issued" to: change the CO emissions standard; change the expected equivalent maximum VOC emission rate; incorporate recent changes to NSPS Subpart GG regarding the monitoring of the nitrogen and sulfur contents of pipeline natural gas; and include a provision for like-kind component replacements. The units covered are existing units and the initial requirements have already been met including initial compliance tests and reports.}

1. Permitting Authority: All documents related to applications for permits to construct or modify emissions units that require a PSD netting analysis shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP) at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All documents related to applications for minor source construction permits or a Title V operation permit shall be submitted to the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767 and phone number 407/894-7555.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767 and phone number 407/894-7555.

3. Appendices: The following Appendices are attached as part of this permit.

   - Appendix CF: Citation Format
   - ~~Appendix FM: Custom Fuel Monitoring Plan for Gas Turbines Subject to NSPS Subpart GG~~
   - Appendix GC: General Conditions [Rule 62-4.160, F.A.C.]
   - Appendix GG: NSPS Subpart GG Requirements for Gas Turbines
   - Appendix SC: Standard Conditions [applicable requirements from Chapters 62-4, 62-210, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.).]

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and Title 40, Part 60 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Bureau of Air Regulation, and copies to each Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

A. Engine 1704, Modified Reciprocating Compressor Engine (EU-004)

This section of the permit addresses the following modified emissions unit.

Emissions Unit No. 004 (FGT No. 1704)
Modified Reciprocating Compressor Engine

Description: The modified reciprocating internal combustion engine is a Cooper-Bessemer Model No. LS-8-SG installed in 1966 as a compressor engine for the natural gas pipeline.

Fuel: The engine fires only pipeline-quality natural gas (SCC No 2-02-002-54) at a maximum rate of approximately 15,900 cubic feet per hour based on a heat content of 1040 BTU per SCF of gas.

Capacity: At 16.5 mmBTU per hour of heat input, each engine produces approximately 2000 bhp. After initial startup, the engine is intended to operate at or near capacity.

Controls: The efficient combustion of pipeline-quality natural gas at high temperatures minimizes emissions of CO, PM/PM_{10}, SO_2, and VOC. Modifications to the engine turbocharger increase the air manifold pressure and airflow to each cylinder, which reduces NOx emissions.

Stack Parameters: When operating at capacity, exhaust gases exit a 28 feet tall stack that is 1.44 feet in diameter with a flow rate of approximately 11,600 acfm at 700° F.

{Permitting Note: The existing natural gas compressor station is a major source with respect to the PSD preconstruction review program. The compressor engine was installed prior to implementation of the PSD program. However, specific modifications are being made in this project to obtain actual emissions decreases for use in a netting analysis that shows the total project to be minor with respect PSD. Therefore, the control techniques, fuel specifications, operational restrictions, emissions standards, monitoring provisions, and reporting requirements of this section are established in accordance with Rule 62-212.400, F.A.C.}

EQUIPMENT

1. Engine Turbocharger Modifications: The permittee is authorized to physically modify the turbocharger of the reciprocating compressor engine in order to increase the air manifold pressure and airflow to each cylinder. The purpose of this modification is to increase the air-to-fuel mixture and decrease the cylinder temperatures, which will result in lower NOx emissions. Each control system shall be readjusted to include the new engine performance parameters and operating set points. The permittee shall tune, maintain, and operate the modified engine and control system to preserve the reduced NOx emissions. [Applicant Request]

PERFORMANCE RESTRICTIONS

2. Permitted Capacity: The maximum heat input rate to the modified reciprocating compressor engine shall not exceed 16.5 mmBTU per hour while producing approximately 2000 bhp based on a higher heating value (HHV) of 1040 BTU per SCF for natural gas. [Rule 62-210.200(PTE), F.A.C.]

3. Authorized Fuel: The modified reciprocating compressor engine shall fire only pipeline-quality natural gas. *The current pipeline tariff specifies* ~~with~~ a maximum of 10 grains of sulfur per 100 standard cubic feet of natural gas. *Therefore, no fuel sulfur monitoring is required.* ~~The custom fuel monitoring plan for the gas turbine (FGT Unit No. 1706) shall also serve as the compliance demonstration for the fuel sulfur limit for this emissions unit.~~ [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

4. Restricted Operation: The hours of operation of the modified reciprocating compressor engine are not limited (8760 hours per year). [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

A. Engine 1704, Modified Reciprocating Compressor Engine (EU-004)

EMISSIONS STANDARDS

5. Emissions Standards: Emissions from the modified reciprocating compressor engine shall not exceed the following limits for carbon monoxide (CO), nitrogen oxides (NOx), opacity, particulate matter (PM), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

Pollutant	Standards	Equivalent Maximum Emissions [f]		Rule Basis [g]
		lb/hour	TPY	
CO [a]	2.0 gram/bhp-hour	8.8	38.54	Avoid Rule 62-212.400, F.A.C.
NOx [b]	8.0 gram/bhp-hour	35.3	154.61	Avoid Rule 62-212.400, F.A.C.
SO_2 [c]	10 grains of sulfur per 100 SCF of gas	0.5	2.19	Avoid Rule 62-212.400, F.A.C.
Opacity [d]	10% opacity, 6-minute average	Not Applicable		Avoid Rule 62-212.400, F.A.C.
PM [e]	Good combustion practices (Factor: 0.00999 lb/mmBTU)	0.2	0.88	Avoid Rule 62-212.400, F.A.C.
VOC [e]	Good combustion practices (Factor: 0.1 gram/bhp-hour)	0.4	1.75	Avoid Rule 62-212.400, F.A.C.

a. The CO standards are based on 3-hour test averages as determined by EPA Method 10.

b. The NOx standards are based on 3-hour test averages as determined EPA Method 7E.

c. The fuel sulfur specification is based on the maximum limit specified by Federal Energy Regulatory Commission (FERC) and effectively limits the potential SO_2 emissions. Expected fuel sulfur levels are less than 1 grain per 100 SCF of natural gas from the pipeline. Compliance is by record keeping.

d. The opacity standard is based on a 6-minute average, as determined by EPA Method 9.

e. For both PM and VOC, the efficient combustion of clean fuels is indicated by compliance with opacity and CO standards. There are no pollutant-specific limits and no testing required.

f. The equivalent maximum hourly emissions are based on permitted capacity, the corresponding emissions standard (CO, NOx, and SO_2), an emission factor from EPA's AP-42 reference document (PM), and vendor test data (VOC). The equivalent maximum annual emissions are based on 8760 hours of operation per year and the specified restrictions.

g. The conditions of this permit ensure that the project does not trigger the PSD preconstruction review requirements of Rule 62-212.400, F.A.C. The project includes emissions increases and decreases from emissions units 004, 008, and 009.

EMISSIONS PERFORMANCE TESTING

6. Initial Compliance Tests: The modified reciprocating compressor engine shall be tested to demonstrate initial compliance with the emissions standards for CO, NOx, and opacity. The initial tests shall be conducted within 60 days after achieving at least 90% of the maximum permitted capacity, but not later than 180 days after initial operation of the modified engine. CO and NOx performance tests shall be conducted concurrently at permitted capacity. SO_2 emissions shall be calculated based on fuel flow and vendor analysis of fuel sulfur content. [Rule 62-297.310(7)(a)1, F.A.C.]

7. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), the modified reciprocating compressor engine shall be tested to demonstrate compliance with the emissions standards for

CO, NOx, and opacity. CO and NOx performance tests shall be conducted concurrently at permitted capacity. SO_2 emissions shall be calculated based on fuel flow and vendor analysis of fuel sulfur content. [Rule and 62-297.310(7)(a)4, F.A.C. and to avoid Rule 62-212.400, F.A.C.]

8. Test Notification: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. [Rule 62-297.310(7)(a)9, F.A.C.]

9. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Note: The method shall be based on a continuous sampling train.}
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)

Tests shall also be conducted in accordance with the requirements specified in Section 4, Appendix SC of this permit. The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for compliance testing unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

RECORDS AND REPORTS

10. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Section 4, Appendix SC of this permit. For each test run, the report shall also indicate the natural gas firing rate (cubic feet per hour), the heat input rate (mmBTU per hour), and the power output (bhp). [Rule 62-297.310(8), F.A.C.]

11. Operational Data: The permittee shall adequately monitor the fuel consumption rate and hours of operation for use in submittal of the required Annual Operating Report. At least once per calendar quarter, a trained engine analyst shall inspect each modified engine, estimate the exhaust CO and NOx concentration with a portable analyzer, and adjust engine performance as necessary. These inspections shall be recorded in a permanent log and made available for inspection upon request of the Department. [Rule 62-4.070(3), F.A.C.]

B. Engine 1706, Pignone Gas Turbine Compressor Engine (EU-008)

This section of the permit addresses the following new emissions unit.

Emissions Unit No. 008 (FGT No. 1706): New Gas Turbine Compressor Engine
Description: The new 15,700 bhp gas turbine is a Pignone Model No. PGT-10B to be used as a compressor engine for the natural gas pipeline.
Fuel: The gas turbine fires only pipeline-quality natural gas (SCC No 2-02-002-01) at a maximum rate of approximately 129,600 cubic feet per hour based on a heat content of 1040 BTU per SCF of gas.
Capacity: At 134.8 mmBTU per hour of heat input, the gas turbine produces approximately 15,700 bhp. After initial startup, the gas turbine is intended to operate between 50% and 100% of base load.
Controls: The efficient combustion of pipeline-quality natural gas at high temperatures minimizes emissions of carbon monoxide (CO), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC). NOx emissions are reduced with dry low-NOx combustion technology.
Stack Parameters: When operating at capacity, exhaust gases exit a 7.6 feet diameter stack that is 61.5 feet tall with a flow rate of approximately 215,200 acfm at 910° F.

APPLICABLE STANDARDS AND REGULATIONS

{Permitting Note: The existing natural gas compressor station is a major source with respect to the PSD preconstruction review program. The project includes adding a new gas turbine (FGT No. 1706) to increase the compressor station capacity. As such, it is part of the netting analysis that shows the project to be minor with respect to PSD. Therefore, the control systems and techniques, fuel specifications, operational restrictions, emissions standards, monitoring provisions, and reporting requirements of this section are established in accordance with Rule 62-212.400, F.A.C.}

1. NSPS Requirements: The new gas turbine shall comply with the New Source Performance Standards (NSPS) of Subpart GG in 40 CFR 60. The applicable NSPS requirements are provided in Appendix GG of this permit. The Department determines that the conditions in this section are at least as stringent as, or more stringent than, the NSPS requirements of Subpart GG. [Rule 62-4.070(3), F.A.C.; 40 CFR 60, Subpart GG]

EQUIPMENT

2. New Gas Turbine (FGT No. 1706): The permittee is authorized to install, tune, operate, and maintain a new Pignone Model No. PGT-10B gas turbine to be used as a compressor engine for the natural gas pipeline. The gas turbine design shall incorporate dry low-NOx combustion technology to reduce emissions of nitrogen oxides below the permitted limits. Ancillary equipment includes an automated gas turbine control system, an inlet air filtration system, and a 7.6 feet diameter stack that is 61.5 feet tall. The permittee identifies the new gas turbine compressor engine as FGT No. 1706. [Applicant Request; Design]

PERFORMANCE RESTRICTIONS

3. Permitted Capacity: The maximum heat input rate to the gas turbine shall not exceed 134.8 mmBTU per hour while producing approximately 15,700 bhp based on a compressor inlet air temperature of 59° F, 100% load, and a higher heating value (HHV) of 1040 BTU per SCF for natural gas. Heat input rates will vary depending upon gas turbine characteristics, load, and ambient conditions. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Performance data shall be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(PTE), F.A.C.]

4. Authorized Fuel: The gas turbine shall fire only pipeline-quality natural gas with a maximum of 10 grains of sulfur per 100 standard cubic feet of natural gas. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

5. Restricted Operation: The total hours of operation for the gas turbine are not limited (8760 hours per year). Except for startup and shutdown, operation below 50% of base load is prohibited. ~~Operation between 50% and 90% of base load shall not exceed 5256 hours during any consecutive 12 months.~~ [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

6. Emissions Standards: Emissions from the gas turbine shall not exceed the following limits for carbon monoxide (CO), nitrogen oxides (NOx), opacity, particulate matter (PM), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

Pollutant	Standards		Equivalent Maximum Emissions [f]		Rule Basis [g]
	Load	Standards	lb/hour	TPY	
CO [a]	50-100%	21.0 ppmvd @ 15% O_2	7.03	30.79	Avoid Rule 62-212.400, F.A.C.
	~~90-100%~~	~~15.0 ppmvd @ 15% O_2~~	~~5.1~~	~~68.07~~	
	~~50-90%~~	~~75.0 ppmvd @ 15% O_2~~	~~22.5~~		
NOx [b]	50-100%	25.0 ppmvd @ 15% O_2	14.1	61.76	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
SO_2 [c]	50-100%	10.0 grains of sulfur per 100 SCF of natural gas	3.7	16.21	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
Opacity [d]	50-100%	10% opacity, 6-minute average	Not Applicable		Avoid Rule 62-212.400, F.A.C.
PM [e]	50-100%	Good combustion practices	0.9	3.94	Avoid Rule 62-212.400, F.A.C.
VOC [e]	50-100%	Good combustion practices	1.5	6.57	Avoid Rule 62-212.400, F.A.C.
	~~90-100%~~	~~Good combustion practices~~	~~0.3~~	~~4.47~~	
	~~50-90%~~	~~Good combustion practices~~	~~1.5~~		

a. The CO standards are based on 3-hour test averages as determined by EPA Method 10.

b. The NOx standards are based 3-hour test averages as determined EPA Method 20.

c. The fuel sulfur specification is based on the maximum limit specified by Federal Energy Regulatory Commission (FERC) and effectively limits the potential SO_2 emissions. Expected fuel sulfur levels are less than 1 grain per 100 SCF of natural gas from the pipeline.

d. The opacity standard is based on a 6-minute average, as determined by EPA Method 9.

e. For both PM and VOC, the efficient combustion of clean fuels is indicated by compliance with opacity and CO standards. There are no pollutant-specific limits and no testing required.

f. The equivalent maximum hourly emissions are based on permitted capacity, a compressor inlet air temperature of 59° F, the corresponding emissions standard (CO, NOx, and SO_2), an emission factor from EPA's AP-42 reference document (PM), and vendor test data (VOC). The equivalent maximum annual emissions are based on 8760 hours of operation per year and the specified restrictions. Each

test report shall include measured mass emission rates for CO, NOx and SO_2. Mass emission rates for SO_2 shall be calculated based on actual fuel sulfur content and fuel flow rate. For comparison purposes, the permittee shall provide a reference table with the initial compliance test report of CO and NOx mass emission rates versus the compressor inlet temperatures. For tests conducted at 59° F or greater, measured CO and NOx mass emission rates shall be compared to the equivalent maximum emissions above. For tests conducted below 59° F, measured mass emission rates shall be compared to the tabled mass emission rates provided by the manufacturer based on compressor inlet temperatures.

g. The conditions of this permit ensure that the project does not trigger the PSD preconstruction review requirements of Rule 62-212.400, F.A.C. The project includes emissions increases and decreases from emissions units 004, 008, and 009.

EMISSIONS PERFORMANCE TESTING

7. Initial Compliance Tests: The gas turbine shall be tested to demonstrate initial compliance with the emission standards for CO, NOx, and opacity. The initial tests shall be conducted within 60 days after achieving at least 90% of the maximum permitted capacity, but not later than 180 days after initial operation of the gas turbine. The initial CO and NOx performance tests shall be conducted at approximately four evenly spaced points between the minimum normal operating load and 100% of peak load. Each of the three low-load CO and NOx performance tests shall consist of three, 20-minute test runs. The peak load CO and NOx performance test shall consist of three, 1-hour test runs. The CO performance tests shall be conducted concurrently with the NOx performance tests. SO_2 emissions shall be calculated based on fuel flow and vendor analysis of fuel sulfur content. [Rule 62-297.310(7)(a)1, F.A.C.; 40 CFR 60.8 and 60.335]

8. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), the gas turbine shall be tested to demonstrate compliance with the emission standards for CO, NOx, and opacity. CO and NOx emissions shall be tested concurrently at permitted capacity (between 90% to 100% load and between 50% to 60% load). SO_2 emissions shall be calculated based on fuel flow and vendor analysis of fuel sulfur content. [Rule and 62-297.310(7)(a)4, F.A.C. and to avoid Rule 62-212.400, F.A.C.]

9. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Note: The method shall be based on a continuous sampling train.}
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Gas Turbines

Tests shall also be conducted in accordance with the requirements specified in Section 4, Appendix SC of this permit. The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for compliance testing unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

10. Test Notification: The permittee shall notify the Compliance Authority in writing at least 30 days prior to any initial NSPS performance tests and at least 15 days prior to any other required tests. [Rule 62-297.310(7)(a)9, F.A.C.; 40 CFR 60.7 and, 60.8]

RECORDS AND REPORTS

11. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Section 4, Appendix SC of this permit. In addition, NOx emissions shall be corrected to ISO ambient atmospheric conditions and compared to the NSPS Subpart GG standard identified in Appendix GG of this permit for each required test. For each run, the test report shall also indicate the natural gas firing rate (cubic feet per hour), heat input rate (mmBTU per hour), the power output (bhp), percent base load, and the compressor inlet air temperature. [Rule 62-297.310(8), F.A.C.; 40 CFR 60.332]

12. ~~Custom~~ Fuel Monitoring ~~Schedule~~: ~~In lieu of the NSPS fuel monitoring requirements of 40 CFR 60.334 of Subpart GG, the Department approves the custom fuel monitoring schedule specified in Appendix FM of this permit.~~ *The permittee shall not claim the allowance for fuel-bound nitrogen in establishing the NSPS NOx standard. Only pipeline quality natural gas shall be fired. The current pipeline tariff specifies the maximum sulfur content as 10 grains of sulfur per 100 cubic feet of natural gas. Therefore, no fuel nitrogen or fuel sulfur monitoring is required. The fuel monitoring provisions were revised pursuant to the final July 2004 amendments to Subpart GG. See Appendix GG.]* [Rule 62-4.070(3); 40 CFR 60.334]

13. Operational Data: Using the automated gas turbine control system, the permittee shall monitor and record heat input (mmBTU), power output (bhp), and hours of gas turbine operation ~~between 50% to 90% load and 90% to 100% load~~. ~~Within the first 10 days of each month~~ Within at least 5 business days of an agency request, the permittee shall summarize the following information: average heat input (mmBTU per hour); average power output (bhp); and total hours of gas turbine operation~~; hours of gas turbine operation between 50% to 90% load; and hours of gas turbine operation between and 90% to 100% load~~. The average heat input for the month shall be based on the contracted heat content (mmBTU per SCF) of the natural gas for the given month. This information shall also be used for submittal of the required Annual Operating Report. [Rule 62-4.070(3), F.A.C.]

14. Component Replacements: For the replacement of gas turbine components to facilitate prompt repair and return the unit to its original specifications, the permittee shall comply with the following notification and testing requirements.

    a. Components shall only be replaced with functionally equivalent "like-kind" equipment. Replacement components may consist of improved or newer equipment, but such components shall not change operation or increase the capacity (heat input and power output rates) of the gas turbine. Replacement components that affect emissions shall be designed to achieve the emissions standards specified in all valid air permits and shall achieve these standards or better. After a component replacement, the gas turbine compressor engine remains subject to the standards of all valid air permits. [Rule 62-210.200(169), F.A.C.]

    b. The permittee shall notify the Compliance Authority within seven days after beginning any replacement of the gas generator component of the compressor engine. Within seven days of first fire on a replacement gas generator, the permittee shall submit the following information to the Compliance Authority: date of first fire and certification from the vendor that the replacement gas generator is a functionally equivalent "like-kind" component. The vendor certification shall also identify the make, model number, maximum heat input rate (MMBtu/hour), power output (bhp) at ISO conditions, and that the permitted emission rates are achievable with the replacement component. This notification may be made by letter, fax, or email. A copy of the information shall be kept on site at the compressor

station. Within 60 days of restarting the unit after a gas generator replacement, the permittee shall conduct stack tests to demonstrate compliance with the applicable emission standards. The permittee shall notify the Compliance Authority in writing at least 15 days prior to conducting these tests. The permittee shall comply with all permit requirements for test notification, test methods, test procedures, and reporting. [Rules 62-4.130, 62-4.160(2), (6), and (15) and 62-297.310(7)(b), F.A.C.]

c. After investigation and for good cause, the Department may require special compliance tests pursuant to Rule 62-297.310(7)(b), F.A.C.

C. Miscellaneous Unregulated Emissions Units (EU-009)

This permit recognizes the following unregulated emissions units.

Emissions Unit No. 009: Miscellaneous Unregulated Emissions Units	
004	Support equipment includes: • One 585 bhp Waukesha Model No. H24GL lean burn emergency generator fired exclusively with natural gas and identified by the permittee as "GEN03"; • Compressor building and control building; • Lube oil and used oil storage tanks; • Miscellaneous fugitive emission leaks from valves, flanges, etc.

The emergency generator is exempt from air construction permitting requirements in accordance with the following rule.

Rule 62-210.300, F.A.C. Permits Required.

(3) Exemptions.

(c) Categorical Exemptions

20. One or more emergency generators located within a single facility provided:

a. None of the emergency generators is subject to the Federal Acid Rain Program; and

b. Total fuel consumption by all such emergency generators within the facility is limited to 32,000 gallons per year of diesel fuel, 4,000 gallons per year of gasoline, 4.4 million standard cubic feet per year of natural gas or propane, or an equivalent prorated amount if multiple fuels are used.

CONTENTS

SECTION 4. APPENDIX CF
CITATION FORMAT

The following examples illustrate the format used in the permit to identify applicable permitting actions and regulations.

REFERENCES TO PREVIOUS PERMITTING ACTIONS

Old Permit Numbers

Example: Permit No. AC50-123456 or Air Permit No. AO50-123456

Where: "AC" identifies the permit as an Air Construction Permit
"AO" identifies the permit as an Air Operation Permit
"123456" identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: "099" represents the specific county ID number in which the project is located
"2222" represents the specific facility ID number
"001"identifies the specific permit project
"AC" identifies the permit as an air construction permit
"AF" identifies the permit as a minor federally enforceable state operation permit
"AO" identifies the permit as a minor source air operation permit
"AV" identifies the permit as a Title V Major Source Air Operation Permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: "PSD" means issued pursuant to the Prevention of Significant Deterioration of Air Quality
"FL" means that the permit was issued by the State of Florida
"317" identifies the specific permit project

RULE CITATION FORMATS

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CRF 60.7]

Means: Title 40, Part 60, Section 7

SECTION 4. APPENDIX GC

CUSTOM FUEL MONITORING PLAN FOR NSPS GAS TURBINES

Custom Fuel Monitoring Schedule: The Department approves the following custom fuel monitoring schedule in lieu of the NSPS fuel monitoring requirements in 40 CFR 60.334 of Subpart GG for the gas turbines affected by this project.

1. Because natural gas is the exclusive fuel for the gas turbine and contains negligible amounts of nitrogen, no monitoring of the fuel nitrogen content is required.

2. Fuel sulfur monitoring shall be performed in accordance with the following requirements:

   a. The natural gas shall be sampled and analyzed for the sulfur content as determined by ASTM methods D4084-82, D3246-81 or more recent versions.

   b. After first fire in the gas turbine, fuel sulfur monitoring shall be conducted at least twice each month. If this monitoring indicates little variability and compliance with the fuel sulfur limit of this permit for a period of six months, monitoring shall be reduced to once each calendar quarter. If this monitoring indicates little variability and compliance with the fuel sulfur limit of this permit for six calendar quarters, monitoring shall be reduced to twice each year (once each during the first and third calendar quarters).

   c. The permittee shall provide written notification to the Compliance Authority prior to reducing the frequency of monitoring in accordance with the above custom schedule. The notification shall include the results of the previous fuel sulfur analyses, the current frequency of monitoring, and the future frequency of monitoring.

3. This custom fuel monitoring plan shall be reevaluated if there is a change in the fuel supply, a substantial change in the fuel quality, or any required monitoring indicates failure to comply with the fuel sulfur limit of this permit. For such cases, fuel sulfur monitoring shall resume on a weekly basis while the Department reevaluates the monitoring schedule.

[Rule 62-4.070(3); 40 CFR 60.334]

GENERAL CONDITIONS

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

   a. Have access to and copy and records that must be kept under the conditions of the permit;
   b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
   c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

   Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

   a. A description of and cause of non-compliance; and

   b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

   The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida

Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

    a. Determination of Best Available Control Technology (NA);
    b. Determination of Prevention of Significant Deterioration (NA); and
    c. Compliance with New Source Performance Standards (X).

14. The permittee shall comply with the following:

    a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

    b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

    c. Records of monitoring information shall include:

        1) The date, exact place, and time of sampling or measurements;
        2) The person responsible for performing the sampling or measurements;
        3) The dates analyses were performed;
        4) The person responsible for performing the analyses;
        5) The analytical techniques or methods used; and
        6) The results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SECTION 4. APPENDIX GG

NSPS SUBPART GG REQUIREMENTS FOR GAS TURBINES

The following emissions unit is subject to the applicable requirements of Subpart A (General Provisions) and Subpart GG (Stationary Gas Turbines) established as New Source Performance Standards in 40 CFR 60 and adopted by reference in Rule 62-204.800(7)(b), F.A.C.

Emissions Unit 003: FGT Unit No. 1706, Gas Turbine Compressor
FGT No. 1706: A 15,700 bhp gas turbine (Nuovo Pignone Model No. PGT-10B) to be installed as a compressor engine.

NSPS GENERAL PROVISIONS

The emissions units are subject to the applicable General Provisions of the New Source Performance Standards including 40 CFR 60.7 (Notification and Record Keeping), 40 CFR 60.8 (Performance Tests), 40 CFR 60.11 (Compliance with Standards and Maintenance Requirements), 40 CFR 60.12 (Circumvention), 40 CFR 60.13 (Monitoring Requirements), and 40 CFR 60.19 (General Notification and Reporting Requirements). The General Provisions are not included in this permit, but can be obtained from the Department upon request.

40 CFR 60, SUBPART GG
STANDARDS OF PERFORMANCE FOR STATIONARY GAS TURBINES

{Note: Each gas turbine shall comply with all applicable requirements of 40 CFR 60, Subpart GG adopted by reference in Rule 62-204.800(7)(b), F.A.C. Inapplicable provisions have been deleted in the following conditions, but the numbering of the original rules has been preserved for ease of reference. The term "Administrator" when used in 40 CFR 60 shall mean the Department's Secretary or the Secretary's designee. Department notes and requirements related to the Subpart GG requirements are shown in bold immediately following the section to which they refer. The rule basis for the Department requirements specified below is Rule 62-4.070(3), F.A.C.}

Section 60.330 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities: All stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour), based on the lower heating value of the fuel fired.

Section 60.331 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(g) ISO standard day conditions means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

(i) Peak load means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.

(j) Base load means the load level at which a gas turbine is normally operated.

Section 60.332 Standard for nitrogen oxides.

(a) On and after the date of the performance test required by Section 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (c) of this section shall comply with:

(2) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0150 \frac{(14.4)}{Y} + F$$

where:

STD = allowable NOx emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt-hour.

F = NOx emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

(3) F shall be defined according to the nitrogen content of the fuel as follows:

Fuel-bound nitrogen (percent by weight)	F (NOx percent by volume)
N≤0.015	0
0.015<N≤0.1	0.04(N)
0.1<N≤0.25	0.004+0.0067(N–0.1)
N>0.25	0.005

where: N=the nitrogen content of the fuel (percent by weight).

Department Requirement: When firing natural gas, the "F" value shall be assumed to be 0.

{Note: The "Y" value provided by the manufacturer is approximately 11.0 for natural gas. The equivalent emission standard is 196 ppmvd at 15% oxygen. The emissions standards in Section III of this permit are more stringent than this requirement.}

(c) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired, shall comply with the provisions of paragraph (a)(2) of this section.

Section 60.333 Standard for sulfur dioxide.

On and after the date on which the performance test required to be conducted by Section 60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with:

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.

{Permitting Note: The gas turbines will exclusively fire natural gas, which contains less than 0.03% sulfur by weight assuming a density of 0.0455 lb/scf of natural gas.}

Section 60.334 Monitoring of operations.

(b) The owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

(2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with paragraph (b) of this section.

~~*Department Requirement: The requirement to monitor the nitrogen content of pipeline quality natural gas fired is waived because natural gas is the exclusive fuel and contains negligible amounts of nitrogen. For purposes of complying with the sulfur content monitoring requirements of this rule, the permittee shall comply with the custom fuel monitoring schedule specified in the Section 3 of the permit.*~~

~~*{Note: This is consistent with guidance from EPA Region 4 on custom fuel monitoring.}*~~

{Permitting Note: See 60.334(h) below.}

(c) For the purpose of reports required under Section 60.7(c), periods of excess emissions that shall be reported are defined as follows:

(1) Nitrogen oxides. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with Section 60.332 by the performance test required in Section 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in Section 60.8. Each report shall include the average water-to-fuel ratio, average fuel

consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under Section 60.335(a).

{Permitting Note: Excess NOx emissions reporting requirements do not apply. The gas turbine uses "dry" lean premix combustors and not wet injection to control NOx emissions. As indicated above, the Subpart GG NOx standard is 196 ppmvd @ 15% oxygen. This is nearly eight times the NOx standard specified in the permit and would be virtually impossible for this lean premix combustion turbine to exceed. As stated in the preamble to the July 2004 amendments, the rule changes do not impose any additional monitoring requirements for existing units.}

~~*{Note: The excess NOx emissions reporting requirements do not apply. The gas turbine uses dry low NOx combustion technology and not wet injection to control NOx emissions. Also, NOx emissions due to fuel bound nitrogen are considered negligible because natural gas is the exclusive fuel and contains little nitrogen.}*~~

(2) Sulfur dioxide. Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent.

Department Requirement: In accordance with the custom fuel monitoring schedule, any period between two consecutive fuel sulfur analyses shall be reported as excess emissions if the results of the second analysis indicates failure to comply with the fuel sulfur limit of the permit.

(h) The owner or operator of any stationary gas turbine subject to the provisions of this subpart:

(2) Shall monitor the nitrogen content of the fuel combusted in the turbine, if the owner or operator claims an allowance for fuel bound nitrogen (*i.e.*, if an F-value greater than zero is being or will be used by the owner or operator to calculate STD in §60.332).

{Permitting Note: Because the nitrogen content of pipeline natural is negligible, the permittee does not claim an allowance for fuel bound nitrogen and will use "0" for the F-value when calculating the NOx standard in §60.332. The permit prohibits the permittee from claiming the allowance for fuel nitrogen. Therefore, no fuel nitrogen monitoring is required. The fuel monitoring provisions were revised pursuant to the final July 2004 amendments to Subpart GG.}

(3) May elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in §60.331(v), regardless of whether an existing custom schedule approved by the administrator for subpart GG requires such monitoring.

§60.331(v) states, "*Natural gas* means a naturally occurring fluid mixture of hydrocarbons (*e.g.*, methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 Btu per standard cubic foot. Natural gas does not include the following gaseous fuels: Landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value."

The permittee elects not to monitor the sulfur content of natural gas based on §60.334(h)(3)(i), which states that, "The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less." The current tariff sheet specifies that natural gas delivered by the pipeline system shall contain not more than 10 grains of total sulfur per 100 cubic feet of gas. Therefore, the pipeline natural gas meets the above definition.

{Permitting Note: The permit requires the gas turbine to fire only pipeline natural gas with a maximum sulfur content of 10 grains of sulfur per 100 cubic feet of gas. Therefore, no fuel sulfur monitoring is required and no periodic reports of excess SO_2 emissions are required. The fuel monitoring provisions were revised pursuant to the final July 2004 amendments to Subpart GG.}

Section 60.335 Test methods and procedures.

(a) To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.

(b) In conducting the performance tests required in Section 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided for in Section 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.

(c) The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in Sections 60.332 and 60.333(a) as follows:

(1) The nitrogen oxides emission rate (NOx) shall be computed for each run using the following equation:

$$NOx = (NOxo)\,(Pr/Po)^{0.5}\, e^{19(Ho - 0.00633)}\,(288°K/Ta)^{1.53}$$

where:

NOx = emission rate of NOx at 15 percent O2 and ISO standard ambient conditions, volume percent.
NOxo = observed NOx concentration, ppm by volume.
Pr = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.
Po = observed combustor inlet absolute pressure at test, mm Hg.
Ho = observed humidity of ambient air, g H2O/g air.
e = transcendental constant, 2.718.
Ta = ambient temperature, °K.

Department Requirement: The permittee is required to correct NOx emissions to ISO ambient atmospheric conditions for each required emissions performance test and compare to the NOx standard specified in 40 CFR 60.332.

(2) The monitoring device of Section 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with Section 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.

Department Requirement: The initial NOx performance tests shall be conducted at approximately four evenly spaced points between the minimum normal operating load and 100% of peak load.

{Note: The dry low-NOx controls are only effective above a minimum load, which will be identified during initial testing.}

(3) Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NOx emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.

Department requirement: The span value shall be no greater than 75 ppm of nitrogen oxides due to the low NOx emission levels of the gas turbine.

(d) The owner or operator shall determine compliance with the sulfur content standard in Section 60.333(b) as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels (incorporated by reference--see Section 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.

~~*Department requirement: The natural gas shall be sampled and analyzed for the sulfur content as determined by ASTM methods D4084-82, D3246-81 or more recent versions.*~~

(e) To meet the requirements of Section 60.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

~~*{Note: The fuel analysis requirements of the permit meet or exceed the requirements of this rule and will ensure compliance with this rule.}*~~

{Permitting Note: The permit prohibits the permittee from claiming the allowance for fuel nitrogen. The permit also requires the gas turbine to fire only pipeline natural gas with a maximum sulfur content of 10 grains of sulfur per 100 cubic feet of gas. Therefore, no fuel nitrogen or fuel sulfur monitoring is required. The fuel monitoring provisions were revised pursuant to the final July 2004 amendments to Subpart GG.}

{Permitting Note: The following conditions apply to all emissions units and activities at this facility.}

EMISSIONS AND CONTROLS

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]

2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]

3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]

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

5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permitee shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]

6. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]

7. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and62-210.200(203), F.A.C.]

8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. [Rule 62-296.320(4)(b)1, F.A.C.]

9. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

TESTING REQUIREMENTS

10. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]

11. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]

12. Calculation of Emission Rate: For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

13. Test Procedures: Tests shall be conducted in accordance with all applicable requirements of Chapter 62-297, F.A.C.

    a. *Required Sampling Time.* Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be thirty (30) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur.

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

    c. *Calibration of Sampling Equipment.* Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.

    [Rule 62-297.310(4), F.A.C.]

14. Determination of Process Variables

    a. *Required Equipment.* The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

    b. *Accuracy of Equipment.* Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

    [Rule 62-297.310(5), F.A.C.]

15. Sampling Facilities: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C.

16. Test Notification: The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9, F.A.C.]

17. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

18. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide

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

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

RECORDS AND REPORTS

19. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]

20. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Richard Craig, V.P. of Southeastern Operations
Florida Gas Transmission Company
Post Office Box 4657
Houston, TX 77101-4657

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) NEHILL C. Date of Delivery MAR - 7 2005

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7000 1670 0013 3109 9519

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

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(Domestic Mail Only; No Insurance Coverage Provided)

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Postage	$
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Sent To: Mr. Richard Craig, V.P. of Southeastern Operations
Street: Florida Gas Transmission Company
City: Post Office Box 4657
Houston, TX 77101-4657

PS Form 3800, May 2000 See Reverse for Instructions

Florida Gas Transmission Company
601 South Lake Destiny Road, Suite 450, Maitland, FL 32751
Post Office Box 945100, Maitland, FL 32794-5100
407.838.7000 Fax 407.838.7001

January 21, 2005

VIA UPS Overnight Tracking No. 1Z3410920198490702

Ms. Trina Vielhauer
Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Office Bldg.
2600 Blairstone
Tallahassee, FL 32399-2400

Reference: Facility No. 0830070
Compressor Station No. 17, Silver Springs, Marion County

Dear Ms. Vielhauer:

Subject: Application for Air Permit Modification

Florida Gas Transmission Company (FGT) has installed a Nuovo Pignone PGT-10B compressor turbine at the above referenced facility under Permit No. 0830070-003-AC and operates it under Title V Permit No. 0830070-003-AV.

This facility is a major source under New Source Review (NSR) definitions and the turbine was installed with permit limits on the hours of operation allowed at levels less than full load. These restrictions were requested in order to avoid exceeding the NSR trigger for carbon monoxide (CO). Subsequent emissions testing of this turbine have demonstrated that CO emissions are considerably lower than the emission rates that were represented by the manufacturer prior to construction. The manufacturer's emission rates were used as a basis for the permitting and the load schedule restrictions. FGT is proposing to modify the permitted CO and volatile organic compound (VOC) emission rates and to remove the current load schedule restrictions. Specific provision changes are proposed in the attached narrative.

Additionally, FGT is requesting that the following permitting note be added for Emission Unit Nos. 004 (Engine 1704) and 008 (Engine 1706).

> [Permitting Note: *The maximum heat input rates are based on the manufacturer's equipment specifications for each gas turbine. They are included to identify the capacity of each emissions unit for purposes of confirming that tests are conducted within 90% to 100% of the emission unit's rated capacity (or to limit future operation to 110% of the test load,*

if applicable) to establish appropriate emissions limits, and to aid in determining future rule applicability].

Attached is an application with supporting documentation for modification to the construction permit. This modification will change the CO and VOC emission rates and remove the load restrictions. Emissions test data are provided in support of this proposed change. FGT understands that no processing fee is required since this facility is operated under a Part 70 Permit.

FGT is also requesting that the fuel monitoring requirement be revised to reference the July 8, 2004, U.S. EPA promulgated revised 40 CFR 60 Subpart GG. Under these revisions, the fuel sulfur monitoring requirements are no longer applicable to the turbine at Compressor Station No. 17 since the gas quality characteristics are in a current, valid purchase contract, tariff sheet or transportation contract specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less (40 CFR 60.331(u)).

Based on discussions with Mr. Alan Zahm at FDEP Central District, FGT will request that these revisions be included with the Title V permit for this facility when the renewal application is submitted by July 2005.

If you have any questions or need additional information, please call me at (407) 838-7057.

Sincerely,

James E. Fleak, P.E.
Div. Environmental Specialist

ATTACHMENTS

CC: Rick Craig, w/o attachments
David Parham, P.E.
Duane Pierce, AQMcs, LLC
Compressor Station No. 17

Florida Gas Transmission Company

Phase V Expansion Project

Compressor Station No. 17

APPLICATION
For
AIR PERMIT
MODIFICATION

January 2005

Prepared by AQMcs, LLC

Table of Contents

List of Tables

1.0 INTRODUCTION

Florida Gas Transmission Company (FGT) of Houston, Texas, is proposing to revise Air Construction Permit No. 0830070-003-AC and Title V Permit No. 0830070-004-AV for its existing natural gas pipeline facility near Silver Springs, Florida (Compressor Station No. 17). This proposed modification will revise the CO emission rates and load restrictions for a 15,700 brake horsepower (bhp), natural gas-fired, turbine compressor engine that was installed as part of FGT's Phase V Expansion Project.

Compressor Station No. 17 is located in Marion County, Florida, approximately 17 miles northeast of Silver Springs on County Highway 314. Figure 1-1 shows the location of the existing compressor station.

The construction permit application requested load restrictions on the turbine based upon the carbon monoxide (CO) and nitrogen oxides (NO_x) emission rates that were provided by the turbine manufacturer. The projected annual emission rates from the new turbine potentially constituted a significant modification at an existing major stationary source under Prevention of Significant Deterioration (PSD) regulations. FGT reduced the NO_x emissions from an existing 2,000 bhp reciprocating compressor engine by modifying the engine. CO emissions were reduced by accepting limits on the hours of operation that were allowed at lower loads for the Nuovo Pignone turbine. Based on the projected net annual emission rate change, there was no PSD significant increase in the emissions of any contaminant and a state only construction permit was required.

Subsequent emissions testing has demonstrated that CO emissions from the turbine are much lower than expected at all loads and that the load restrictions would not have been necessary if permitting had been based on CO emission rates consistent with the emission test values. FGT is proposing to delete the load restrictions and to establish a single CO emission rate for all loads. There will be no change in the total annual CO emissions.

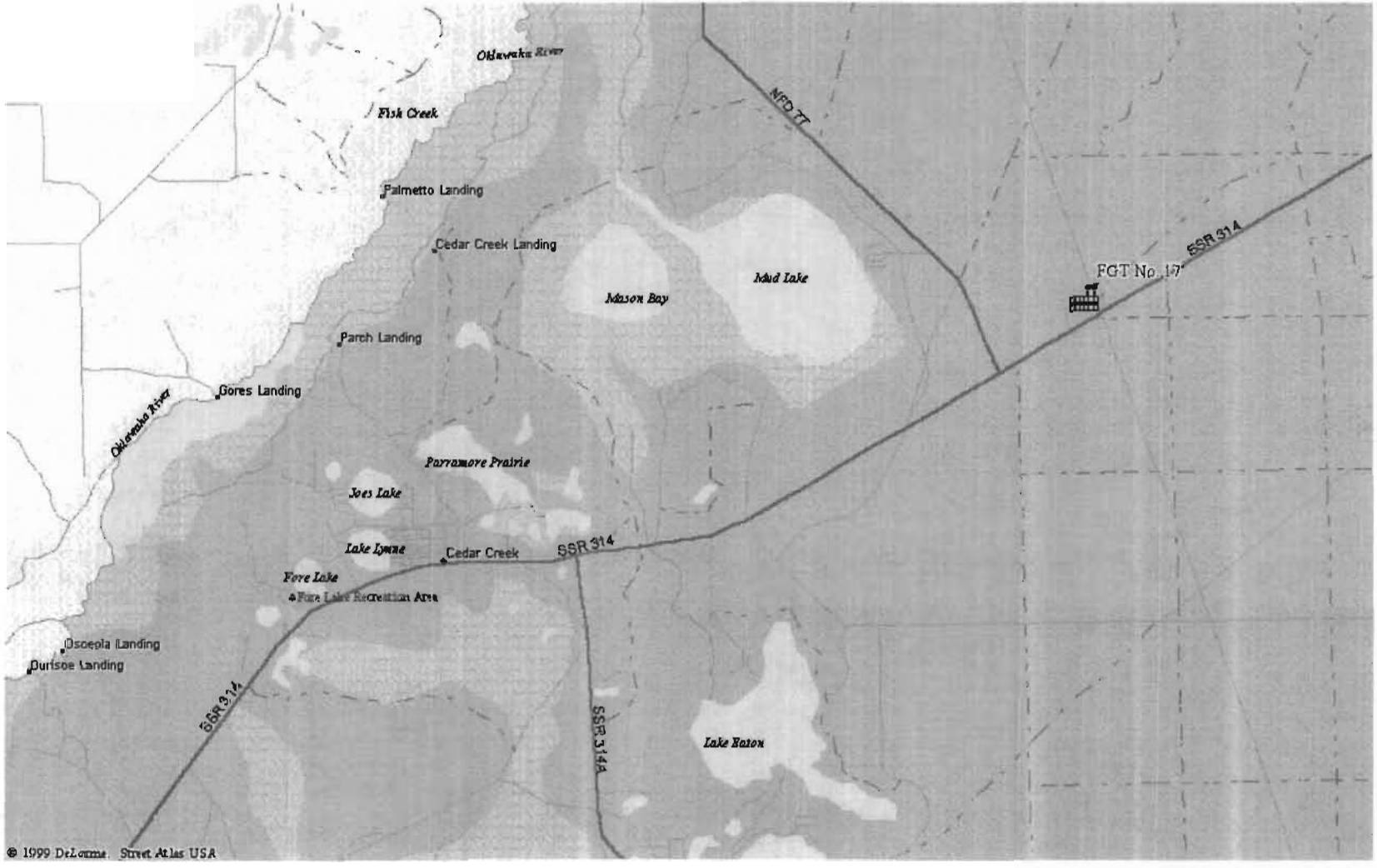
A change in VOC emission limits is also being requested in order to delete the load restrictions. There are no test data on VOC emissions; however, the VOC emissions can be expected to vary as the CO emissions vary. In any case, FGT is proposing that the VOC emission limit be changed to the 50% load lb/hr emission rate for all loads. This is the highest currently permitted lb/hr rate.

This narrative contains three additional sections. Descriptions of the existing operation at FGT's Compressor Station No. 17 and the proposed modifications are presented in Section 2.0. The air quality review requirements and applicability of state and federal regulations are discussed in

Section 3.0. References are included in Section 4.0.

FDEP permit application forms are provided in Attachment A. Attachment B contains a plot plan of the facility. Attachment C contains emissions test data and Attachment D contains emission calculations.

Figure 1-1 Location Map



2.0 PROJECT DESCRIPTION

A plot plan of FGT's Compressor Station No. 17, showing the location of the plant boundaries, the existing emission sources, and the location of the new engine, is presented in Attachment B. The following sections provide a description of the existing operations at this location, as well as a description of the proposed changes.

2.1. Existing Operations

FGT's existing Compressor Station No. 17 consists of four 2,000 bhp and one 2,400 bhp natural-gas-fired reciprocating internal combustion (IC) engines. Table 2-1 summarizes engine manufacturer, model, and the date of installation for each of the existing engines. The original installation was made in 1966 (Compressor Engines 1701 through 1704). An addition, referred to as Phase II, was constructed in 1991 (Compressor Engine 1705) and was subject to PSD review. Existing engine 1704 was modified to reduce NO_X emissions as part of the Phase V Expansion Project. Turbine 1706 was installed as part of the Phase VI Expansion Project in 2002.

The existing facility also has supporting equipment including lube and used oil storage tanks, air compressors and emergency generators.

2.2. Proposed Modifications

FGT proposes to revise the permitted CO emission rates for Turbine No. 1706 (EU 008). The initial permit application was based on CO emission rates provided by the manufacturer. Subsequent emission testing has shown the CO emission rates to be considerably lower than those initially provided by the manufacturer. The current air permit limits the hours of operation at low loads due to the expected high CO emission rates. These restrictions would not have been necessary if the CO emission rates from the manufacturer had been more realistic. Based on the results of emissions testing, FGT proposes to change the CO emission rate to a constant emission rate for all loads and to remove the low load operating restrictions. The total annual CO emissions will not change as a result of this revision.

Additionally, FGT is proposing to change the VOC emission rates to a single rate for all loads based on the worse case emissions rate. HAP emission estimates are also being revised by basing them on the current U.S. EPA AP-42 emission factors instead of the GRI HAPCalc software factors.

2.2.1. Compressor Turbine Engine No. 1706 Change

Turbine engine No. 1706 is a Pignone PGT-10B engine compressor unit rated at 15,700 bhp (ISO). Fuel is exclusively natural gas from the FGT's natural gas pipeline. Engine specifications and stack parameters for the engine are presented in Table 2-2. There will be no changes in these parameters with the proposed change.

Table 2-1 Summary of Existing Compressor Engines

Engine #	Date of Installation	Type	Manufacturer	Model #	Brake Horse Power (bhp)
1701	1966	Reciprocating	Cooper - Bessemer	LS-8-SG	2000
1702	1966	Reciprocating	Cooper - Bessemer	LS-8-SG	2000
1703	1966	Reciprocating	Cooper - Bessemer	LS-8-SG	2000
1704	1966	Reciprocating	Cooper - Bessemer	LS-8-SG	2000
1705	1991	Reciprocating	Dresser-Rand	412KVSRA	2400
1706	2002	Turbine	Nuovo Pignone	PGT-10B	15,700

Table 2-2 Compressor Turbine (1706) Specifications and Stack Parameters

Parameter	Design
Compressor Engine	1706
Type	Gas Turbine
Manufacturer	Nuovo Pignone
Model	PGT10B
Unit Size	15,700 bhp
Heat Input [a]	134.77 MMBtu/hr
Maximum Fuel Consumption [b]	0.1296 MMscf/hr
Speed	7,900 rpm
Stack Parameters	
Stack Height	61.5 ft
Stack Diameter	7.6 ft
Exhaust Gas Flow	215,175 acfm
Exhaust Temperature	909 °F
Exhaust Gas Velocity	79.1 ft/sec

NOTE:

acfm	=	actual cubic feet per minute.
bhp	=	brake horsepower.
Btu/hp-hr	=	British thermal units per brake horsepower per hour.
°F	=	degrees Fahrenheit.
ft	=	feet.
ft/sec	=	feet per second.
MMscf/hr	=	million standard cubic feet per hour
rpm	=	revolutions per minute.

[a] Based on vendor heat rate value plus 10%

[b] Based on heating value for natural gas of 1040 British thermal units per standard cubic foot (Btu/scf).

AQMcs

The currently permitted hourly and annual emissions of regulated pollutants from the engine under normal operating conditions are presented in Table 2-3. Emissions of oxides of nitrogen (NO_X), carbon monoxide (CO) and volatile organic compounds (VOC) are based on the engine manufacturer's initially supplied information.

Typically, turbine vendors do not provide information on particulate matter (PM), hazardous air pollutants (HAP) or sulfur dioxide (SO2) emissions; therefore, particulate matter and HAP emissions were based upon USEPA publication AP-42 Table 3.1-2a (USEPA, 2000) and emissions of SO_2 were based on FGT's Federal Energy Regulatory Commission (FERC) certificate limit of 10 grains sulfur per 100 cubic feet of natural gas.

All contaminants have decreasing lb/hr emission rates with decreasing engine load except CO and VOCs. The CO and VOC emission rates on the PGT-10B increase with decreasing engine load. Permitted emission rates were based on 100% load (worse case) for all contaminants except CO and VOC. CO and VOC emission rates are based on operation at 90 - 100% load for 40% of the time (3504 hr/yr) and 50 - 90% load for 60% of the time (5256 hr/yr). This was done in order for the project to remain minor with respect to Prevention of Significant Deterioration (PSD) permitting requirements for CO emissions.

Emissions tests on EU No. 008 (Engine No. 1706) have demonstrated significantly lower CO emission rates than those represented by the manufacturer. Three separate emissions tests showed lb/hr emission rates ranging from 0.11 lb/hr to 1.44 lb/hr over the load range from 50% to 100%. Results of the tests are provided in Table 2-4. The test reports have been submitted to the Florida DEP and the test summary tables from the reports are attached as Attachment C.

FGT is also proposing to revise the VOC emission limit to a single rate for all loads. The worst case emission rate is at 50% load and is 1.5 lb/hr. FGT is proposing to use this limit for all loads. This is a very conservative estimate of VOC emissions.

The proposed new emission rates are provided in Table 2-5. The multiple lb/hr CO and VOC emission rates have been changed to single rates of 15.54 lb/hr and 1.5 lb/hr at all loads. This new CO lb/hr rate is equal to the currently permitted annual rate of 68.07 tpy; therefore, there is no change in annual emissions for CO. The change in VOC emissions will result in an increase in permitted annual VOC emissions from 4.47 tpy to 6.57 tpy.

Finally, HAP emissions have changed from those in the original construction permit application. They are now estimated using the current AP-42 emission factors. This change does not represent any real change in actual HAP emissions.

Table 2-3 Current Emissions for Compressor Turbine Engine (1706)

Pollutant	Emission Factor	Reference	lb/hr	TPY
Nitrogen Oxides	14.1 lb/hr	Manufacturer Data	14.10	61.76
Carbon Monoxide	5.14 lb/hr @ 100% load 22.50 lb/hr @ 50% load	Manufacturer Data	15.54[a]	68.07[b]
Volatile Organic Compounds	0.29 lb/hr @ 100% load 1.46 lb/hr @ 50% load	Manufacturer Data	1.02[c]	4.47[b]
Particulate Matter	0.0066 lb/MMBtu	AP-42, Table 3.1-2a	0.89	3.94
Sulfur Dioxide	10 grains/100 scf	FERC Limit	3.70	16.21
HAPs	Various see Attachment D	GRI HapCalc 3.0	0.75	3.29

a) Nominal CO (annual) rate, maximum 22.50 lb/hr
b) 90 - 100% load for 40% of time & 50 - 90% load for 60% of time
c) Nominal VOC (annual) rate, maximum 1.46 lb/hr

Table 2-4 CO Emissions Test Results for Compressor Turbine Engine (1706)

Test on 05/29/02						
	Test Results			Permit Limits		
Load	CO ppmv @ 15% O2	CO lb/hr	CO tpy*	CO ppmv @ 15% O2	CO lb/hr	CO tpy**
52.2%	2.22	0.425	1.86	75	22.5	68.07
60.3%	0.59	0.12	0.54	75	22.5	68.07
68.4%	0.52	0.12	0.53	75	22.5	68.07
75.8%	0.45	0.11	0.49	15	5.1	68.07

* Assumes 8760 hrs/yr

** 68.07 tpy limit is based on load restrictions

Test on 01/17/03						
	Test Results			Permit Limits		
Load	CO ppmv @ 15% O2	CO lb/hr	CO tpy*	CO ppmv @ 15% O2	CO lb/hr	CO tpy**
90.1%	0.85	0.250	1.10	15	5.1	68.07

* Assumes 8760 hrs/yr

** 68.07 tpy limit is based on load restrictions

Test on 06/10/03						
	Test Results			Permit Limits		
Load	CO ppmv @ 15% O2	CO lb/hr	CO tpy*	CO ppmv @ 15% O2	CO lb/hr	CO tpy**
54.4%	7.53	1.24	5.44	75	22.5	68.07
70.1%	5.62	1.16	5.06	75	22.5	68.07
85.5%	1.19	0.281	1.23	75	22.5	68.07
100.0%	2.29	0.619	2.71	15	5.1	68.07

* Assumes 8760 hrs/yr

** 68.07 tpy limit is based on load restrictions

Table 2-5 Proposed Emissions for Compressor Turbine Engine (1706)

Pollutant	Emission Factor	Reference	lb/hr	TPY
Nitrogen Oxides	14.1 lb/hr	Manufacturer Data	14.10	61.76
Carbon Monoxide	15.54 lb/hr	Test Data [a]	15.54	68.07
Volatile Organic Compounds	1.5 lb/hr	Manufacturer Data	1.5	6.57
Particulate Matter	0.0066 lb/MMBtu	AP-42, Table 3.1-2a	0.9	3.94
Sulfur Dioxide	10 grains/100 scf	FERC Limit	3.7	16.21
HAPs	Various see Attachment D	AP-42, Table 3.1-3	0.14	0.61

a) See Attachment C

2.2.2. Emissions Summary

There are no changes in total annual CO emissions as a result of the proposed change. VOC emissions will increase 2.10 tpy. The calculations used to estimate emissions are presented in Attachment D.

2.2.3. Proposed Permit Provision Changes

FGT proposes the following changes to the construction permit (Permit No. 0830070-003-AC). Similar changes are requested for the current operating (Permit No. 0830070-004-AV)

Section III. Subsection B. Requirement B.5

Current:

B.5. Restricted Operation: The total hours of operation for the gas turbine are not limited (8760 hours per year). Except for startup and shutdown, operation below 50% base load is prohibited. Operation between 50% and 90% of base load shall not exceed 5256 hours during any consecutive 12 months. [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

Proposed:

B.5 Restricted Operation: The hours of operation for the gas turbine are not limited (8760 hours per year). Except for startup and shutdown, operation below 50% base load is prohibited. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

Section III. Subsection B. Requirement B.6

Current:

B.6 Emissions Standards: Emissions from the gas turbine shall not exceed the following limits for carbon monoxide (CO), nitrogen oxides (NOx), opacity, particulate matter (PM), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

Pollutant	Standards		Equivalent Maximum Emissions [f]		Rule Basis [g]
	Load	Standards	lb/hour	TPY	
CO [a]	90-100%	15.0 ppmvd @ 15% O_2	5.1	68.07	Avoid Rule 62-212.400, F.A.C.
	50-90%	75.0 ppmvd @ 15% O_2	22.5		
NOx [b]	50-100%	25.0 ppmvd @ 15% O_2	14.1	61.76	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
SO_2 [c]	50-100%	10.0 grains of sulfur per 100 SCF of natural gas	3.7	16.21	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
Opacity [d]	50-100%	10% opacity, 6-minute average	Not Applicable		Avoid Rule 62-212.400, F.A.C.
PM [e]	50-100%	Good combustion practices	0.9	3.94	Avoid Rule 62-212.400, F.A.C.
VOC [e]	90-100%	Good combustion practices	0.3	4.47	Avoid Rule 62-212.400, F.A.C.
	50-90%	Good combustion practices	1.5		

Proposed:

B6. Emissions Standards: Emissions from the gas turbine shall not exceed the following limits for carbon monoxide (CO), nitrogen oxides (NOx), opacity, particulate matter (PM), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

		Equivalent Emissions	
Pollutant	Standards	lb/hr	tons/year
NOx	25.0 ppmvd @ 15% O_2	14.1	61.76
CO	52.0 ppmvd	15.54	68.07
SO2	10.0 grains of sulfur/100 SCF	3.7	16.21
Opacity	10% opacity, 6-minute average		
PM	Good combustion practices	0.9	3.94
VOC	Good combustion practice	1.5	6.57

Section III. Subsection B. Requirement B.13

Current:

B.13 Operational Data: Using the automated gas turbine control system, the permittee shall monitor and record heat input (mmBTU), power output (bhp), and hours of gas turbine operation between 50% to 90% load and 90% to 100% load. Within the first 10 days of each month, the permittee shall summarize the following information: average heat input (mmBTU per hour); average power output (bhp); total hours of gas turbine operation; hours of gas turbine operation between 50% to 90% load; and hours of gas turbine operation between and 90% to 100% load. The average heat input for the month shall be based on the contracted heat content (mmBTU per SCF) of the natural gas for the given month. This information shall also be used for submittal of the required Annual Operating Report. [Rule 62-4.070(3), F.A.C.]

Proposed:

B.13 Operation of this turbine compressor shall be monitored by an automated gas turbine control system. As a minimum, this system shall maintain a continuous record of heat input (MMBtu), power output (bhp), and hours of gas turbine operation. Within the first 10 days of each month, the permittee shall summarize the following information: average heat input (MMBtu per hour); average power output (bhp); and total hours of gas turbine operation. The average heat input for the month shall be based on the actual heat content (MMBtu per SCF) of the natural gas for the given month. This

information shall also be used for submittal of the required Annual Operating Report. [Rule 62-4.070, F.A.C.]

3.0 REGULATORY ANALYSIS

This section presents a review of federal and Florida State air quality regulations, which govern the operations and proposed modifications to be conducted at Compressor Station No. 17.

3.1 Federal Regulations Review

The federal regulatory programs administered by the USEPA have been developed under the authority of the Clean Air Act. The following subsections review the essential elements of the federal regulatory program and the impact they have on the operations and proposed modification at Compressor Station No. 17.

3.1.1. Applicability of New Source Performance Standards (NSPS)

Standards of Performance for New Sources are published in 40 CFR 60. All Standards apply to all new sources within a given category, regardless of geographic location or ambient air quality at the location.

The turbine at Compressor Station No. 17 is subject to Subpart GG, Standards of Performance for Stationary Gas Turbines, because it will have a maximum heat input at peak load of >10.7 gigajoules/hour (10 MMBtu/hr) based on the lower heating value of the natural gas fuel. This regulation establishes emission limits for NO_X and SO_2 and requires performance testing and daily monitoring of fuel nitrogen and sulfur.

The NO_x emission limit for Subpart GG is calculated as follows:

$$STD = 0.0150\ (14.4/Y) + F$$

STD = Allowable NO_x emissions % by volume

Y = Heat rate at peak load not to exceed 14.4 *Kj/watt-hour*

F = NO_x emission allowance

The fuel bound nitrogen in natural gas is less than 0.015% by weight. Therefore, the value of F as defined in 40 CFR 60.332(3) is equal to zero.

For new Engine No. 1706

Y = Btu/bhp-hr x 1.055 *Kj/Btu x hp-hr/745.7 watt-hour*

= 7,807 Btu/bhp-hr x 1.055 *Kj/Btu x hp-hr/745.7 watt-hour*

= 11.0 Kj/watt-hr

STD = 0.0150 (14.4/11.0) + 0

= 0.0196 %

= 196 ppm_v

Table 3-6 summarizes the NSPS applicability for the gas engine. This turbine will comply with both the NSPS for NO_X of 196 ppmv (i.e., manufacturer's estimation of 25 ppmv), and for SO_2 of 150 ppmv (estimated for these turbines to be 4 ppmv). There has been no change in these values.

FGT was granted a custom fuel monitoring schedule for this engine; however, the daily monitoring of fuel nitrogen and sulfur is no longer required under the recent revisions effective July 8, 2004. FGT is requesting that this requirement be removed from the construction and operating permits. Specifically, FGT is requesting that Provision B.12 of Section III be deleted from the construction permit.

Table 3-1 Applicability of New Source Performance Standards

NSPS Subpart	NSPS Regulations	Equipment	Fuel	Pollutant	Heat Input Applicability	Equipment Design Maximum*	NSPS Emission Limits	Equipment Emissions
GG	60.332	Engine No. 1706 Gas Turbine	Gas	NO_2	>10 MM Btu/hr	122 MM Btu/hr	196 ppm_v	25 ppm_v
GG	60.333	Engine No. 1706 Gas Turbine	Gas	SO_2	>10 MM Btu/hr	122 MM Btu/hr	150 ppm_v	~4 ppm_v
Design maximum based on vendor data.								

3.1.2. Applicability of National Emission Standards for Hazardous Air Pollutants (NESHAPS)

Several NESHAPS are potentially applicable to this facility and these emission sources.

3.1.2.1. 40 CFR 63 Subpart HHH

One NESHAPS potentially applicable to this compressor station is 40 CFR 63 Subpart HHH. Compressor Station No. 12 has no affected sources as defined by 40 CFR 63 Subpart HHH and is, therefore, not subject to this subpart.

3.1.2.2. 40 CFR 63 Subpart YYYY

This facility is a Major Source for Hazardous Air Pollutants and this turbine is subject to the new turbine MACT regulations (40 CFR 63 Subpart YYYY) promulgated on March 5, 2004. However, on April 7, 2004, the U.S. EPA proposed to stay Subpart YYYY applicability for four subcategories of the Combustion Turbines source category and also proposed a rule to delete these four subcategories from the Combustion Turbines source category. The stay was finalized for two subcategories on August 18, 2004. This turbine (Engine No. 1706) is included within these two sub-categories and was originally constructed prior to January 14, 2003.

3.1.2.3. 40 CFR 63 Subpart ZZZZ

The U.S.EPA has recently finalized 40 CFR 63 Subpart ZZZZ for reciprocating internal combustion engines; however, all of FGT's reciprocating engines at this facility are lean burn types that are not subject to this regulation.

3.2 Florida State Air Quality Regulations

Compressor Station No. 17 is currently operating under Permit No.0830070-004-AV and is subject to the provisions of that permit. Rule 62, F.A.C., contains the air quality rules and regulations for the State of Florida. The primary federal regulations that affect Compressor Station No. 17 have been incorporated into or are referenced by these rules. The significant state regulations that are applicable to the new emission units are briefly listed below.

3.2.1. Rule 62-210.300 Permits Required

FGT is required to obtain a construction permit prior to construction of new emission units. This requirement is being met by the submittal of this application.

3.2.2. Rule 62-204.240 Ambient Air Quality Standards

FGT must not violate any of the ambient air quality standards listed under this rule. The proposed new emissions will not violate any air quality standards. Potential NOx emissions and impacts will be decreased.

3.2.3. Rule 62-296.320(2) Objectionable Odors

This rule prohibits the discharge of pollutants that will cause or contribute to an objectionable odor. There will be no odors from the proposed changes.

3.2.4. Rule 62-296.320(4)(b)1 General Particulate Emission Limiting Standards.

FGT is prohibited from allowing the compressor engine to discharge into the atmosphere the emissions of air pollutants, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). The new and modified engines will not violate this standard.

3.2.5. Rule 62-210.300(3)(a) Exempt Emissions Units and/or Activities.

The emissions from the fugitive leak emissions are insignificant sources and are exempt from the permitting requirements of Chapter 62-210 Stationary Sources - General Requirements, 62-213 Operation Permits For Major Sources Of Air Pollution and 62-4 Permits.

3.2.6. FDEP Title V CORE Requirements

This facility and emission unit are subject to the requirements of the FDEP Title V CORE requirements.

4.0 REFERENCES

U.S. Environmental Protection Agency (USEPA). 2000. Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources (5th Ed.) AP-42. Supplement E, Research Triangle Park, NC.

Attachment A

DEP Forms

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – **Use this form to apply for an air construction permit for a proposed project:**

- **subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or**
- **where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or**
- **at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.**

Air Operation Permit – **Use this form to apply for:**

- **an initial federally enforceable state air operation permit (FESOP); or**
- **an initial/revised/renewal Title V air operation permit.**

Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option) – **Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.**

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: Florida Gas Transmission Company
2. Site Name: Compressor Station No. 17
3. Facility Identification Number: 0830070
4. Facility Location...
   Street Address or Other Locator: Rt. 3 Box 3390, Highway 65 S
   City: Silver Springs County: Marion Zip Code: 34489-0337
5. Relocatable Facility? ☐ Yes ☒ No
6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: James Fleak, Division Environmental Specialist
2. Application Contact Mailing Address...
   Organization/Firm: Florida Gas Transmission Company
   Street Address: P.O. Box 945100
   City: Maitland State: FL Zip Code: 32794-5100
3. Application Contact Telephone Numbers:
   Telephone: (407) 838-7057 Fax: (407) 838-7157
4. Application Contact Email Address: james.fleak@crosscountryenergy.com

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	1-24-05
2. Project Number(s):	0830078-005-AC
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

APPLICATION INFORMATION

Purpose of Application

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

Air Construction Permit

[X] Air construction permit.

Air Operation Permit

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

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

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

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

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

Application Comment

Florida Gas Transmission Company (FGT) is proposing to revise permitted CO emission rates for a Pignone PGT-10B 15,700 bhp compressor turbine. There will be no change in the annual tpy CO emission rate. The change will eliminate the current CO lb/hr emissions rates that vary with the engine load and replace them with a single lb/hr rate for all loads.

Due to the change in CO emissions, FGT is requesting a slight increase in permitted VOC emissions.

Finally, FGT is requesting that the 40 CFR Subpart GG fuel monitoring requirement be removed from the permit.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
008	Turbine Compressor Engine No. 1706, 15,700 bhp, Natural Gas Fired	NA	$0

Application Processing Fee

Check one: ☐ Attached - Amount: $_____ ☒ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name : Rick Craig, Vice-President, Southeast Operations

2. Owner/Authorized Representative Mailing Address...
Organization/Firm: Florida Gas Transmission Company
Street Address: P.O. Box 4657
City: Houston State: Texas Zip Code: 77210-4657

3. Owner/Authorized Representative Telephone Numbers...
Telephone: (713) 646-7227 ext. Fax: ( ) -

4. Owner/Authorized Representative Email Address: rick.craig@crosscountryenergy.com

5. Owner/Authorized Representative Statement:

I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.

Rick Craig
Signature

1-18-05
Date

APPLICATION INFORMATION

Application Responsible Official Certification

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

1. Application Responsible Official Name: Rick Craig, Vice President, Southeastern Operations

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):

[X] For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.

[ ] For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

[ ] For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.

[ ] The designated representative at an Acid Rain source.

3. Application Responsible Official Mailing Address...
Organization/Firm: Florida Gas Transmission Company
Street Address: P.O. Box 4657
City: Houston State: TX Zip Code: 77210-4657

4. Application Responsible Official Telephone Numbers...
Telephone: (713) 646 - 7227 ext. Fax: ( ) -

5. Application Responsible Official Email Address: rick.craig@crosscountryenergy.com

6. Application Responsible Official Certification:

I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

Rick Craig
Signature

01/10/05
Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: David Holmes Parham
   Registration Number: 50834

2. Professional Engineer Mailing Address...
   Organization/Firm: Florida Gas Transmission Company
   Street Address: 601 S. Lake Destiny Dr. Suite 450
   City: Maitland State: FL Zip Code: 32751

3. Professional Engineer Telephone Numbers...
   Telephone: (407) 838-7119 ext. Fax: (407) 838-7101

4. Professional Engineer Email Address: David.Parham@crosscountryenergy.com

5. 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.

(3) If the purpose of this application is to obtain a Title V 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 plan and schedule is submitted with this application.

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

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, 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.

Signature 1/4/05
Date

DAVID HOLMES PARHAM LICENSE NO. 50834 STATE OF FLORIDA PROFESSIONAL ENGINEER (seal)

Attach any exception to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 418.84 North (km) 3240.90		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4922
7. Facility Comment : Compressor Station No. 17 is an existing natural gas pipeline compressor station with five reciprocating compressor engines and one compressor turbine.			

Facility Contact

1. Facility Contact Name: David Read, Team Environmental Leader
2. Facility Contact Mailing Address... Organization/Firm: Florida Gas Transmission Company Street Address: P.O. Box 337 City: Silver Springs State: FL Zip Code: 34489-0337
3. Facility Contact Telephone Numbers: Telephone: (850) 350-5500 ext. Fax: (850) 350-5501
4. Facility Contact Email Address: david.read@crosscountryenergy.com

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name: Same as Section 1
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Facility Primary Responsible Official Email Address:

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply following completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☐ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☒ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☐ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment: EU 008 is potentially subject to 40 CFR 63 Subpart YYYY.	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
NO_X	A	N
CO	A	N
VOC	B	N
SO_2	B	N
PM	B	N
HAPs	A	N

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]? (all units)	3. Emissions Unit ID No.s Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap
NA					

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID:_____ ☒ Previously Submitted, Date: June 2002
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID:_____ ☒ Previously Submitted, Date: November 2000
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: NA ☐ Previously Submitted, Date:_____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location:
   ☒ Attached, Document ID: Narr. Fig. 1-1 ☐ Not Applicable (existing permitted facility)
2. Description of Proposed Construction or Modification:
   ☒ Attached, Document ID: Narrative Section 2
3. Rule Applicability Analysis:
   ☒ Attached, Document ID: Narrative Section 3
4. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable
6. Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable
7. Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
    ☐ Attached, Document ID:_____ ☒ Not Applicable

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

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

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

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

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

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

6. Requested Changes to Current Title V Air Operation Permit:
   ☒ Attached, Document ID: Section 2.2.3 of Narrative ☐ Not Applicable

Additional Requirements Comment

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION
Section [1] of [1]

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

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

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

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

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

2. Description of Emissions Unit Addressed in this Section:

15,700 bhp natural gas fired turbine compressor unit, Engine No. 1706

3. Emissions Unit Identification Number: 008

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	November 2001	March 2002	49	[ ] Yes [X] No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

The turbine engine is a Pignone PGT10B engine compressor unit ISO rated at 15,700 bhp. Fuel is exclusively natural gas from FGT's gas pipeline. The engine incorporates dry, low NO_X combustion technology.

EMISSIONS UNIT INFORMATION
Section [1] of [1]

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

   The engine incorporates dry, low NOX combustion technology.

2. Control Device or Method Code(s): 99

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: NA	
2. Maximum Production Rate: NA	
3. Maximum Heat Input Rate: 134.77 million Btu/hr	
4. Maximum Incineration Rate: NA pounds/hr tons/day	
5. Requested Maximum Operating Schedule: 24 hours/day 52 weeks/year	7 days/week 8760 hours/year
6. Operating Capacity/Schedule Comment: Higher heat value (HHV) heat input is 134.77 MM Btu/hr based on vendor lower heat value (LHV) specifications of 122.52 MM Btu/hr plus 10%.	

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: 1706	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: NA		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: None		
5. Discharge Type Code: V	6. Stack Height: 61.5 feet	7. Exit Diameter: 7.6 feet
8. Exit Temperature: 909 °F	9. Actual Volumetric Flow Rate: 215,175 acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 414.8 North (km): 3240.9	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Natural gas fired reciprocating internal combustion engine driving a natural gas compressor, operating full time.		
2. Source Classification Code (SCC): 2-02-002-01	3. SCC Units: million cubic feet burned	
4. Maximum Hourly Rate: 0.1296	5. Maximum Annual Rate: 1135.3	6. Estimated Annual Activity Factor: NA
7. Maximum % Sulfur: 0.03	8. Maximum % Ash: 0.0	9. Million Btu per SCC Unit: 1040
10. Segment Comment: Percent Sulfur is based on maximum Federal Energy Regulatory Commission (FERC) limit of 10 gr S/100scf and gas density of 0.0455 lb/scf.		

Segment Description and Rate: Segment __ of __

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

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment __ of __

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

Segment Description and Rate: Segment __ of __

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

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

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

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NOX	2. Total Percent Efficiency of Control:
3. Potential Emissions: 14.1 lb/hour 61.76 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 14.1 lb/hr Reference: Vendor's data	7. Emissions Method Code: 5
8. Calculation of Emissions: (14.10 lb/hr)(1 ton/2000 lb)(8760hr/1 yr) = 61.76 tons/year	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Vendor's data based on ISO conditions and site elevation.	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 25 ppmv	4. Equivalent Allowable Emissions: 14.1 lb/hour 61.76 tons/year
5. Method of Compliance: Initial performance test.	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 60.332(3) limits NOX emissions to 196 ppmv.	

Allowable Emissions Allowable Emissions __ of ___

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

Allowable Emissions Allowable Emissions __ of ___

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

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control:
3. Potential Emissions: 15.54 lb/hour 68.07 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 15.54 lb/hr Reference: Test data	7. Emissions Method Code: 1
8. Calculation of Emissions: (15.54 lb/hr)(1 ton/2000 lb)(8760hr/1 yr) = 68.07 tons/year	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: See Table 2-4 of the narrative and Attachment C for test results	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: ESCPSD	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: 15.54 lb/hour 68.07 tons/year
5. Method of Compliance: Initial performance test.	
6. Allowable Emissions Comment (Description of Operating Method): Emissions based on three separate test events.	

Allowable Emissions Allowable Emissions __ of ___

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

Allowable Emissions Allowable Emissions __ of ___

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

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:
3. Potential Emissions: 1.5 lb/hour 6.57 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 1.5 lb/hr Reference: Vendor's data	7. Emissions Method Code: 5
8. Calculation of Emissions: (1.5 lb/hr)(1 ton/2000 lb)(8760hr/1 yr) = 6.57 tons/year	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Vendor's data based on ISO conditions at lowest load for total hydrocarbons (THC). VOCs assumed to be 10% of THC.	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: ESCPSD	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: 1.5 lb/hour 6.57 tons/year
5. Method of Compliance: Initial performance test.	
6. Allowable Emissions Comment (Description of Operating Method): CO compliance test and good combustion practices	

Allowable Emissions Allowable Emissions __ of __

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

Allowable Emissions Allowable Emissions __ of __

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

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control:
3. Potential Emissions: 3.70 lb/hour 16.21 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 10 grains/100 scf Reference: Vendor's fuel use data and FERC limitation	7. Emissions Method Code: 3

8. Calculation of Emissions:

(10 gr S/100 scf)(129,600 scf/hr)(1 lb/7000 gr) = 1.85 lb S/hr
(1.85 lb S/hr)(2 lb SO2/lb S) = 3.70 lb SO2/hr
(3.70 lb SO2/hr)(8760 hr/yr)(1 ton/2000 lb) = 16.21 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

SO2 emission factor is based on maximum Federal Energy Regulatory Commission (FERC) limit of 10 gr S/100 scf and gas density of 0.0455 lb/scf.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: 3.70 lb/hour 16.21 tons/year
5. Method of Compliance: Initial performance test.	
6. Allowable Emissions Comment (Description of Operating Method): FGT is requesting that Provision B.12 of Section III be deleted from the construction permit.	

Allowable Emissions Allowable Emissions __ of __

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

Allowable Emissions Allowable Emissions __ of __

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

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.89 lb/hour 3.94 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.0066 lb/MM Btu Reference: Table 3.1-2a, AP-42 4/00, Supplement E	7. Emissions Method Code: 4
8. Calculation of Emissions: (0.0066 lb/MM Btu)(134.77 MM Btu/hr) = 0.9 lb/hr (0.9 lb/hr)(8760 hr/yr)(1 ton/2000 lb) = 3.94 ton/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions NA of ___

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

Allowable Emissions Allowable Emissions __ of ___

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

Allowable Emissions Allowable Emissions __ of ___

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

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: HAPS	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.14 lb/hour 0.61 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.00103 lb/MM Btu Reference: Table 3.1-3, AP-42 4/00, Supplement E	7. Emissions Method Code: 4
8. Calculation of Emissions: (0.00103 lb/MM Btu)(134.77 MM Btu/hr) = 0.14 lb/hr (0.14 lb/hr)(8760 hr/yr)(1 ton/2000 lb) = 0.61 ton/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions NA of ___

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

Allowable Emissions Allowable Emissions __ of ___

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

Allowable Emissions Allowable Emissions __ of ___

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

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: Annual test with EPA Method 9	
5. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation ___ of __

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ___NA___ of _

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

Continuous Monitoring System: Continuous Monitor ___ of ___

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

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ___ of ___

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

Continuous Monitoring System: Continuous Monitor ___ of ___

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

EMISSIONS UNIT INFORMATION
Section [ ] of [ ]

I. EMISSIONS UNIT ADDITIONAL INFORMATION
Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [X] Previously Submitted, Date 2000

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [X] Previously Submitted, Date 2000

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [ ] Previously Submitted, Date None

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [ ] Previously Submitted, Date _____
   [X] Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [ ] Previously Submitted, Date _____
   [X] Not Applicable

6. Compliance Demonstration Reports/Records
   [ ] Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [x] Previously Submitted, Date: 07/02/02, 02/27/02, 07/24/03
   Test Date(s)/Pollutant(s) Tested: 5/29/02 – NOx and CO, 01/17/02 – NOx and CO, 06/10/03 - NOX, CO and SO2
   _____
   [ ] To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [ ] Not Applicable

   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   [ ] Attached, Document ID: _____ [X] Not Applicable

EMISSIONS UNIT INFORMATION
Section [ ] of [ ]

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

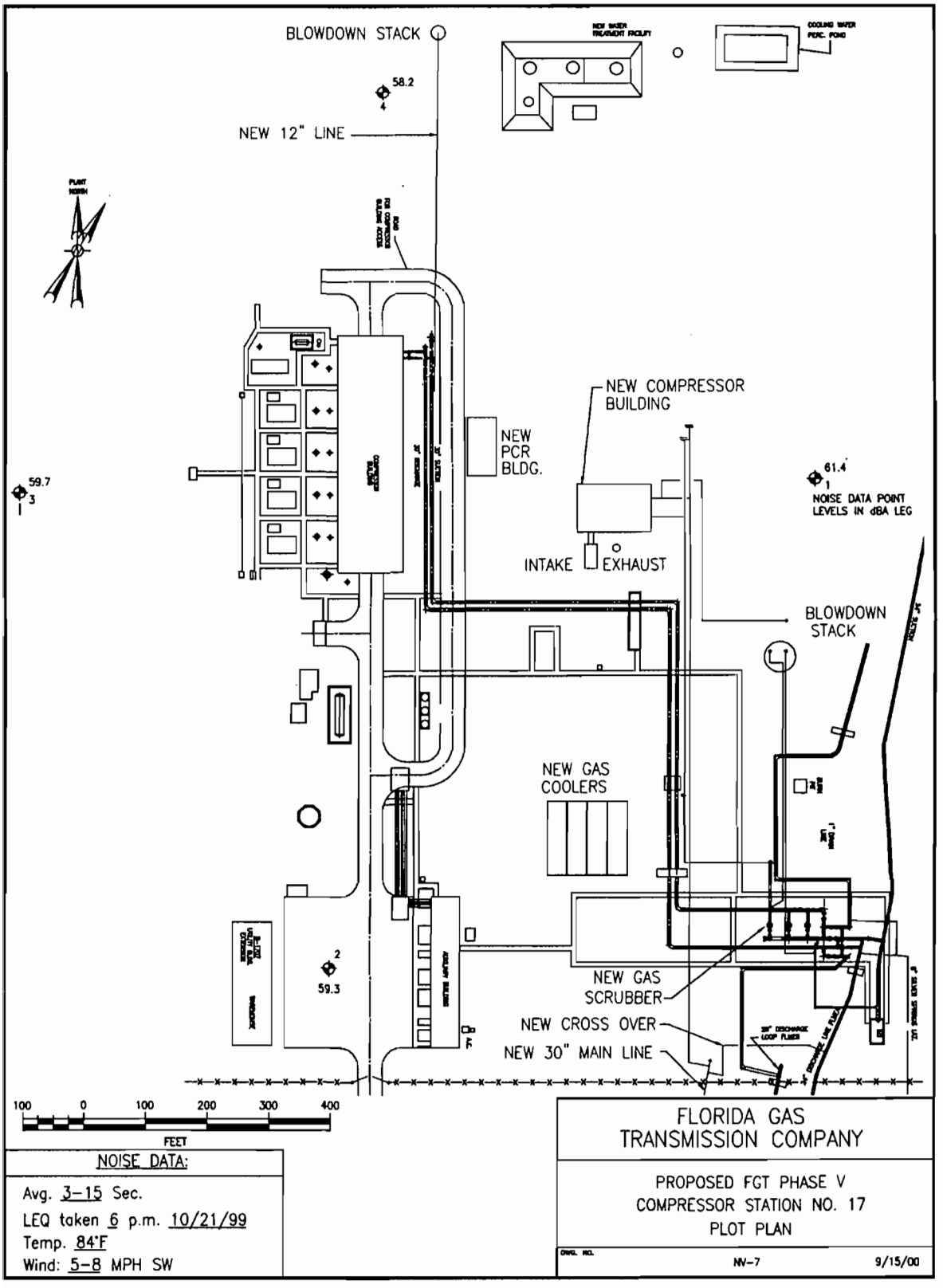
Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: Narrative Section 3.0_____
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   - ☐ Certificate of Representation (EPA Form No. 7610-1)
     - ☐ Copy Attached, Document ID:
   - ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Not Applicable

Additional Requirements Comment

Attachment B

Plot Plan


BLOWDOWN STACK
58.2
4
NEW 12" LINE
NEW COMPRESSOR BUILDING
NEW PCR BLDG.
59.7
3
61.4
1
NOISE DATA POINT LEVELS IN dBA LEQ
INTAKE
EXHAUST
BLOWDOWN STACK
NEW GAS COOLERS
2
59.3
NEW GAS SCRUBBER
NEW CROSS OVER
NEW 30" MAIN LINE
100 0 100 200 300 400
FEET
NOISE DATA:
Avg. 3-15 Sec.
LEQ taken 6 p.m. 10/21/99
Temp. 84°F
Wind: 5-8 MPH SW
FLORIDA GAS TRANSMISSION COMPANY
PROPOSED FGT PHASE V
COMPRESSOR STATION NO. 17
PLOT PLAN
NV-7
9/15/00

Attachment C

Test Reports

Engine 1706 Report Dated 05/29/02
Engine 1706 Report Dated 01/17/03
Engine 1706 Report Dated 06/10/03

Engine 1706 Test Dated 05/29/02

TABLE 3:Summary of Results
Unit 1706
Full Load Testing

Company: Florida Gas Transmission Company
Facility: Compressor Station No. 17
Location: Silver Springs, Marion County, Florida
Source: GE Nuevo Pignone Model No. PGT-10B Combustion Gas Turbine Compressor
Technicians: LJB, RPO

Test Number	**1706-C-10**	**1706-C-11**	**1706-C-12**		
Date	5/29/02	5/29/02	5/29/02		
Start Time	15:46	16:57	18:06		**FDEP Permit Limits**
Stop Time	16:46	17:57	19:06		
Turbine/Compressor Operation		**Full Load**		***Averages***	
Gas Producer Speed (NGP, %)	10813	10817	10826	***10819***	
Power Turbine Speed (NPT, %)	7122	7169	7213	***7168***	
Turbine Load (Engine Horsepower, Hp)	9,799	9,909	10,097	***9935***	**15,700 ISO**
Turbine Capacity (as Horsepower Output)	13,028	13,082	13,227	***13,112***	
Percent Load (% of max HP at inlet temp and %NPT)	75.2%	75.7%	76.3%	***75.8%***	
Thermal Load (% load available, Pignone)	78.6%	78.7%	79.0%	***78.7%***	
Engine Compressor Discharge Pressure (96CD, psia)	199.4	199.7	201.1	***200.1***	
Turbine Air Inlet Temperature (CT-1A, °F)	90.9	90.2	88.1	***89.7***	
Air Inlet Duct Losses (combined, "H_2O)	0.83	0.83	0.83	***0.83***	
Power Turbine Inlet Temperature (TT-XD, °F)	956.8	955.8	953.4	***955.3***	
Gas Pilot Valve Command (% open)	14.14	14.13	14.10	***14.12***	
Gas Compressor Suction Pressure (psig)	597.7	585.9	575.7	***586.5***	
Gas Compressor Suction Temperature (°F)	74.3	74.3	74.2	***74.3***	
Gas Compressor Discharge Pressure (psig)	880.7	866.8	853.7	***867.1***	
Gas Compressor Discharge Temperature (°F)	134.7	135.3	135.5	***135.2***	
Compressor Flow (MMSCFD)	470.0	469.6	476.1	***471.9***	
Turbine Fuel Data (Natural Gas)					
Fuel Heating Value (Btu/SCF, HHV)	1033.5	1033.5	1033.5	***1033.5***	
Fuel Specific Gravity	0.5838	0.5838	0.5838	***0.5838***	
O_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8641	8641	8641	***8641***	
CO_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1026	1026	1026	***1026***	
Total Sulfur in Fuel (ppm, weight basis)	5.52	5.52	5.52	***5.52***	**8000**
Total Sulfur in Fuel (grains S/per 100SCF of NG)	0.173	0.173	0.173	***0.173***	**10**
Fuel Flow (MSCFH)	108.416	108.574	109.484	***108.825***	
Heat Input (MMBtu/hr, Higher Heat Value)	112.05	112.21	113.15	***112.47***	**134.8 ISO**
Heat Input (MMBtu/hr, Lower Heat Value)	100.84	100.99	101.84	***101.22***	
Ambient Conditions					
Atmospheric Pressure ("Hg)	29.69	29.69	29.68	***29.69***	
Temperature (°F): Dry bulb	88.0	86.7	83.8	***86.2***	
(°F): Wet bulb	74.3	74.3	75.1	***74.5***	
Humidity (lbs moisture/lb of air)	0.0147	0.0151	0.0164	***0.0154***	
Measured Emissions					
NO_X (ppmv, dry basis)	14.70	14.64	14.76	***14.70***	
NO_X (ppmv, dry @ 15% O_2)	**17.0**	**17.0**	**17.2**	***17.1***	**25.0**
NO_X (ppmv @ 15% O_2, ISO Day)	18.3	18.5	19.2	***18.7***	
CO (ppmv, dry basis)	0.39	0.38	0.37	***0.38***	
CO (ppmv, dry @ 15% O_2)	**0.46**	**0.45**	**0.44**	***0.45***	**15.0**
O_2 (% volume, dry basis)	15.81	15.82	15.83	***15.82***	
CO_2 (% volume, dry basis)	2.98	2.98	2.99	***2.99***	
Visible Emissions (% opacity)	0	-	-	***0***	**10**
F_O (fuel factor, range = 1.600-1.836 for NG)	1.71	1.70	1.69	***1.70***	
Stack Volumetric Flow Rates					
via O_2 "F_d-factor" (SCFH, dry basis)	3.98E+06	3.99E+06	4.03E+06	***4.00E+06***	
via CO_2 "F_c-factor" (SCFH, dry basis)	3.85E+06	3.86E+06	3.88E+06	***3.86E+06***	
Calculated Emission Rates (via EPA Method 19)					
NO_X (lbs/hr)	**6.98**	**6.98**	**7.10**	***7.02***	**14.1**
***CO* (lbs/hr)**	**0.11**	**0.11**	**0.11**	***0.11***	**5.1**
SO_2 (lbs/hr, based on fuel flow and fuel sulfur)	**0.0534**	**0.054**	**0.054**	***0.054***	**3.7**

Testing by Cubix Corporation - Austin, Texas - Gainesville, Florida

Company: Florida Gas Transmission Company
Facility: Compressor Station No. 17
Location: near Silver Springs, Marion County, Florida
Source: GE Nuevo Pignone Model No. PGT-10B
Combustion Gas Turbine Compressor
Technicians: LJB, RPO

TABLE 4: Summary of Results
Unit 1706
Reduced Load Testing

Test Number	1706-C-1	1706-C-2	1706-C-3	1706-C-4	1706-C-5	1706-C-6	1706-C-7	1706-C-8	1706-C-9
Date	5/29/02	5/29/02	5/29/02	5/29/02	5/29/02	5/29/02	5/29/02	5/29/02	5/29/02
Start Time	10:22	11:21	11:50	12:43	13:12	13:42	14:12	14:42	15:11
Stop Time	11:12	11:41	12:10	13:03	13:32	14:02	14:32	15:02	15:31
Turbine/Compressor Operation		**Low Load**			**Mid-Low Load**			**Mid-High Load**	
Gas Producer Speed (NGP, rpm)	10427	10442	10444	10579	10574	10584	10708	10696	10699
Power Turbine Speed (NPT, rpm)	5979	5980	5979	6495	6498	6521	6806	6842	6872
Turbine Horsepower (Hp)	6,563	6,585	6,597	7,758	7,642	7,718	8,819	8,829	8,696
Turbine Capacity (Pignone Curve, bhp vs. T-1/NPT)	12,694	12,572	12,538	12,796	12,762	12,749	12,820	12,846	12,863
Percent Load (% of max HP at inlet temp and %NPT)	51.7%	52.4%	52.6%	60.6%	59.9%	60.5%	68.8%	68.7%	67.6%
Thermal Load (% load available, Pignone)	59.9%	59.9%	59.8%	66.2%	65.7%	66.0%	72.8%	72.4%	72.5%
Engine Compressor Discharge Pressure (96CD, psia)	170.7	169.6	169.4	180.1	179.1	179.4	190.7	189.9	190.1
Turbine Air Inlet Temperature (CT-1A, °F)	84.4	86.7	87.4	89.3	90.2	90.7	91.5	91.5	91.4
Air Inlet Duct Losses (combined, "H_2O)	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Power Turbine Inlet Temperature (TT-XD, °F)	878.2	882.6	883.0	910.6	909.4	912.1	938.6	938.0	938.8
Gas Pilot Valve Command (% open)	18.99	19.02	19.01	16.56	16.75	16.64	14.72	14.76	14.75
Gas Compressor Suction Pressure (psig)	699.0	696.6	694.3	653.8	649.5	643.6	626.4	619.8	614.2
Gas Compressor Suction Temperature (°F)	91.9	92.5	92.6	75.3	76.8	76.5	74.6	74.6	74.5
Gas Compressor Discharge Pressure (psig)	905.3	902.6	899.5	908.9	902.7	895.9	896.7	891.7	886.6
Gas Compressor Discharge Temperature (°F)	132.2	133.0	133.2	126.9	128.3	128.5	130.4	131.4	131.8
Compressor Flow (MMSCFD)	474.0	470.7	471.1	438.7	432.2	431.6	460.0	451.1	440.6
Turbine Fuel Data (Natural Gas)									
Fuel Heating Value (Btu/SCF, HHV)	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5
Fuel Specific Gravity	0.5838	0.5838	0.5838	0.5838	0.5838	0.5838	0.5838	0.5838	0.5838
O_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8641	8641	8641	8641	8641	8641	8641	8641	8641
CO_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1026	1026	1026	1026	1026	1026	1026	1026	1026
Total Sulfur in Fuel (ppm, weight basis)	5.52	5.52	5.52	5.52	5.52	5.52	5.52	5.52	5.52
Fuel Flow (MSCFH)	83.213	83.013	83.013	91.613	90.760	91.100	100.423	100.090	99.943
Heat Input (MMBtu/hr, Higher Heat Value)	86.00	85.80	85.80	94.68	93.80	94.15	103.79	103.44	103.29
Heat Input (MMBtu/hr, Lower Heat Value)	77.40	77.22	77.22	85.22	84.42	84.74	93.41	93.10	92.96
Ambient Conditions									
Atmospheric Pressure ("Hg)	29.76	29.76	29.76	29.76	29.75	29.74	29.73	29.72	29.71
Temperature (°F): Dry bulb	82.4	84.2	85.4	89.1	87.3	92.0	91.0	89.2	90.8
(°F): Wet bulb	73.3	73.0	74.6	75.0	74.2	75.7	75.0	74.5	75.0
Humidity (lbs moisture/lb of air)	0.0152	0.0146	0.0156	0.0151	0.0148	0.0150	0.0146	0.0146	0.0147
Cubix Measurements									
NO_x (ppmv, dry basis)	14.03	14.07	14.08	14.55	14.51	14.67	16.07	16.07	16.31
CO (ppmv, dry basis)	1.82	1.60	1.55	0.44	0.48	0.44	0.48	0.40	0.42
O_2 (% volume, dry basis)	16.52	16.50	16.50	16.28	16.28	16.35	16.00	16.04	16.01
CO_2 (% volume, dry basis)	2.60	2.60	2.60	2.74	2.73	2.75	2.89	2.88	2.89
F_0 (fuel factor, range = 1.600-1.836 for NG)	1.69	1.69	1.69	1.69	1.69	1.66	1.70	1.69	1.69
Stack Volumetric Flow Rates									
via O_2 "F_c-factor" (SCFH, dry basis)	3.55E+06	3.52E+06	3.52E+06	3.70E+06	3.66E+06	3.73E+06	3.83E+06	3.85E+06	3.82E+06
via CO_2 "F_c-factor" (SCFH, dry basis)	3.40E+06	3.38E+06	3.38E+06	3.54E+06	3.52E+06	3.52E+06	3.69E+06	3.69E+06	3.67E+06
Cubix Calculated Values									
NO_x (ppmv, dry @ 15% O_2)	**18.9**	**18.9**	**18.9**	**18.6**	**18.5**	**19.0**	**19.4**	**19.5**	**19.7**
NO_x (ppmv @ 15% O_2, ISO Day)	20.9	20.4	20.8	20.1	20.0	20.5	20.7	20.9	21.1
CO (ppmv, dry @ 15% O_2)	2.45	2.15	2.07	0.57	0.62	0.58	0.58	0.48	0.51
NO_x (lbs/hr)	5.94	5.92	5.92	6.42	6.35	6.54	7.35	7.38	7.43
CO (lbs/hr)	0.469	0.410	0.396	0.12	0.13	0.12	0.13	0.11	0.12

Engine 1706 Test Dated 01/17/03

Table 3
Summary of Results
Unit 1706

Company: Florida Gas Transmission Company
Facility: Compressor Station No. 17
Location: Silver Springs, Florida
Source: GE Nuovo Pignone Model No. PGT-10B
Combustion Gas Turbine Compressor
Technicians: RPO, JTH

Test Number	**1706-C-1**	**1706-C-2**	**1706-C-3**		
Date	1/17/03	1/17/03	1/17/03		
Start Time	8:00	9:23	10:42		**FDEP**
Stop Time	9:00	10:23	11:42		**Permit**
Turbine/Compressor Operation		**Full Load**		***Averages***	**Limits**
Gas Producer Speed (NGP, %)	10,998	11,000	10,999	***10,999***	
Power Turbine Speed (NPT, %)	7,186	7,236	7,275	***7,232***	
Turbine Load (compressor shaft power, bhp)	13,281	13,598	13,586	***13488***	**15,700 ISO**
Turbine Capacity (as Horsepower Output)	14,828	14,984	15,122	***14,978***	
Percent Load (% of maximum at T-1 and %NPT)	89.6%	90.7%	89.8%	***90.1%***	
Engine Compressor Discharge Pressure (96CD, psia)	229.0	230.4	230.2	***229.9***	
Turbine Air Inlet Temperature (CT-1A, °F)	54.2	52.3	51.0	***52.5***	
Air Inlet Duct Losses (combined, "H_2O)	0.83	0.83	0.83	***0.83***	
Power Turbine Inlet Temperature (TT-XD, °F)	917.9	915.7	914.8	***916.1***	
Gas Pilot Valve Command (% open)	13.00	13.00	13.00	***13.00***	
Gas Compressor Suction Pressure (psig)	629.0	621.2	614.6	***621.6***	
Gas Compressor Suction Temperature (°F)	56.2	56.2	56.2	***56.2***	
Gas Compressor Discharge Pressure (psig)	929.2	920.5	913.2	***921.0***	
Gas Compressor Discharge Temperature (°F)	115.7	116.0	116.5	***116.0***	
Compressor Flow (MMSCFD)	637.8	647.3	644.7	***643.3***	
Turbine Fuel Data (Natural Gas)					
Fuel Heating Value (Btu/SCF, HHV)	1038.7	1038.7	1038.7	***1038.7***	
Fuel Specific Gravity	0.5895	0.5895	0.5895	***0.5895***	
O_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8645	8645	8645	***8645***	
CO_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1029	1029	1029	***1029***	
Total Sulfur in Fuel (grains S/per 100SCF of NG)	0.261	0.261	0.261	***0.261***	**10**
Fuel Flow (SCFH)	124,094	124,944	125,525	***124,854***	
Heat Input (MMBtu/hr, Higher Heat Value)	128.90	129.78	130.38	***129.69***	**134.8 ISO**
Heat Input (MMBtu/hr, Lower Heat Value)	116.01	116.80	117.35	***116.72***	
Ambient Conditions					
Atmospheric Pressure ("Hg)	29.95	29.98	30.05	***29.99***	
Temperature (°F): Dry bulb	50.6	50.7	48.8	***50.0***	
(°F): Wet bulb	49.9	45.3	43.0	***46.1***	
Humidity (lbs moisture/lb of air)	0.0073	0.0051	0.0044	***0.0056***	
Measured Emissions					
NO_X (ppmv, dry basis)	12.47	13.14	13.79	***13.13***	
NO_X (ppmv, dry @ 15% O_2)	**14.6**	**15.3**	**16.0**	***15.3***	**25.0**
NO_X (ppmv @ 15% O_2, ISO Day)	15.1	15.2	15.8	***15.4***	
CO (ppmv, dry basis)	0.80	0.69	0.70	***0.73***	
CO (ppmv, dry @ 15% O_2)	**0.94**	**0.80**	**0.82**	***0.85***	**15.0**
O_2 (% volume, dry basis)	15.86	15.83	15.82	***15.84***	
CO_2 (% volume, dry basis)	3.00	3.00	2.99	***3.00***	
Visible Emissions (% opacity)	-	0	-	***0***	**10**
F_O (fuel factor, range = 1.600-1.836 for NG)	1.68	1.69	1.70	***1.69***	
Stack Volumetric Flow Rates					
via O_2 "F_d-factor" (SCFH, dry basis)	4.71E+06	4.71E+06	4.72E+06	***4.71E+06***	
via CO_2 "F_c-factor" (SCFH, dry basis)	4.51E+06	4.53E+06	4.56E+06	***4.53E+06***	
Calculated Emission Rates (via EPA Method 19)					
NO_X (lbs/hr)	**7.01**	**7.39**	**7.77**	***7.39***	**14.1**
CO (lbs/hr)	**0.274**	**0.23**	**0.241**	***0.250***	**5.1**
SO_2 (lbs/hr, based on fuel flow and fuel sulfur)	**0.0925**	**0.0931**	**0.0935**	***0.0930***	**3.7**

Testing by Cubix Corporation - Austin, Texas - Gainesville, Florida

Engine 1706 Test Dated 06/10/03

Table 3: Summary of Results
Unit 1706
Full Load Testing

Company: Florida Gas Transmission Company
Facility: Compressor Station No. 17
Location: Silver Springs, Marion County, Florida
Source: GE Nuevo Pignone Model No. PGT-10B Combustion Gas Turbine Compressor
Technicians: LJB, RPO, JTH

Test Number	1706-C-10	1706-C-11	1706-C-12		
Date	6/10/03	6/10/03	6/10/03		
Start Time	16:34	17:48	19:01		FDEP Permit
Stop Time	17:34	18:48	20:01		
Turbine/Compressor Operation		**Full Load**		***Averages***	**Limits**
Gas Producer Speed (NGP, rpm)	11,001	10,998	10,999	***10,999***	
Power Turbine Speed (NPT, rpm)	7,200	7,314	7,387	***7,300***	
Compressor Shaft Power (Turbine Horsepower, bhp)	12,066	12,185	12,170	***12,140***	**15,700 ISO**
Turbine Capacity (Calculated, bhp @ ambient conditions)	12,057	12,167	12,207	***12,144***	
Percent Load (% of turbine capacity @ ambient conditions)	100.1%	100.1%	99.7%	***100.0%***	
Engine Compressor Discharge Pressure (96CD, psia)	203.3	203.7	204.3	***203.8***	
Turbine Air Inlet Temperature (CT-1A, °F)	94.6	93.1	92.2	***93.3***	
Air Inlet Duct Losses (combined, "H_2O)	1.98	1.98	1.98	***1.98***	
Power Turbine Inlet Temperature (TT-XD, °F)	951.8	949.7	948.2	***949.9***	
Inlet Guide Main Valve Command (% open)	94.12	94.12	94.12	***94.12***	
Gas Pilot Valve Command (% open)	13.79	13.78	13.77	***13.78***	
Gas Compressor Suction Pressure (psig)	602.8	586.0	571.8	***586.9***	
Gas Compressor Suction Temperature (°F)	74.8	74.8	74.8	***74.8***	
Gas Compressor Discharge Pressure (psig)	893.4	880.8	865.2	***879.8***	
Gas Compressor Discharge Temperature (°F)	137.5	139.9	141.1	***139.5***	
Compressor Flow (MMSCFD)	548.5	531.9	521.1	***533.8***	
Turbine Fuel Data (Natural Gas)					
Fuel Heating Value (Btu/SCF, HHV)	1058.3	1058.3	1058.3	***1058.3***	
Fuel Specific Gravity	0.6032	0.6032	0.6032	***0.6032***	
O_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8652	8652	8652	***8652***	
CO_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1036	1036	1036	***1036***	
Total Sulfur in Fuel (ppm, weight basis)	4.96	4.96	4.96	***4.96***	**8000**
Total Sulfur in Fuel (grains S/per 100SCF of NG)	0.160	0.160	0.160	***0.160***	**10**
Fuel Flow (MSCFH)	2693.115	2678.454	2715.356	***2695.641***	
Heat Input (MMBtu/hr, Higher Heat Value)	118.75	118.11	119.73	***118.87***	**134.8 ISO**
Ambient Conditions					
Atmospheric Pressure ("Hg)	29.89	29.89	29.89	***29.89***	
Temperature (°F): Dry bulb	90.6	88.3	86.8	***88.6***	
(°F): Wet bulb	77.2	76.7	75.4	***76.4***	
Humidity (lbs moisture/lb of air)	0.0166	0.0166	0.0158	***0.0163***	
Measured Emissions					
NO_X (ppmv, dry basis)	18.36	18.44	18.48	***18.43***	
NO_x (ppmv, dry @ 15% O_2)	**21.1**	**21.2**	**21.4**	***21.2***	**25.0**
NO_X (ppmv @ 15% O_2, ISO Day)	23.2	23.4	23.3	***23.3***	
CO (ppmv, dry basis)	1.78	1.35	2.84	***1.99***	
CO (ppmv, dry @ 15% O_2)	**2.04**	**1.54**	**3.29**	***2.29***	**15.0**
O_2 (% volume, dry basis)	15.77	15.76	15.80	***15.77***	
CO_2 (% volume, dry basis)	3.06	3.07	3.07	***3.07***	
Visible Emissions (% opacity)	0	-	-	***0***	**10**
F_o (fuel factor, range = 1.600-1.836 for NG)	1.68	1.67	1.66	***1.67***	
Stack Volumetric Flow Rates					
via O_2 "F_d-factor" (SCFH, dry basis)	4.26E+06	4.23E+06	4.32E+06	***4.27E+06***	
via CO_2 "F_c-factor" (SCFH, dry basis)	4.09E+06	4.06E+06	4.12E+06	***4.09E+06***	
Calculated Emission Rates (via EPA Method 19)					
NO_x (lbs/hr)	**9.34**	**9.31**	**9.53**	***9.39***	**14.1**
CO (lbs/hr)	**0.550**	**0.414**	**0.893**	***0.619***	**5.1**
SO_2 (lbs/hr, based on fuel flow and fuel sulfur)	**0.0513**	**0.0510**	**0.0517**	***0.0513***	**3.7**
NO_x (tons/yr)	**40.9**	**40.8**	**41.8**	***41.1***	**61.76**
CO (tons/yr)	**2.41**	**1.81**	**3.91**	***2.71***	**68.07**
SO_2 (tons/yr, based on fuel flow and fuel sulfur)	**0.22**	**0.22**	**0.23**	***0.22***	**16.21**

Testing by Cubix Corporation - Gainesville, Florida

Company: Florida Gas Transmission Company
Facility: Compressor Station No. 17
Location: near Silver Springs, Marion County, Florida
Source: GE Nuevo Pignone Model No. PGT-10B
Combustion Gas Turbine Compressor
Technicians: LJB, RPO, JTH

Table 4: Summary of Results
Unit 1706
Reduced Load Testing

Test Number	1706-C-1	1706-C-2	1706-C-3	1706-C-4	1706-C-5	1706-C-6	1706-C-7	1706-C-8	1706-C-9
Date	6/10/03	6/10/03	6/10/03	6/10/03	6/10/03	6/10/03	6/10/03	6/10/03	6/10/03
Start Time	10:10	11:14	11:49	12:53	13:27	14:02	14:36	15:09	15:42
Stop Time	11:00	11:34	12:09	13:13	13:47	14:22	14:56	15:29	16:02
Turbine/Compressor Operation		**Low Load**			**Mid-Low Load**			**Mid-High Load**	
Gas Producer Speed (NGP, rpm)	10,239	10,242	10,254	10,568	10,554	10,560	10,745	10,763	10,760
Power Turbine Speed (NPT, rpm)	4,995	4,994	4,996	5,984	6,082	6,147	6,588	6,652	6,669
Compressor Shaft Power (Turbine Horsepower, bhp)	5,942	5,832	5,771	8,018	8,153	8,140	10,026	10,094	10,113
Turbine Capacity (Calculated, bhp @ ambient conditions)	10,828	10,764	10,680	11,443	11,593	11,637	11,801	11,762	11,799
Percent Load (% of turbine capacity @ ambient conditions)	54.9%	54.2%	54.0%	70.1%	70.3%	69.9%	85.0%	85.8%	85.7%
Engine Compressor Discharge Pressure (96CD, psia)	150.9	149.9	149.1	171.5	172.1	172.6	189.5	189.4	190.0
Turbine Air Inlet Temperature (CT-1A, °F)	87.8	88.9	91.3	95.6	93.9	93.7	95.3	96.5	96.0
Air Inlet Duct Losses (combined, "H_2O)	2.81	2.81	2.81	2.81	2.81	2.53	2.53	2.35	2.07
Power Turbine Inlet Temperature (TT-XD, °F)	832.2	833.6	836.5	886.3	883.5	884.8	922.8	928.3	928.3
Inlet Guide Main Valve Command (% open)	65.75	65.14	64.59	80.74	80.91	81.31	91.47	91.61	91.73
Gas Pilot Valve Command (% open)	19.82	19.86	19.89	17.92	17.84	17.80	15.17	15.11	15.05
Gas Compressor Suction Pressure (psig)	797.7	793.0	785.3	691.3	681.0	671.7	650.0	642.0	638.7
Gas Compressor Suction Temperature (°F)	81.7	81.1	80.9	75.3	75.5	75.5	75.2	75.3	75.4
Gas Compressor Discharge Pressure (psig)	898.8	885.7	876.0	908.3	907.3	904.0	905.7	902.0	896.3
Gas Compressor Discharge Temperature (°F)	104.3	102.9	102.6	119.1	121.8	123.3	128.2	129.9	129.8
Compressor Flow (MMSCFD)	765.3	779.5	777.2	528.8	507.1	490.2	541.3	529.8	532.9
Turbine Fuel Data (Natural Gas)									
Fuel Heating Value (Btu/SCF, HHV)	1058.3	1058.3	1058.3	1058.3	1058.3	1058.3	1058.3	1058.3	1058.3
Fuel Specific Gravity	0.6032	0.6032	0.6032	0.6032	0.6032	0.6032	0.6032	0.6032	0.6032
O_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8652	8652	8652	8652	8652	8652	8652	8652	8652
CO_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1036	1036	1036	1036	1036	1036	1036	1036	1036
Total Sulfur in Fuel (grains S/per 100SCF of NG)	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160
Fuel Flow (MSCFD)	1664.98	1652.99	1621.68	2028.31	2068.45	2071.81	2381.73	2348.01	2324.78
Heat Input (MMBtu/hr, Higher Heat Value)	73.42	72.89	71.51	89.44	91.21	91.36	105.02	103.54	102.51
Ambient Conditions									
Atmospheric Pressure ("Hg)	29.95	29.96	29.96	29.95	29.93	29.92	29.91	29.91	29.89
Temperature (°F): Dry bulb	85.0	85.0	88.2	97.0	94.0	92.0	93.5	97.0	93.5
(°F): Wet bulb	75.8	75.8	76.8	78.8	78.0	77.8	77.0	79.0	75.0
Humidity (lbs moisture/lb of air)	0.0166	0.0166	0.0167	0.0164	0.0164	0.0167	0.0157	0.0166	0.0139
Measured Emissions									
NO_x (ppmv, dry basis)	14.14	14.32	14.44	15.82	15.87	16.06	18.17	18.32	18.77
CO (ppmv, dry basis)	5.84	5.65	4.01	4.56	4.17	3.76	1.02	0.97	0.90
O_2 (% volume, dry basis)	16.93	16.80	16.81	16.53	16.55	16.51	16.14	16.12	16.13
CO_2 (% volume, dry basis)	2.41	2.39	2.39	2.64	2.65	2.66	2.87	2.89	2.88
F_o (fuel factor, range = 1.600-1.836 for NG)	1.65	1.72	1.71	1.66	1.64	1.65	1.66	1.65	1.65
Stack Volumetric Flow Rates									
via O_2 "F_d-factor" (SCFH, dry basis)	3.40E+06	3.27E+06	3.22E+06	3.77E+06	3.86E+06	3.83E+06	4.06E+06	3.99E+06	3.95E+06
via CO_2 "F_c-factor" (SCFH, dry basis)	3.22E+06	3.21E+06	3.15E+06	3.57E+06	3.63E+06	3.62E+06	3.85E+06	3.78E+06	3.75E+06
Calculated Emission Rates									
NO_x (ppmv, dry @ 15% O_2)	**21.0**	**20.6**	**20.8**	**21.4**	**21.5**	**21.6**	**22.5**	**22.6**	**23.2**
NO_x (ppmv @ 15% O_2, ISO Day)	**23.5**	**23.0**	**23.2**	**23.4**	**23.6**	**23.9**	**24.3**	**24.8**	**24.2**
CO (ppmv, dry @ 15% O_2)	**8.67**	**8.13**	**5.79**	**6.16**	**5.65**	**5.06**	**1.27**	**1.20**	**1.11**
NO_x (lbs/hr)	**5.74**	**5.59**	**5.55**	**7.12**	**7.31**	**7.35**	**8.81**	**8.73**	**8.86**
CO (lbs/hr)	**1.44**	**1.34**	**0.940**	**1.25**	**1.17**	**1.05**	**0.302**	**0.283**	**0.257**
NO_x (tons/yr)	**25.2**	**24.5**	**24.3**	**31.2**	**32.0**	**32.2**	**38.6**	**38.2**	**38.8**
CO (tonys/yr)	**6.33**	**5.89**	**4.12**	**5.48**	**5.12**	**4.59**	**1.32**	**1.24**	**1.13**

Testing by Cubix Corporation - Gainesville, Florida

Attachment D

Emission Calculations

Engine No. 1706 EPN: 008

CO Emissions: (Based on Test Data)

lb CO/hr = 15.5

tons CO = (lb CO/hr)(hr/yr)(1 ton/2000 lb)
= (15.5 lb CO/hr)(8760 hr/yr)(1 ton/2000 lb)
= 68.07

VOC Emissions: (Based on Vendor Data)

lb VOC/hr = 1.5

tons VOC/yr = (lb VOC/hr)(hr/yr)(1 ton/2000 lb)
= (1.5 lb VOC/hr)(8760 hr/yr)(1 ton/2000 lb)
= 6.57

HAPs Emissions: (Based on AP-42 Table 3.1-3, 4/00)

lb HAP/hr = (lb HAP/MMBtu)(MMBtu/hr)
= (0.00102733 lb/MMBtu)(134.77 MMBtu/hr)
= 0.14

tons HAP/yr = (lb HAP/hr)(hr/yr)(1 ton/2000 lb)
= (0.14 lb PM/hr)(8760 hr/yr)(1 ton/2000 lb)
= 0.61

NOx Emissions: (Based on Vendor Data)

lb NOx/hr = 14.10

tons NOx/yr = (lb NOx/hr)(hr/yr)(1 ton/2000 lb)
= (14.10 lb NOx/hr)(8760 hr/yr)(1 ton/2000 lb)
= 61.76

SO2 Emissions: (Based on FERC Limits)

lb S/hr = (gr S/100 scf)(MMscf/hr)(1 lb/7000 gr)
= (10 gr S/100 scf)(0.1296 MMscf/hr)(1 lb/7000 gr)
= 1.85

lb SO2/hr = (lb S/hr)(2 lb SO2/lb S)
= (1.85 lb S/hr)(2 lb SO2/lb S)
= 3.70

tons SO2/yr = (lb SO2/hr)(hr/yr)(1 ton/2000 lb)
= (3.70 lb SO2/hr)(8760 hr/yr)(1 ton/2000 lb)
= 16.21

PM Emissions: (Based on AP-42 Table 3.1-2a, 4/00)

lb PM/hr = (lb PM / MMBtu)(MMBtu/hr)
= (0.0066 MMBtu/hr)(134.77 MMBtu/hr)
= 0.9

tons PM/yr = (lb PM/hr)(hr/yr)(1 ton/2000 lb)
= (0.9 lb PM/hr)(8760 hr/yr)(1 ton/2000 lb)
= 3.94

Turbine 1706 HAP Emission Factors

HAP	Turbine Factor lb/MMBtu
1,3-Butadiene	4.30E-07
Acetaldehyde	4.00E-05
Acrolein	6.40E-06
Benzene	1.20E-05
Ethylbenzene	3.20E-05
Formaldehyde	7.10E-04
Naphthalene	1.30E-06
PAH	2.20E-06
Propylene Oxide	2.90E-05
Toluene	1.30E-04
Xylenes	6.40E-05
Total Hazardous Cmpds	**1.027E-03**

Reference:

AP-42, 5th Edition, Supplement F, 04/00, Table 3.1-3

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1. Article Addressed to:

Mr. Richard Craig, V.P. of Southeastern Operations
Florida Gas Transmission Company
Post Office Box 4657
Houston, TX 77101-4657

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X [signature] ☐ Agent ☐ Addressee

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PROOF OF PUBLICATION

STAR-BANNER Published—Daily

OCALA, MARION COUNTY, FLORIDA

STATE OF FLORIDA,
COUNTY OF MARION

Before the undersigned authority personally appeared **Gloria Thomas** who on oath says that she is an authorized employee of the Star-Banner, a daily newspaper published at Ocala, in Marion County, Florida; that the attached copy of advertisement, being a notice in the matter of_

Ad #688266 LEGAL AD

_____in the_____ Court,

was published in said newspaper in the issues of_____

MARCH 30, 2005

Affiant further says that the said STAR-BANNER is a daily newspaper published at Ocala, in said Marion County, Florida, and that the said newspaper has heretofore been continuously published in said Marion County, Florida, daily, and has been entered as second class mail matter at the post office in Ocala, in said Marion County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Gloria Thomas

Sworn to and subscribed before me this 4TH day

of MAY A.D. 2005

CARRIE HAUGABROOK NOTARY PUBLIC STATE OF FLORIDA My Comm. Expires August 15, 2006 No. DD 142654

Carrie Haugabrook
Notary Public

Carrie Haugabrook
(Print, Type or Stamp Name of Notary Public)

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT
Florida Department of Environmental Protection
Draft Air Permit
No 0830070-005-AC
Florida Gas Transmission Company - Station 17
Marion County, Florida

Applicant: The applicant for this project is the Florida Gas Transmission Company. The applicant's authorized representive and mailing address is Mr. Rick Craig, V.P. of Southeastern Operations, P.O. Box 4657, Houston, TX 77210-4657.

Facility Location: Florida Gas Transmission Company operates existing natural gas compressor Station 17, which is located approximately 17 miles northeast of Silver Springs on County Highway 314 in Marion County, Florida.

Project: The applicant proposes the following air construction permit revisions: This permit is a revision to: change the CO emissions standard; change the expected equivalent maximum VOC emission rate; incorporate recent changes to NSPS Subpart GG regaurding the monitoring of the nitrogen and sulfur contents of pipeline natural gas; and include a provision for like-kind component replacements. The Department agrees that the requested revisions are minor in nature and do not trigger any new regulatory requirement. The permit will be issued as a revised air construction permit that supersedes the previous air construction permit.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to preform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority;s project review engineer for additional information at the address or phone number listed above. A copy of the complete project file is also available at the Air Resources Section of the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. The telephone number is 407/894-7555.

Notice of Intent to Issue Air Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of fourteen (14) days from the date of publication of this Public Notice. Written comments must be provided to the Permitting Authority at the above address. Any written comments filed will be made available for public inspection. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station. #35, Tallahassee, Florida 32399-3000. Petitions filed by any person other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name and address and telephone number of the petitioner; the name address and telephone number of the petitioner's representative, if any, which shall be the address, for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial rights will be affected by the agency determination; (c) A statement of how and when the petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or

modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petitin means that the Permitting Authority's final actoin may be different from the position taken by it in this Public Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available for this proceeding.

No. 688266 - March 30, 2005.

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1. Article Addressed to:

Mr. Richard Craig, V.P. of Southeastern Operations
Florida Gas Transmission Company
Post Office Box 4657
Houston, TX 77101-4657

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) NEHLY C. Date of Delivery MAR - 7 2005

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4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from service label)* 7000 1670 0013 3109 9519

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total	

Postmark Here

Sent To: Mr. Richard Craig, V.P. of Southeastern Operations
Street, Apt. No.; or PO Box No.: Florida Gas Transmission Company
City, State, ZIP+4: Post Office Box 4657
Houston, TX 77101-4657

PS Form 3800, May 2000 See Reverse for Instructions

7000 1670 0013 3109 9519