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 1188
Houston, TX 77251

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

Santa Rosa Compressor Station No. 12
Air Permit No. 1130037-008-AC
Air Permit Modification

Enclosed is Final Air Permit No. 1130037-008-AC, to change the CO emission rates and to remove certain load restrictions related to turbine No. 1208 (EU 010). The equipment is installed at Compressor Station No. 12, which is located north of Munson on Highway 191 approximately 5 miles north of Highway 4 in Santa Rosa County, Florida. As noted in the Intent to Issue, the permit changes will result in no CO emissions changes, and only slight VOC annual emission increases. 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 3/12/04 to the person(s) listed:

Mr. Rick Craig, FGT*
Mr. Jacob Krautsch, FGT
Mr. David Holmes Parham, P.E.
Mr. Duane Pierce, AQMcs, LLC
Ms. Sandra Veazey, NWD
Mr. Greg Worley, EPA Region 4.

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.

[signature] (Clerk) 3/12/04 (Date)

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

PERMITTEE:

Florida Gas Transmission Company
1400 Smith Street
Houston, TX 77002

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

Santa Rosa Compressor Station No. 12
Air Permit No. 1130037-008-AC
Facility ID No. 1130037
SIC No. 4922
Permit Expires: December 31, 2004

PROJECT AND LOCATION

This permit authorizes the construction of a new 15,700 bhp gas turbine compressor engine (No. 1208), the up-rating of an existing gas turbine compressor engine (No. 1207) to 13,000 bhp, and modification of two existing reciprocating internal combustion compressor engines (Nos. 1204 and 1205). The new equipment will be installed at Compressor Station No. 12, which is located north of Munson on Highway 191, approximately 5 miles north of Highway 4 in Santa Rosa County, Florida. The UTM coordinates are Zone 16, 510.8 km East, and 3419.0 km North.

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 is a modification of Permit No. 1130037-003-AC to revise the CO emission standard and specific load restrictions. It does not authorize new construction and the expiration date is extended simply to allow ample time for inclusion of the subject revisions into the Title V permit.

CONTENTS

Michael G. Cooke, Director
Division of Air Resources Management

3/11/04
(Date)

FACILITY AND PROJECT DESCRIPTION

The existing facility operates as a compressor station in Santa Rosa 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. 1208), up-rate existing gas turbine compressor engine (No. 1207) to 13,000 bhp, and modify two existing reciprocating internal combustion compressor engines (Nos. 1204 and 1205). After the project is complete, the facility will consist of the following emissions units.

ID	Emission Unit Description
004	**FGT No. 1204**: One modified 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. 1205**: One modified 2000 bhp natural gas-fired reciprocating internal combustion engine (Cooper-Bessemer Model No. LS-8-SG) was installed as a compressor engine 1968.
006	**FGT No. 1206**: One 4100 bhp natural gas-fired reciprocating internal combustion engine (Dresser-Rand Model No. TVC-10) was installed as a compressor engine in 1991.
007	**FGT Nos. 1201 to 1203**: Three 2000 bhp natural gas-fired reciprocating internal combustion engines (Cooper-Bessemer Model No. LS-8-SG) were installed as compressor engines in 1958.
008	**FGT No. 1207**: One 13,000 bhp gas turbine (Solar Model No. Mars 90-T-13000S) was originally installed as a compressor engine in January 2001 and up-rated later in 2001.
009	**Miscellaneous Unregulated Emissions Units**
010	**FGT No. 1208**: A new 15,700 bhp gas turbine (Nuovo Pignone Model No. PGT-10B) to be installed as a compressor engine in 2001.

{Note: Emissions units 001, 002, and 003 are "inactive".}

REGULATORY CLASSIFICATION

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

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

Title V: Because potential emissions of at least one regulated pollutant exceed 100 tons per year, the facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

PSD: The project is located in an area designated as "attainment" or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. Potential emissions of at least one regulated pollutant exceed 250 tons per year. Therefore, the facility is classified as a major source of air pollution with respect to Rule 62-212.400, F.A.C, the Prevention of Significant Deterioration (PSD) of Air Quality. Because potential emissions from this project do not exceed the PSD Significant Emissions Rates (Table 62-212.400-2), the project is not subject to the PSD preconstruction review requirements.

NSPS: The new gas turbine and the existing gas turbine are subject to the New Source Performance Standards of 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.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct or modify emissions units regulated by this permit 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 permits to operate an emissions unit shall be submitted to the Department's Northwest District Office at 160 Governmental Center, Pensacola, Florida 32501-5794 and phone number 850/595-8364.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department's Northwest District Office at 160 Governmental Center, Pensacola, Florida 32501-5794 and phone number 850/595-8364.

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. EU-004 and 005: FGT Nos. 1204 and 1205, Modified Reciprocating Compressor Engines

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

Emissions Unit No. 004 and 005 (FGT Nos. 1204 and 1205) Modified Reciprocating Compressor Engines
Description: Each modified reciprocating internal combustion engine is a Cooper-Bessemer Model No. LS-8-SG that is used as a compressor engine for the natural gas pipeline. Engine No. 1204 was installed in 1966 and Engine No. 1205 was installed in 1968. *Fuel*: Each engine fires pipeline-quality natural gas (SCC No 2-02-002-54). The maximum natural gas firing rate is 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 engines are intended to operate at or near capacity. *Controls*: The efficient combustion of pipeline-quality natural gas at high temperatures minimizes emissions of PM/PM_{10}, SO_2, and VOC. A catalytic converter reduces emissions of CO 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 engines were 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 project to be minor with respect PSD. Therefore, the control systems, 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 for each 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 each 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 engines shall fire only pipeline-quality natural gas with a maximum of 10 grains of sulfur per 100 standard cubic feet of natural gas. The custom fuel monitoring plan for the gas turbine (FGT Unit No. 1208) shall serve as the compliance demonstration for the fuel sulfur limit. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]
4. Restricted Operation: The hours of operation of each 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. EU-004 and 005: FGT Nos. 1204 and 1205, Modified Reciprocating Compressor Engines

EMISSIONS STANDARDS

5. Emissions Standards: Emissions from each 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]	0.8 gram/bhp-hour	3.5	15.5	Avoid Rule 62-212.400, F.A.C.
NOx [b]	5.4 gram/bhp-hour	23.8	104.3	Avoid Rule 62-212.400, F.A.C.
SO_2 [c]	10 grains of sulfur per 100 SCF of gas	0.5	2.0	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	0.7	Avoid Rule 62-212.400, F.A.C.
VOC [e]	Good combustion practices (Factor: 0.1 gram/bhp-hour)	0.4	1.9	Avoid Rule 62-212.400, F.A.C.

a. The CO standard is based on a 3-hour test average as determined by EPA Method 10.

b. The NOx standard is based on a 3-hour test average 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 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. Equivalent maximum PM emissions are based on data in Table 3.2-2 of AP-42. Equivalent maximum VOC emissions are based on test data. No testing required.

f. Equivalent maximum emissions are based on the maximum expected emissions (or the emissions standard) at permitted capacity and 8760 hours of operation per year.

g. The emissions standards of this permit ensure that the project does not trigger the PSD preconstruction review requirements of Rule 62-212.400, F.A.C.

EMISSIONS PERFORMANCE TESTING

6. Initial Compliance Tests: Each modified reciprocating compressor engine shall be tested to demonstrate initial compliance with the emissions standards for CO, NOx, and visible emissions. 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), each modified reciprocating compressor engine shall be tested to demonstrate compliance with the emissions standards for NOx and visible emissions. 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. Tests Prior to Renewal: Within the 12-month period prior to expiration of the operation permit, each modified reciprocating compressor engine shall be tested to demonstrate compliance with the emission standards for CO, NOx, and visible emissions. 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)3, F.A.C.]

9. 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.]

10. 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 administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

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. For each test run, the report shall also indicate the natural gas firing rate (cubic feet per hour), heat input rate (mmBTU per hour), and the power output (bhp). [Rule 62-297.310(8), F.A.C.]

12. 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 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. EU-008: FGT No. 1207, Up-Rated Gas Turbine Compressor Engine

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

Emissions Unit No. 008 (FGT No. 1207): Up-Rated Gas Turbine Compressor Engine
Description: The up-rated 13,000 bhp gas turbine is a Solar Model No. Mars 90-T-13000S that is used as a compressor engine for the natural gas pipeline. Engine No. 1207 was originally installed in January of 2001.
Fuel: The gas turbine fires pipeline-quality natural gas (SCC No 2-02-002-01). The maximum natural gas firing rate is approximately 108,470 cubic feet per hour based on a heat content of 1040 BTU per SCF of gas.
Capacity: At 112.8 mmBTU per hour of heat input, the gas turbine produces approximately 13,000 bhp. After initial startup, the gas turbine 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. NOx emissions are reduced with dry low-NOx combustion technology.
Stack Parameters: When operating at capacity, exhaust gases exit a rectangular stack (7.5 feet by 8 feet) that is 58 feet tall with a flow rate of approximately 179,500 acfm at 870° F.

{Permitting Note: The existing natural gas compressor station is a major source with respect to the PSD preconstruction review program. The project includes up-rating the existing gas turbine (FGT No. 1207) installed in January of 2001. As such, it is part of the netting analysis that shows the project to be minor with respect to PSD. Therefore, the control systems, 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.}

APPLICABLE STANDARDS AND REGULATIONS

1. NSPS Requirements: The 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, 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. Up-Rated Gas Turbine (FGT No. 1207): The permittee is authorized to up-rate the recently installed Solar Model No. Mars 90-T-13000S gas turbine from 10,350 bhp to 13,000 bhp. The permittee shall tune, operate and maintain the gas turbine's dry low-NOx combustion system to reduce emissions of nitrogen oxides below the permitted limits. Ancillary equipment includes the automated Solar Turbotronic gas turbine control system, an inlet air filtration system, and a rectangular stack (7.5 feet by 8.0 feet) that is 58 feet tall. [Applicant Request]

PERFORMANCE RESTRICTIONS

3. Permitted Capacities: The maximum heat input rate to the gas turbine shall not exceed 112.8 mmBTU per hour while producing approximately 13,078 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. For the gas turbine, 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 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.] *{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 105% of the test load, if applicable), to establish appropriate emissions limits, and to aid in determining future rule applicability.}

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 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 62-4.070(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]
		lb/hour	TPY	
CO [a]	50.0 ppmvd @ 15% O_2	12.4	54.5	Avoid Rule 62-212.400, F.A.C.
NOx [b]	25.0 ppmvd @ 15% O_2	10.2	44.7	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
SO_2 [c]	10.0 grains of sulfur per 100 SCF of gas	3.1	13.6	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
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)	0.7	3.3	Avoid Rule 62-212.400, F.A.C.
VOC [e]	Good combustion practices (Factor: 2.5 ppmvd @ 15% O_2)	0.4	1.6	Avoid Rule 62-212.400, F.A.C.

a. The CO standard is based on a 3-hour test average as determined by EPA Method 10.

b. The NOx standards is based a 3-hour test average 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. Equivalent maximum PM emissions are based on vendor data. Equivalent maximum VOC emissions were conservatively assumed to be 10% of the vendor's data for total unburned hydrocarbon. No testing required.

f. Equivalent maximum emissions are based on the maximum expected emissions, permitted capacity, a compressor inlet air temperature of 59° F, and 8760 hours of operation per year. For comparison purposes, the permittee shall provide a reference table with the initial compliance test report of mass

emission rates versus the compressor inlet temperatures. 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 tests conducted at 59° F or greater, measured 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 emissions standards of this permit ensure that the project does not trigger the PSD preconstruction review requirements of Rule 62-212.400, F.A.C.

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 visible emissions. 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 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 NOx performance tests shall consist of three, 20-minute test runs. The peak load NOx performance test shall consist of three, 1-hour test runs. The CO performance tests shall be conducted concurrently with the NOx performance tests at peak load. 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 visible emissions. 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 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]

10. 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 administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

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 inlet compressor 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. [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 operation for the gas turbine. 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 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.]

C. EU-010: FGT No. 1208, New Gas Turbine Compressor Engine

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

Emissions Unit No. 010 (FGT No. 1208): 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 pipeline-quality natural gas (SCC No 2-02-002-01). The maximum natural gas firing rate is 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. 1208) 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, 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, 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. 1208): 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. 1208. [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.] *{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 105% of the test load, if applicable), to establish appropriate emissions limits, and to aid in determining future rule applicability.}

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% base load is prohibited. ~~Operation between 50% and 90% of base load shall not exceed 2190 hours during any consecutive 12 months. Of this authorized low-load operation, operation between 50% and 70% of base load shall not exceed 438 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	Standard	lb/hour	TPY	
CO [a]	~~90-100%~~	~~15.0 ppmvd @ 15% O2~~	~~5.1~~	30.8	Avoid Rule 62-212.400, F.A.C.
	~~70-90%~~	~~30.0 ppmvd @ 15% O2~~	~~10.2~~		
	50-~~70~~100%	~~75.0~~ 21.0 ppmvd @ 15% O2	~~22.5~~ 7.03		
NOx [b]	50-100%	25.0 ppmvd @ 15% O2	14.1	61.8	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	16.2	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	3.9	Avoid Rule 62-212.400, F.A.C.
VOC [e]	~~90-100%~~	~~Good combustion practices~~	~~0.3~~	~~2.0~~	Avoid Rule 62-212.400, F.A.C.
	~~70-90%~~	~~Good combustion practices~~	~~0.8~~	6.6	
	50-~~70~~100%	Good combustion practices	1.5		

a. The CO standards are based on 3-hour test average as determined by EPA Method 10. Annual CO emissions were based on emissions standards and restricted hours of operation.

b. The NOx standards are based on a 3-hour test average 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. Equivalent maximum PM emissions are based on data in Table 3.1-2a in AP-42. Equivalent maximum VOC emissions are based on vendor data. Annual VOC emissions were based on the vendor data and restricted hours of operation. No testing required.

f. Equivalent maximum hourly emissions are the maximum expected emissions based on permitted capacity and a compressor inlet air temperature of 59° F. For comparison purposes, the permittee shall provide a reference table with the initial compliance test report of mass emission rates versus the compressor inlet temperatures. 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 tests conducted at 59° F or greater, measured 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. Equivalent maximum annual emissions are based on 8760 hours of operation per year.

h. The emissions standards of this permit ensure that the project does not trigger the PSD preconstruction review requirements of Rule 62-212.400, F.A.C.

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 visible emissions. 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] {Permitting Note: This permit modification does not impose any new, additional testing.}

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 visible emissions. 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 administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C. [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 inlet compressor 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. [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 each of the following load ranges: 50% to 70% load, 70% 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; and hours of gas turbine operation ~~between 50% to 70% load; hours of gas turbine operation between 70% 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.]

D. EU-009: Miscellaneous Unregulated Emissions Units

This permit recognizes the following unregulated emissions units.

Emissions Unit No. 009: Miscellaneous Unregulated Emissions Units	
004	Support equipment includes: • One Caterpillar Model 3412 emergency generator (637 bhp) fired exclusively with natural gas and identified by the permittee as "GEN03"; • One 1 mmBTU/hour air compressor engine fired exclusively with natural gas and identified by permittee as "Air Compressor No. 1"; • Lube oil storage tanks; • Used oil storage tanks; • Blowdown stacks; and • Miscellaneous fugitive emission leaks from valves, flanges, etc.

The emergency generator and air compressor engine are exempt from air pollution 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.

21. One or more heating units, general purpose internal combustion engines, or other combustion devices, all of which are located within a single facility, are not listed elsewhere in Rule 62-210.300(3)(a), F.A.C., and are not pollution control devices, provided:

    a. None of the heating units, general purpose internal combustion engines, or other combustion devices that would be exempted is subject to the Federal Acid Rain Program;

    b. Total fuel consumption by all such heating units, general purpose internal combustion engines, and other combustion devices that would be exempted 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; and

    c. Fuel for the heating units, general purpose internal combustion engines, and other combustion devices that would be exempted is limited to natural gas, diesel fuel, gasoline and propane.

Memorandum

Florida Department of
Environmental Protection

TO: Mike Cooke

THRU: Trina Vielhauer
Jim Pennington

FROM: Mike Halpin

DATE: March 10, 2004

SUBJECT: Final Air Construction Permit No. 1130037-008-AC
Florida Gas Transmission Company
Santa Rosa Compressor Station No. 12
Permit Modifications

Attached for approval and signature is a construction permit modification for FGT's Compressor Station No. 12 located in Santa Rosa County. The permit modification is to revise the CO emission rates and remove certain operating restrictions in the low and middle load ranges. The changes will not cause any increases in CO, although an incidental increase in VOC emissions may occur (< 5TPY) as a result (only) of the load limitation removal. The permit is issued without a BACT Review since the permit revision does not cross any PSD pollutant thresholds.

The applicant published the "Public Notice of Intent to Issue" in Pensacola News Journal on February 19, 2004. No comments were received beyond a single request from FGT. FGT had asked that a fairly standard permitting note be included within Specific Condition No. 3 of EU-008 and EU-010. The requested permitting note (concerning the Department's basis for including heat input values within permits) was included as requested.

I recommend your approval of the attached Final Permit for this project.

Attachments

mph

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. Rick Craig
Florida Gas Transmission Company
Post Office Box 1188
Houston, TX 77251

COMPLETE THIS SECTION ON DELIVERY

A. Signature
x [signature] ☑ Agent ☐ Addressee

B. Received by (Printed Name) E.O. Rice C. Date of Delivery 03/15/04

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 2870 0000 7028 3703

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)

7000 2870 0000 7028 3901

OFFICIAL USE

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Sent To: Florida Gas Transmission Co.
Street, Apt. No.; or PO Box No.: P O Box 1188
City, State, ZIP+4: Houston TX - 77251

PS Form 3800, May 2000 See Reverse for Instructions

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7000 2870 0000 7028 3703

OFFICIAL USE

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Sent To: MR. Rick Craig, TGT
Street, Apt. No.; or PO Box No.: P. O. Box 1188
City, State, ZIP+4: Houston TX - 77251

PS Form 3800, May 2000 See Reverse for Instructions

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:

Florida Gas Transmission Company
Post Office Box 1188
Houston, TX 77251

COMPLETE THIS SECTION ON DELIVERY

A. Signature
x [signature] ☑ Agent ☐ Addressee

B. Received by (Printed Name) E.O. Rice C. Date of Delivery 03/15/04

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 2870 0000 7028 3901

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

Florida Gas Transmission Company

1967 Commonwealth Lane, Tallahassee, FL 32303, (850) 350-5000, Fax Downstairs (850) 350-5001

February 26, 2004 UPS Overnight – 1Z F62 059 22 1004 396 4

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

Re: Florida Gas Transmission Company, Draft Air Permit No. 1130037-008-AC
Compressor Station No. 12 Munson

Dear Mr. Mike Halpin

Florida Gas Transmission (FGT) requests that the following permitting note be included with Emission Units No. 008 and 010's Specific Condition (3) Permitted Capacities: 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 the 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.

Included with this letter is another Florida Gas Transmission permit that includes this permitting note. If you have any questions, please call me at (850) 350-5042.

Sincerely,

Jacob S. Krautsch
Environmental Specialist

Attachment

Cc: C/S 12
Duane Pierce
Tallahassee File
Envision Env. 3.1.20

PERFORMANCE RESTRICTIONS

5. Permitted Capacities

   a. *Engine 2401*: The maximum heat input rate to the gas turbine is 113 MMBtu per hour while producing approximately 13,000 bhp (ISO) based on a turbine inlet air temperature of 59° F, 100% load, and a heating value (HHV) of 1040 Btu/scf of natural gas.

   b. *Engine 2402*: The maximum heat input rate to the gas turbine is 63 MMBtu per hour while producing approximately 7222 bhp (ISO) based on a turbine inlet air temperature of 59° F, 100% load, and a heating value (HHV) of 1040 Btu per scf of 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 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.] *{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 105% of the test load, if applicable); to establish appropriate emissions limits, and to aid in determining future rule applicability.}*

6. Authorized Fuel: Each gas turbine shall fire only 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.]

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

EMISSIONS STANDARDS

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

Pollutant	Standards Engines 2401 and 2402	Equivalent Maximum Emissions [f]				Rule Basis [g]
		Engine 2401		Engine 2402		
		lb/hour	TPY	lb/hour	TPY	
CO [a]	50.0 ppmvd @ 15% O_2	12.3	54	7.0	31	Rule 62-4.070(3), F.A.C.
NOx [b]	25.0 ppmvd @ 15% O_2	10.1	44	5.7	25	Rule 62-4.070(3), F.A.C. 40 CFR 60.332
SO_2 [c]	10 grains of sulfur/100 scf	3.1	14	1.7	8	Rule 62-4.070(3), F.A.C. 40 CFR 60.333
Opacity [d]	10% opacity, 6-minute average	Not Applicable				Rule 62-4.070(3), F.A.C.
PM [e]	Lean premix combustion design	0.7	3	0.4	2	Rule 62-4.070(3), F.A.C.
VOC [e]	Lean premix combustion design	0.4	2	1.5	7	Rule 62-4.070(3), F.A.C.

   a. The CO standards are based on the average of three test runs as determined by EPA Method 10.

   b. The NOx standards are based on the average of three test runs 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.

Florida Gas Transmission Company

1967 Commonwealth Lane, Tallahassee, FL 32303, (850) 350-5000, Fax Downstairs (850) 350-5001

February 26, 2004 UPS Overnight – 1Z F62 059 22 1004 396 4

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

Re: Proof of publication – Intent to Issue Construction Permit
Florida Gas Transmission Company, Draft Air Permit No. 1130037-008-AC
Compressor Station No. 12 Munson

Dear Mr. Mike Halpin

Please find enclosed the proof of publication for the above referenced facility. The public notice ran on February 19, 2004 in the Pensacola News Journal.

If you have any questions, please call me at (850) 350-5042.

Sincerely,

Jacob S. Krautsch
Environmental Specialist

Cc: C/S 12
Duane Pierce
Tallahassee File
Envision Env. 3.1.20

PENSACOLA
News Journal
Informed. In Tune. In Touch.

Published Daily-Pensacola, Escambia County, FL

STATE OF FLORIDA
County of Escambia

Before the undersigned authority, personally appeared **NIKKI WINDHAM** who is personally known to me and who on oath says that he/she is a representative of The Pensacola News Journal, a daily newspaper published in Pensacola in Escambia County, Florida; that the attached copy of advertisement, being a legal in the matter of **PUBLIC NOTICE OF INTENT** said newspaper in the issues **FEBRUARY 19, 2004.** Affidavit further says that the said Pensacola News Journal is a newspaper published in Pensacola, in said Escambia County, Florida, and that the said newspaper has heretofore been continuously published in said Escambia County, Florida each day and has been entered as second class mail matter at the post office in Pensacola, in said Escambia County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and Affidavit further says that he/she 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.

Sworn to and subscribed before me this **19TH DAY OF FEBRUARY A.D., 2004.**

Bereth Ferguson
Notary Public

RECEIVED
FEB 27 2004
BUREAU OF AIR REGULATION

BERETH FERGUSON
"Notary Public-State of FL"
My Comm. Expires OCT. 10, 2005
Comm. No. DD048662

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Draft Air Permit No. 1130037-008-AC
Florida Gas Transmission Company
Santa Rosa Compressor Station No. 12

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification to the Florida Gas Transmission Company Department to modify the permit to change the Carbon Monoxide (CO) and Volatile Organic Compounds (VOC) emission rates and to remove certain load restrictions related to turbine no. 1208 (EU 010). The equipment is installed at existing Compressor Station No. 12, which is located north of Munson on Highway 191 approximately 5 miles north of Highway 4 in Santa Rosa County, Florida. The applicant's authorized representative is Mr. Rick Craig, Vice President Southeastern Operations. The applicant's mailing address is Florida Gas Transmission Company, p. o. Box 1188, Houston, TX 77251.

The originally permitted limits for turbine no. 1208 and the related restrictions were set based upon information provided by the turbine manufacturer. During years 2002 and 2003, FGT conducted testing which showed the emission rates of CO to be much lower than originally permitted. Based upon this test data, FGT seeks to decrease such emission rates and related load restrictions. As a result of this request, there will be no increase in the annual emissions of CO, nor any other permitted air pollutant except for VOC's. An incidental increase in VOC emissions (4.6 TPY) will occur as an effect of the removal of the load restrictions.

Because potential emissions of at least one regulated pollutant exceed 250 tons per year, the existing facility is classified as a major source of air pollution with respect to Rule 62-212.400, F.A.C, the Prevention of Significant Deterioration (PSD) of Air Quality. The existing station is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to a National Ambient Air Quality Standard (NAAOS). This project is not subject to PSD preconstruction review because the net emissions increases are less than each of the corresponding PSD significant emissions rates.

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. 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 public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication0. 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 Department'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 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 indicate; (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 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 Department'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 Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
(111 S. Magnolia Drive, Suite 4)
2600 Blair Stone Road, MS #5505
Tall+ahassee, Florida, 32399-2400
Telephone: 850/488-0114
Fax: 850/922-6979

Department of Environmental Protection
Northwest District Office
Air Resources Section
160 Governmental Center
Pensacola, FL 32501-5794
Telephone: 850/595-8300
Fax: 850/595-4417

The complete project file includes the application, Technical Evaluation and Prelimnary Determination, Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Department's reviewing engineer for this project for additional information at the address and phone numbers listed above.

Legal No. 66158 1T February 19, 2004

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

January 23, 2004

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Rick Craig, V.P. Southeastern Operations
Florida Gas Transmission Company
P. O. Box 1188
Houston, TX 77251

Re: Draft Air Permit Modification No. 1130037-008-AC
Santa Rosa Compressor Station No. 12

Dear Mr. Craig:

Enclosed is one copy of the draft air permit modification to change the CO emission rates and to remove certain load restrictions related to turbine No. 1208 (EU 010). The equipment is installed at Compressor Station No. 12, which is located north of Munson on Highway 191 approximately 5 miles north of Highway 4 in Santa Rosa County, Florida. The permit changes will result in no CO emissions changes, and only slight VOC annual emission increases. The Department's "Technical Evaluation and Preliminary Determination", "Intent to Issue Permit Modification", and the "Public Notice of Intent to Issue Permit Modification" are included.

The "Public Notice of Intent to Issue Permit Modification" must be published one time only, as soon as possible, in the legal advertisement section of a newspaper of general circulation in the area affected, pursuant to the requirements Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to J. K. Pennington, Administrator of the North Permitting Section, at the above letterhead address. If you have any other questions, please contact Mike Halpin at 850/921-9519.

Sincerely,

T. Vielhauer, Chief
Bureau of Air Regulation

TV/mph

Enclosures

In the Matter of an
Application for Air Permit by:

Florida Gas Transmission Company
P.O. Box 1188
Houston, TX 77251

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

Compressor Station No. 12
Draft Air Permit No. 1130037-008-AC
Air Permit Modifications
Santa Rosa County

INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification (copy of Draft Permit Modification attached) for the proposed project as detailed in the application and the enclosed Technical Evaluation and Preliminary Determination, for the reasons stated below. The applicant, Florida Gas Transmission Company, applied on January 15, 2004 to the Department to modify the air permit to change the CO and VOC emission rates and to remove certain load restrictions related to turbine No. 1208 (EU 010). The project is located at the existing Compressor Station No. 12, which is approximately 5 miles north of Highway 4 in Santa Rosa County, Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-210, and 62-212 of the Florida Administrative Code (F.A.C.). The above actions are not exempt from permitting procedures. The Department has determined that an air construction permit is required to perform proposed work. The Department intends to issue this air construction permit based on the belief that the applicant has provided reasonable assurances to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Construction Permit Modification. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting 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 Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114, Fax: 850/ 922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in Section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) and (11), F.A.C.

The Department will issue the final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of Public Notice of Intent to Issue Air Permit Modification. Written comments and should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent.

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 public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S. however, any person who asked the Department 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 Department'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 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 indicate; (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 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 Department'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 Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542, F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Mediation is not available in this proceeding. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2), F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally

delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.

T. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Intent to Issue Air Construction Permit Modification package (including the Public Notice of Intent to Issue Air Construction Permit Modification, Technical Evaluation and Preliminary Determination, and the Draft Permit Modification) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 1/27/04 to the person(s) listed:

Mr. Rick Craig, FGT*
Mr. Jacob Krautsch, FGT
Mr. David Holmes Parham, P.E.
Mr. Duane Pierce, AQMcs, LLC
Ms. Sandra Veazey, NWD
Mr. Greg Worley, EPA Region 4

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.

(Clerk) 1/27/04 (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Draft Air Permit No. 1130037-008-AC

Florida Gas Transmission Company
Santa Rosa Compressor Station No. 12

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification to the Florida Gas Transmission Company Department to modify the permit to change the Carbon Monoxide (CO) and Volatile Organic Compounds (VOC) emission rates and to remove certain load restrictions related to turbine no. 1208 (EU 010). The equipment is installed at existing Compressor Station No. 12, which is located north of Munson on Highway 191 approximately 5 miles north of Highway 4 in Santa Rosa County, Florida. The applicant's authorized representative is Mr. Rick Craig, Vice President Southeastern Operations. The applicant's mailing address is Florida Gas Transmission Company, p. o. Box 1188, Houston, TX 77251.

The originally permitted limits for turbine no. 1208 and the related restrictions were set based upon information provided by the turbine manufacturer. During years 2002 and 2003, FGT conducted testing which showed the emission rates of CO to be much lower than originally permitted. Based upon this test data, FGT seeks to decrease such emission rates and related load restrictions. As a result of this request, there will be no increase in the annual emissions of CO, nor any other permitted air pollutant except for VOC's. An incidental increase in VOC emissions (4.6 TPY) will occur as an effect of the removal of the load restrictions.

Because potential emissions of at least one regulated pollutant exceed 250 tons per year, the existing facility is classified as a major source of air pollution with respect to Rule 62-212.400, F.A.C, the Prevention of Significant Deterioration (PSD) of Air Quality. The existing station 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). This project is not subject to PSD preconstruction review because the net emissions increases are less than each of the corresponding PSD significant emissions rates.

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. 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 public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department 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 Department'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,

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

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 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 indicate; (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 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 Department'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 Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
(111 S. Magnolia Drive, Suite 4)
2600 Blair Stone Road, MS #5505
Tallahassee, Florida, 32399-2400
Telephone: 850/488-0114
Fax: 850/922-6979

Department of Environmental Protection
Northwest District Office
Air Resources Section
160 Governmental Center
Pensacola, FL 32501-5794
Telephone: 850/595-8300
Fax: 850/595-4417

The complete project file includes the application, Technical Evaluation and Preliminary Determination, Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Department's reviewing engineer for this project for additional information at the address and phone numbers listed above.

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

Draft Air Construction Permit Modification
Santa Rosa Compressor Station No. 12
Florida Gas Transmission Company

DEP FILE: 1130037-008-AC

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
North Permitting Section

January 23, 2004

1. GENERAL PROJECT INFORMATION

1.1 Applicant Name and Address

Florida Gas Transmission Company
P.O. Box 1188
Houston, TX 77251

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

1.2 Facility Description and Location

Florida Gas Transmission Company operates the existing facility as a compressor station for the natural gas pipeline serving Florida. Compressor Station No. 12 is located north of Munson on Highway 191, approximately 5 miles north of Highway 4 in Santa Rosa County, Florida. The compressor station consists of five 2000 bhp reciprocating compressor engines, one 4100 bhp reciprocating compressor engine, one 13,000 bhp gas turbine compressor engine, one 15,700 bhp gas turbine compressor engine, and miscellaneous support equipment. The UTM coordinates are Zone 16, 510.8 km East, and 3419.0 km North. 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).

1.3 Standard Industrial Classification Code (SIC)

SIC No. 4922 – Natural Gas Transmission

1.4 Regulatory Categories

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

Title IV: The facility has 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 because potential emissions of at least one regulated pollutant exceed 100 tons per year. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

PSD: Because potential emissions are greater than 250 tons per year for at least one regulated air pollutant, the facility is a major source of air pollution in accordance with the requirements of the Prevention of Significant Deterioration (PSD) of Air Quality Program (Rule 62-212.400, F.A.C.). Projects resulting in net emissions increases greater than the Significant Emissions Rates specified in Table 62-212.400-2, F.A.C. are subject to the PSD new source preconstruction review requirements.

1.5 Project Description

The existing facility permit was modified during August 2001 so as to incorporate Engine No. 1208 (the 15,700 bhp gas turbine) as well as miscellaneous changes to Engines 1204, 1205 and 1207. Engine 1208 is a Pignone PGT-10B engine compressor and the fuel is exclusively natural gas. Upon the original permitting, FGT had acquired limited data on the Pignone engine and as a result requested conservative permit limits for Carbon Monoxide. The Department granted the FGT request, however imposed limitations on operating hours in the mid-load ranges (between 50% and 90%) in order to minimize impacts. Additionally, FGT was required to keep records of all hours of operation within this load range as a means of demonstrating compliance. The original permitted emission levels did not trigger a BACT Review.

At this time, FGT has gained sufficient operational data on the Pignone engine performance, and as a result wishes to gain relief from the limitations referred to above. In summary, the CO emission engine levels are adequately low such that FGT can commit to an emission limit which is unchanging over the load range.

On an annual, 8-hour or hourly basis, the newly requested CO permit limit yields emissions which are less than or equal to those in the original permit.

2. APPLICABLE REGULATIONS

2.1 State Regulations

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 and Comments, Reports, Stack Height Policy, 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

2.2 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, CFR	Description
Part 60	Subpart A - General Provisions for NSPS Sources
	NSPS Subpart GG - Stationary Gas Turbines
	Applicable Appendices

2.3 PSD Applicability for Project

The proposed project is located in Santa Rosa County, an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to a National Ambient Air Quality Standard (NAAQS). The facility is an existing PSD-major source and is subject to the new source preconstruction review requirements. However, emission changes from this permit modification do not exceed PSD thresholds; in fact the potential emissions alone equate to 30.8 TPY which is far below the threshold.

Table 1. Potential Emission Changes of CO (Tons Per Year) and PSD Applicability

Load Range	Existing Potential Emissions (TPY)	Existing Emission rates (lb/hr)	Revised Potential Emissions (TPY)	Revised Emission rates (lb/hr)	Subject To PSD?
50% – 70%	NA	22.5	NA	7.03	No – 1hr and 8hr emission rates decrease
70% - 90%	NA	10.2	NA	7.03	
100%	30.8	5.1	30.8	7.03	No – TPY does not change

3. EXISTING PERMIT REQUIREMENTS

The existing permit authorized installation of the Pignone Model No. PGT-10B gas turbine as a compressor engine with a capacity of 15,700 bhp. Although the unit was permitted to operate continuously (8760 hours per year), low-load operation was restricted as follows:

- Operation between 50% and 90% of base load shall not exceed 2190 hours during any consecutive 12 months.
- Of this authorized low-load operation, operation between 50% and 70% of base load shall not exceed 438 hours during any consecutive 12 months.
- Except for startup and shutdown, operation below 50% base load is prohibited.

Additionally, record-keeping was required in order to validate the above-referenced hours of operation.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that requested permit modification will comply with all applicable state and federal air pollution regulations as conditioned by the original permit. The Department notes that an incidental increase of (annual only) VOC emissions will occur, by virtue of the removal of the hours of operation limitation. The annual PTE of VOC's was originally 2.0 TPY and will need to be revised upwards to a total of 6.6 TPY. No air quality modeling analysis is required because the project does not result in a significant increase in emissions.

M. P. Halpin, P.E.

DRAFT

PERMITTEE:

Florida Gas Transmission Company
1400 Smith Street
Houston, TX 77002

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

Santa Rosa Compressor Station No. 12
Air Permit No. 1130037-008-AC
Facility ID No. 1130037
SIC No. 4922
Permit Expires: December 31, 2004

PROJECT AND LOCATION

This permit authorizes the construction of a new 15,700 bhp gas turbine compressor engine (No. 1208), the up-rating of an existing gas turbine compressor engine (No. 1207) to 13,000 bhp, and modification of two existing reciprocating internal combustion compressor engines (Nos. 1204 and 1205). The new equipment will be installed at Compressor Station No. 12, which is located north of Munson on Highway 191, approximately 5 miles north of Highway 4 in Santa Rosa County, Florida. The UTM coordinates are Zone 16, 510.8 km East, and 3419.0 km North.

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 is a modification of Permit No. 1130037-003-AC to revise the CO emission standard and specific load restrictions. It does not authorize new construction and the expiration date is extended simply to allow ample time for inclusion of the subject revisions into the Title V permit.

CONTENTS

Michael G. Cooke, Director
Division of Air Resources Management

(Date)

FACILITY AND PROJECT DESCRIPTION

The existing facility operates as a compressor station in Santa Rosa 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. 1208), up-rate existing gas turbine compressor engine (No. 1207) to 13,000 bhp, and modify two existing reciprocating internal combustion compressor engines (Nos. 1204 and 1205). After the project is complete, the facility will consist of the following emissions units.

ID	Emission Unit Description
004	**FGT No. 1204**: One modified 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. 1205**: One modified 2000 bhp natural gas-fired reciprocating internal combustion engine (Cooper-Bessemer Model No. LS-8-SG) was installed as a compressor engine 1968.
006	**FGT No. 1206**: One 4100 bhp natural gas-fired reciprocating internal combustion engine (Dresser-Rand Model No. TVC-10) was installed as a compressor engine in 1991.
007	**FGT Nos. 1201 to 1203**: Three 2000 bhp natural gas-fired reciprocating internal combustion engines (Cooper-Bessemer Model No. LS-8-SG) were installed as compressor engines in 1958.
008	**FGT No. 1207**: One 13,000 bhp gas turbine (Solar Model No. Mars 90-T-13000S) was originally installed as a compressor engine in January 2001 and up-rated later in 2001.
009	**Miscellaneous Unregulated Emissions Units**
010	**FGT No. 1208**: A new 15,700 bhp gas turbine (Nuovo Pignone Model No. PGT-10B) to be installed as a compressor engine in 2001.

{Note: Emissions units 001, 002, and 003 are "inactive".}

REGULATORY CLASSIFICATION

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

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

Title V: Because potential emissions of at least one regulated pollutant exceed 100 tons per year, the facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

PSD: The project is located in an area designated as "attainment" or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. Potential emissions of at least one regulated pollutant exceed 250 tons per year. Therefore, the facility is classified as a major source of air pollution with respect to Rule 62-212.400, F.A.C, the Prevention of Significant Deterioration (PSD) of Air Quality. Because potential emissions from this project do not exceed the PSD Significant Emissions Rates (Table 62-212.400-2), the project is not subject to the PSD preconstruction review requirements.

NSPS: The new gas turbine and the existing gas turbine are subject to the New Source Performance Standards of 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.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct or modify emissions units regulated by this permit 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 permits to operate an emissions unit shall be submitted to the Department's Northwest District Office at 160 Governmental Center, Pensacola, Florida 32501-5794 and phone number 850/595-8364.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department's Northwest District Office at 160 Governmental Center, Pensacola, Florida 32501-5794 and phone number 850/595-8364.

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. EU-004 and 005: FGT Nos. 1204 and 1205, Modified Reciprocating Compressor Engines

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

Emissions Unit No. 004 and 005 (FGT Nos. 1204 and 1205)
Modified Reciprocating Compressor Engines

Description: Each modified reciprocating internal combustion engine is a Cooper-Bessemer Model No. LS-8-SG that is used as a compressor engine for the natural gas pipeline. Engine No. 1204 was installed in 1966 and Engine No. 1205 was installed in 1968.

Fuel: Each engine fires pipeline-quality natural gas (SCC No 2-02-002-54). The maximum natural gas firing rate is 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 engines are intended to operate at or near capacity.

Controls: The efficient combustion of pipeline-quality natural gas at high temperatures minimizes emissions of PM/PM_{10}, SO_2, and VOC. A catalytic converter reduces emissions of CO 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 engines were 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 project to be minor with respect PSD. Therefore, the control systems, 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 for each 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 each 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 engines shall fire only pipeline-quality natural gas with a maximum of 10 grains of sulfur per 100 standard cubic feet of natural gas. The custom fuel monitoring plan for the gas turbine (FGT Unit No. 1208) shall serve as the compliance demonstration for the fuel sulfur limit. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

4. Restricted Operation: The hours of operation of each 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. EU-004 and 005: FGT Nos. 1204 and 1205, Modified Reciprocating Compressor Engines

EMISSIONS STANDARDS

5. Emissions Standards: Emissions from each 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]	0.8 gram/bhp-hour	3.5	15.5	Avoid Rule 62-212.400, F.A.C.
NOx [b]	5.4 gram/bhp-hour	23.8	104.3	Avoid Rule 62-212.400, F.A.C.
SO_2 [c]	10 grains of sulfur per 100 SCF of gas	0.5	2.0	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	0.7	Avoid Rule 62-212.400, F.A.C.
VOC [e]	Good combustion practices (Factor: 0.1 gram/bhp-hour)	0.4	1.9	Avoid Rule 62-212.400, F.A.C.

a. The CO standard is based on a 3-hour test average as determined by EPA Method 10.

b. The NOx standard is based on a 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 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. Equivalent maximum PM emissions are based on data in Table 3.2-2 of AP-42. Equivalent maximum VOC emissions are based on test data. No testing required.

f. Equivalent maximum emissions are based on the maximum expected emissions (or the emissions standard) at permitted capacity and 8760 hours of operation per year.

g. The emissions standards of this permit ensure that the project does not trigger the PSD preconstruction review requirements of Rule 62-212.400, F.A.C.

EMISSIONS PERFORMANCE TESTING

6. Initial Compliance Tests: Each modified reciprocating compressor engine shall be tested to demonstrate initial compliance with the emissions standards for CO, NOx, and visible emissions. 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), each modified reciprocating compressor engine shall be tested to demonstrate compliance with the emissions standards for NOx and visible emissions. 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. Tests Prior to Renewal: Within the 12-month period prior to expiration of the operation permit, each modified reciprocating compressor engine shall be tested to demonstrate compliance with the emission standards for CO, NOx, and visible emissions. 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)3, F.A.C.]

9. 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.]

10. 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 administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

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. For each test run, the report shall also indicate the natural gas firing rate (cubic feet per hour), heat input rate (mmBTU per hour), and the power output (bhp). [Rule 62-297.310(8), F.A.C.]

12. 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 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. EU-008: FGT No. 1207, Up-Rated Gas Turbine Compressor Engine

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

Emissions Unit No. 008 (FGT No. 1207): Up-Rated Gas Turbine Compressor Engine
Description: The up-rated 13,000 bhp gas turbine is a Solar Model No. Mars 90-T-13000S that is used as a compressor engine for the natural gas pipeline. Engine No. 1207 was originally installed in January of 2001.
Fuel: The gas turbine fires pipeline-quality natural gas (SCC No 2-02-002-01). The maximum natural gas firing rate is approximately 108,470 cubic feet per hour based on a heat content of 1040 BTU per SCF of gas.
Capacity: At 112.8 mmBTU per hour of heat input, the gas turbine produces approximately 13,000 bhp. After initial startup, the gas turbine 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. NOx emissions are reduced with dry low-NOx combustion technology.
Stack Parameters: When operating at capacity, exhaust gases exit a rectangular stack (7.5 feet by 8 feet) that is 58 feet tall with a flow rate of approximately 179,500 acfm at 870° F.

{Permitting Note: The existing natural gas compressor station is a major source with respect to the PSD preconstruction review program. The project includes up-rating the existing gas turbine (FGT No. 1207) installed in January of 2001. As such, it is part of the netting analysis that shows the project to be minor with respect to PSD. Therefore, the control systems, 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.}

APPLICABLE STANDARDS AND REGULATIONS

1. NSPS Requirements: The 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, 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. Up-Rated Gas Turbine (FGT No. 1207): The permittee is authorized to up-rate the recently installed Solar Model No. Mars 90-T-13000S gas turbine from 10,350 bhp to 13,000 bhp. The permittee shall tune, operate and maintain the gas turbine's dry low-NOx combustion system to reduce emissions of nitrogen oxides below the permitted limits. Ancillary equipment includes the automated Solar Turbotronic gas turbine control system, an inlet air filtration system, and a rectangular stack (7.5 feet by 8.0 feet) that is 58 feet tall. [Applicant Request]

PERFORMANCE RESTRICTIONS

3. Permitted Capacities: The maximum heat input rate to the gas turbine shall not exceed 112.8 mmBTU per hour while producing approximately 13,078 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. For the gas turbine, 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 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 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 62-4.070(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]
		lb/hour	TPY	
CO [a]	50.0 ppmvd @ 15% O_2	12.4	54.5	Avoid Rule 62-212.400, F.A.C.
NOx [b]	25.0 ppmvd @ 15% O_2	10.2	44.7	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
SO_2 [c]	10.0 grains of sulfur per 100 SCF of gas	3.1	13.6	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
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)	0.7	3.3	Avoid Rule 62-212.400, F.A.C.
VOC [e]	Good combustion practices (Factor: 2.5 ppmvd @ 15% O_2)	0.4	1.6	Avoid Rule 62-212.400, F.A.C.

a. The CO standard is based on a 3-hour test average as determined by EPA Method 10.

b. The NOx standards is based a 3-hour test average 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. Equivalent maximum PM emissions are based on vendor data. Equivalent maximum VOC emissions were conservatively assumed to be 10% of the vendor's data for total unburned hydrocarbon. No testing required.

f. Equivalent maximum emissions are based on the maximum expected emissions, permitted capacity, a compressor inlet air temperature of 59° F, and 8760 hours of operation per year. For comparison purposes, the permittee shall provide a reference table with the initial compliance test report of mass emission rates versus the compressor inlet temperatures. 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 tests conducted at 59° F or greater, measured 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 emissions standards of this permit ensure that the project does not trigger the PSD preconstruction review requirements of Rule 62-212.400, F.A.C.

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 visible emissions. 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 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 NOx performance tests shall consist of three, 20-minute test runs. The peak load NOx performance test shall consist of three, 1-hour test runs. The CO performance tests shall be conducted concurrently with the NOx performance tests at peak load. 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 visible emissions. 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 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]

10. 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 administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

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 inlet compressor 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. [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 operation for the gas turbine. 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 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.]

C. EU-010: FGT No. 1208, New Gas Turbine Compressor Engine

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

Emissions Unit No. 010 (FGT No. 1208): 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 pipeline-quality natural gas (SCC No 2-02-002-01). The maximum natural gas firing rate is 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. 1208) 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, 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, 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. 1208): 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. 1208. [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% base load is prohibited. ~~Operation between 50% and 90% of base load shall not exceed 2190 hours during any consecutive 12 months. Of this authorized low load operation, operation between 50% and 70% of base load shall not exceed 438 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	Standard	lb/hour	TPY	
CO [a]	~~90-100%~~	~~15.0 ppmvd @ 15% O2~~	~~5.1~~	30.8	Avoid Rule 62-212.400, F.A.C.
	~~70-90%~~	~~30.0 ppmvd @ 15% O2~~	~~10.2~~		
	50-~~70~~100%	~~75.0~~ 21.0 ppmvd @ 15% O2	~~22.5~~ 7.03		
NOx [b]	50-100%	25.0 ppmvd @ 15% O2	14.1	61.8	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	16.2	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	3.9	Avoid Rule 62-212.400, F.A.C.
VOC [e]	~~90-100%~~	~~Good combustion practices~~	~~0.3~~	~~2.0~~	Avoid Rule 62-212.400, F.A.C.
	~~70-90%~~	~~Good combustion practices~~	~~0.8~~	6.6	
	50-~~70~~100%	Good combustion practices	1.5		

a. The CO standards are based on 3-hour test average as determined by EPA Method 10. Annual CO emissions were based on emissions standards and restricted hours of operation.

b. The NOx standards are based on a 3-hour test average 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. Equivalent maximum PM emissions are based on data in Table 3.1-2a in AP-42. Equivalent maximum VOC emissions are based on vendor data. Annual VOC emissions were based on the vendor data and restricted hours of operation. No testing required.

f. Equivalent maximum hourly emissions are the maximum expected emissions based on permitted capacity and a compressor inlet air temperature of 59° F. For comparison purposes, the permittee shall provide a reference table with the initial compliance test report of mass emission rates versus the compressor inlet temperatures. 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 tests conducted at 59° F or greater, measured 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. Equivalent maximum annual emissions are based on 8760 hours of operation per year.

h. The emissions standards of this permit ensure that the project does not trigger the PSD preconstruction review requirements of Rule 62-212.400, F.A.C.

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 visible emissions. 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] {Permitting Note: This permit modification does not impose any new, additional testing.}

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 visible emissions. 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 administrator of the Department's Emissions Monitoring Section in accordance with an

alternate sampling procedure pursuant to 62-297.620, F.A.C. [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 inlet compressor 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. [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 each of the following load ranges: 50% to 70% load, 70% 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; and hours of gas turbine operation ~~between 50% to 70% load; hours of gas turbine operation between 70% 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.]

D. EU-009: Miscellaneous Unregulated Emissions Units

This permit recognizes the following unregulated emissions units.

Emissions Unit No. 009: Miscellaneous Unregulated Emissions Units	
004	Support equipment includes: • One Caterpillar Model 3412 emergency generator (637 bhp) fired exclusively with natural gas and identified by the permittee as "GEN03"; • One 1 mmBTU/hour air compressor engine fired exclusively with natural gas and identified by permittee as "Air Compressor No. 1"; • Lube oil storage tanks; • Used oil storage tanks; • Blowdown stacks; and • Miscellaneous fugitive emission leaks from valves, flanges, etc.

The emergency generator and air compressor engine are exempt from air pollution 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.

21. One or more heating units, general purpose internal combustion engines, or other combustion devices, all of which are located within a single facility, are not listed elsewhere in Rule 62-210.300(3)(a), F.A.C., and are not pollution control devices, provided:

    a. None of the heating units, general purpose internal combustion engines, or other combustion devices that would be exempted is subject to the Federal Acid Rain Program;

    b. Total fuel consumption by all such heating units, general purpose internal combustion engines, and other combustion devices that would be exempted 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; and

    c. Fuel for the heating units, general purpose internal combustion engines, and other combustion devices that would be exempted is limited to natural gas, diesel fuel, gasoline and propane.

P.E. Certification Statement

Florida Gas Transmission Company
Compressor Station No. 12
Santa Rosa County

DEP File No.: 1130037-008-AC
Facility ID No.: 1130037

Project: Air Construction Permit Modification

I HEREBY CERTIFY that the engineering features described in the above referenced application and related additional information submittals, if any, and subject to the proposed permit conditions, provide reasonable assurance of compliance with applicable (PSD) provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).

(Seal)

Michael P. Halpin, P.E.
Registration Number: 31970

1-23-04
Date

Permitting Authority:
Florida Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
New Source Review Section
Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Telephone: 850/488-0114
Fax: 850/922-6979

Memorandum

Florida Department of
Environmental Protection

TO: Trina Vielhauer

THRU: Jim Pennington

FROM: M. P. Halpin, P.E.

DATE: January 23, 2004

SUBJECT: FGT Compressor Station 12

Attached for approval and signature is a construction permit modification for FGT's Compressor Station No. 12 located in Santa Rosa County. The permit modification is to revise the CO emission rates and remove certain operating restrictions in the low and middle load ranges. The changes will not cause any increases in CO, although an incidental increase in VOC emissions may occur (< 5TPY) as a result (only) of the load limitation removal.

The draft permit is being issued without a BACT Review since the permit revision does not cross any PSD pollutant thresholds. Accordingly, this modification is being issued as a minor modification requiring only 14 days of notice.

I have coordinated this modification with input from Jeff Koerner who has done most of the prior compressor station construction permitting. I recommend your approval and signature.

Attachments

/mph

BEST AVAILABLE COPY

SENDER: C ... **ON DELIVERY**

- 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.

A. Received by *(Please Print Clearly)*: E.O. Rice — B. Date of Delivery: 6/30/04

C. Signature: X E.O. Rice — ☑ Agent ☐ Addressee

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

1. Article Addressed to:

'CK CRAIG, V.P. SOUTHEASTERN OPERATIONS
DA GAS TRANSMISSION COMPANY
)FFICE BOX 1188
'ON, TEXAS 77251

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 *(Copy from ...el)*
7000 2870 ... 7028 3710

PS Form 3811, Ju... 102595-99-M-1789

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
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Total Postage & Fees	**$**

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7000 2870 0000 7028 3710

MR. RICK CRAIG, V.P. SOUTHEASTERN OPERATIONS
FLORIDA GAS TRANSMISSION COMPANY
POST OFFICE BOX 1188
HOUSTON, TEXAS 77251

PS Form 3800, May 2000 — See Reverse for Instructions

Florida Gas Transmission Company

1967 Commonwealth Lane, Tallahassee, FL 32303, (850) 350-5000, Fax Downstairs (850) 350-5001

January 14, 2004

UPS 2nd Day – 1Z F62 059 37 1001 159 6

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

Reference: Facility: 1130037
Compressor Station No. 12, Santa Rosa 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. 1130037-003-AC.

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 lower 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.

Attached is an application with supporting documentation for an air permit modification to change the CO and VOC emission rates and to 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.

If you have any questions or need additional information, please call me at (850) 350-5042.

Sincerely,

Jacob Krautsch
Environmental Specialist

ATTACHMENTS

CC: Rick Craig, w/o attachments
David Parham, P.E.
Duane Pierce, AQMcs, LLC
Compressor Station No. 12

Florida Gas Transmission Company

Phase V Expansion Project

Compressor Station No. 12

APPLICATION
For
AIR PERMIT
MODIFICATION

November 2003

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 Permit No. 1130037-005-AV for its existing natural gas pipeline facility near Munson, in Santa Rosa County, Florida (Compressor Station No. 12). 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. 12 is located in Santa Rosa County, Florida, north of Munson on Highway 191, approximately 5 miles north of Highway 4. 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 two existing 2,000 bhp reciprocating compressor engines by modifying the engines. 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.

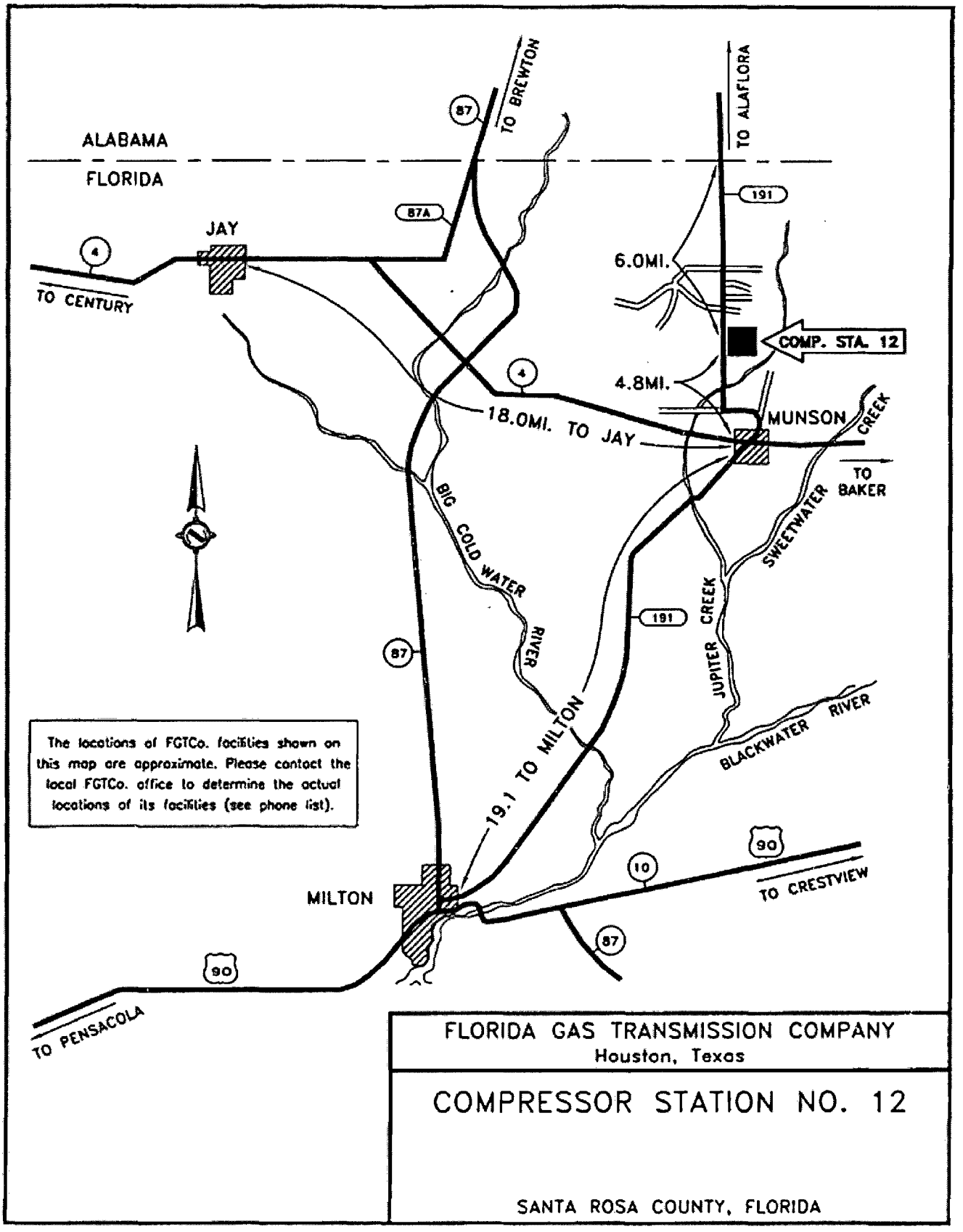
Subsequent emissions testing demonstrated that CO emissions from the turbine were much lower than expected at all loads and that the load restrictions would not have been necessary if permitting had been based on CO emission rates consistent with the emission test values. FGT is proposing to delete the 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 four additional sections. Descriptions of the existing operation at FGT's Compressor Station No. 12 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.

AQMcs


ALABAMA
FLORIDA
JAY
TO CENTURY
87
TO BREWTON
87A
TO ALAFLORA
191
6.0MI.
COMP. STA. 12
4.8MI.
4
18.0MI. TO JAY
MUNSON
CREEK
TO BAKER
SWEETWATER
BIG COLD WATER
RIVER
191
JUPITER CREEK
87
19.1 TO MILTON
BLACKWATER RIVER
MILTON
10
90
TO CRESTVIEW
87
90
TO PENSACOLA
The locations of FGTCo. facilities shown on this map are approximate. Please contact the local FGTCo. office to determine the actual locations of its facilities (see phone list).
FLORIDA GAS TRANSMISSION COMPANY
Houston, Texas
COMPRESSOR STATION NO. 12
SANTA ROSA COUNTY, FLORIDA

2.0 PROJECT DESCRIPTION

A plot plan of FGT's Compressor Station No. 12, showing the location of the plant boundaries, the existing emission sources, and the location of the proposed engine addition, 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 project.

2.1 Existing Operations

FGT's Compressor Station No. 12 currently consists of five 2,000 bhp and one 4,100 bhp natural-gas-fired reciprocating internal combustion (IC) engines, and two natural gas-fired turbines rated at 13,000 bhp and 15,700 bhp. Table 2-1 summarizes engine manufacturer, model, and the date of installation for each of the existing engines. The original installation was made in 1958 (Compressor Engines 1201 through 1203). Engine 1204 was installed in 1966 and engine 1205 was installed in 1968. An addition referred to as Phase II was constructed in 1991 (Compressor Engine 1206) and was subject to PSD review. Compressor Engine 1207 was installed in 2001 as part of the Phase IV Expansion Project at 10,350 bhp. In 2002, as part of the Phase V Expansion, Compressor Engine No. 1207 was upgraded to 13,000 bhp and Engine No. 1208 was installed. Engines Nos. 1204 and 1205 were also modified to reduce NO_X and CO emissions in 2002 as part of the Phase V Expansion Project.

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. 1208 (EU 010). 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. Also HAP emission estimates are 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. 1208 Change

Turbine engine No. 1208 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 No.	Year of Installation	Engine Type	Manufacturer	Model	Brake Horse Power (bhp)
1201	1958	Reciprocating	Cooper-Bessemer	LS-8-SG	2,000
1202	1958	Reciprocating	Cooper-Bessemer	LS-8-SG	2,000
1203	1958	Reciprocating	Cooper-Bessemer	LS-8-SG	2,000
1204	1966	Reciprocating	Cooper-Bessemer	LS-8-SG	2,000
1205	1968	Reciprocating	Cooper-Bessemer	LS-8-SG	2,000
1206	1991	Reciprocating	Dresser-Rand	TVC-10	4,100
1207	2001	Turbine	Solar	Mars 90 T-13000S	13,000
1208	2002	Turbine	Nuovo Pignone	PGT-10B	15,700

Table 2-2 Compressor Turbine (1208) Specifications and Stack Parameters

Parameter	Design
Compressor Engine	1208
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).

The currently permitted hourly and annual emissions of regulated pollutants from the engine under normal operating conditions as presented in Table 2-3. Emissions of oxides of nitrogen (NO_X), carbon monoxide (CO) and non-methane hydrocarbons (NMHC) 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 were based on operation at 100% load for 75% of the time (6570 hr/yr) 70% load for 20% (1752 hr/yr) and 50% load for 5% of the time (438 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. 010 (Engine No. 1208) have demonstrated significantly lower CO emission rates than those represented by the manufacturer. Three separate emissions tests showed lb/hr emission rates ranging from 0.410 lb/hr to 1.694 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 worse case emission rate is at 50% load and is 1.5 lb/hr. FGT is proposing to use this limit for all loads. This will obviously be 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 7.03 lb/hr and 1.5 lb/hr at all loads.

Finally, HAP emissions have changed since 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 (1208)

Pollutant	Emission Factor	Reference	lb/hr	TPY
Nitrogen Oxides	14.1 lb/hr	Manufacturer Data	14.10	61.8
Carbon Monoxide	5.14 lb/hr @ 100% load 10.23 lb/hr @ 70% load 22.50 lb/hr @ 50% load	Manufacturer Data	7.03[a]	30.8[b]
Volatile Organic Compounds	0.29 lb/hr @ 100% load 0.80 lb/hr @ 70% load 1.46 lb/hr @ 50% load	Manufacturer Data	0.45[c]	2.0[b]
Particulate Matter	0.0066 lb/MMBtu	AP-42, Table 3.1-2a	0.89	3.9
Sulfur Dioxide	10 grains/100 scf	FERC Limit	3.70	16.2
HAPs	Various	GRI HapCalc 3.0	0.75	3.3

a) Nominal CO (annual) rate, maximum 22.50 lb/hr
b) @ 100% load for 75% of time, 70% load for 20% of time & 50% load for 5% of time
c) Nominal VOC (annual) rate, maximum 1.46 lb/hr

Table 2-4 CO Emissions Test Results for Compressor Turbine Engine (1208)

Test on 06/20/02						
	Test Results			Permit Limits		
Load	CO ppmv @ 15% O2	CO lb/hr	CO tpy*	CO ppmv @ 15% O2	CO lb/hr	CO tpy**
52.3%	2.13	0.419	1.83	75	22.5	30.8
60.0%	3.40	0.858	3.76	75	22.5	30.8
69.3%	2.41	1.694	7.42	30	10.2	30.8
77.0%	1.83	0.448	1.96	15	5.1	30.8

* Assumes 8760 hrs/yr

** 30.8 tpy limit is based on load restrictions

Test on 11/06/02						
	Test Results			Permit Limits		
Load	CO ppmv @ 15% O2	CO lb/hr	CO tpy*	CO ppmv @ 15% O2	CO lb/hr	CO tpy**
95.7%	1.88	0.531	2.33	15	5.1	30.8

* Assumes 8760 hrs/yr

** 30.8 tpy limit is based on load restrictions

Test on 06/12/03						
	Test Results			Permit Limits		
Load	CO ppmv @ 15% O2	CO lb/hr	CO tpy*	CO ppmv @ 15% O2	CO lb/hr	CO tpy**
50.6%	2.30	0.410	1.80	75	22.5	30.8
67.9%	2.24	0.496	2.17	75	22.5	30.8
81.6%	1.88	0.459	2.01	30	10.2	30.8
95.8%	1.87	0.525	2.30	15	5.1	30.8

* Assumes 8760 hrs/yr

** 30.8 tpy limit is based on load restrictions

Table 2-5 Proposed Emissions for Compressor Turbine Engine (1208)

Pollutant	Emission Factor	Reference	lb/hr	TPY
Nitrogen Oxides	14.1 lb/hr	Manufacturer Data	14.10	61.8
Carbon Monoxide	7.03 lb/hr	Test Data [a]	7.03	30.8
Volatile Organic Compounds	1.5 lb/hr	Manufacturer Data	1.5	6.6
Particulate Matter	0.0066 lb/MMBtu	AP-42, Table 3.1-2a	0.89	3.9
Sulfur Dioxide	10 grains/100 scf	FERC Limit	3.70	16.2
HAPs	Various see Attachment D	AP-42, Table 3.1-3	0.14	0.6

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 4.4 tpy. The calculations used to estimate emissions are presented in Attachment C.

2.2.3 Proposed Permit Provision Changes

FGT proposes the following changes to the current operating permit (Permit No. 1130037-005-AV).

Section III. Subsection E. Requirement E3

Current:

E.3 Restricted Hours of 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 2190 hours during any consecutive 12 months. Of this authorized low-load operation, operation between 50% and 70% of base load shall not exceed 438 hours during any consecutive 12 months. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; construction permit 1130037-003-AC, issued August 15, 2001]

Proposed:

E.3 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.; Construction Permit 1130037-003-AC, issued August 15, 2001]

Section III. Subsection E. Requirement E4

Current:

E.4 Emissions from the gas turbine shall not exceed the following limits:

		Equivalent Emissions	
Pollutant	Standards	lb/hr	tons/year
Nitrogen Oxides	25.0 ppmvd @ 15% O2	14.1	61.8
CO	15.0 ppmvd at 90-100%	5.1	30.8
	30.0 ppmvd at 70-90%	10.2	
	75.0 ppmvd at 50-70%	22.5	
	(all @ 15% O_2)		
SO2	10.0 grains of sulfur/100 SCF	3.7	16.2
Opacity	10% opacity, 6-minute average		
PM	Good combustion practices	0.9	3.9
VOC	Good combustion practice at 90-100%	0.3	2.0
	Good combustion practice at 70-90%	0.8	
	Good combustion practice at 50-70%	1.5	

Proposed:

E.4 Emissions from the gas turbine shall not exceed the following limits:

		Equivalent Emissions	
Pollutant	Standards	lb/hr	tons/year
Nitrogen Oxides	25.0 ppmvd @ 15% O2	14.1	61.8
CO	21.0 ppmvd	7.03	30.8
SO2	10.0 grains of sulfur/100 SCF	3.7	16.2
Opacity	10% opacity, 6-minute average		
PM	Good combustion practices	0.9	3.9
VOC	Good combustion practice	1.5	6.6

Section III. Subsection E. Requirement E11

Current:

E.11 Operation of this turbine compressor shall be monitored by an automated gas turbine control system monitoring and recording heat input (MMBtu), power output (bhp), and hours of gas turbine operation within each of the following load ranges: 50% to 70% load, 70% 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 70% load; hours of gas turbine operation between 70% 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 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., Construction Permit 1130037-003-AC issued August 15, 2001]

Proposed:

E.11 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., Construction Permit 1130037-003-AC issued August 15, 2001]

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. 12.

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. 12.

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. 12 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. 1208

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 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.

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(a)(2)	Engine No. 1208 Gas Turbine	Gas	NO_2	>10 MM Btu/hr	122 MM Btu/hr	196 ppm_v	25 ppm_v
GG	60.333(a)	Engine No. 1208 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)

Currently the only 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.

40 CFR 63 Subpart YYYY has been proposed for turbines, but these regulations have not been promulgated at this time.

3.2 Florida State Air Quality Regulations

Compressor Station No. 12 is currently operating under Permit No.1130037-005-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. 12 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.

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 Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

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

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: Florida Gas Transmission Company	
2. Site Name: Compressor Station No. 12	
3. Facility Identification Number: 1130037 [ ] Unknown	
4. Facility Location: Street Address or Other Locator: Rt. 1, Box 146 City: Milton County: Santa Rosa Zip Code: 32570-9740	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: Jacob Krautsch, Division Environmental Specialist
2. Application Contact Mailing Address: Organization/Firm: Florida Gas Transmission Company Street Address: 1967 Commonwealth Lane City: Tallahassee State: FL Zip Code: 32303
3. Application Contact Telephone Numbers: Telephone: (850) 350-5042 Fax: (850) 350-5001

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	1-15-04
2. Permit Number:	1130037-008-AC
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

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

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

[ ] Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

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

Current construction permit number: _____

Operation permit number to be revised: _____

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

Operation permit number to be revised/corrected: ____ 1130037-004-AV_____

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

Operation permit number to be revised: _____

Reason for revision: _____

Air Construction Permit Application

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

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

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

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

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:
   Rick Craig, Vice President, Southeastern Operations
2. Owner/Authorized Representative or Responsible Official Mailing Address:
   Organization/Firm: Florida Gas Transmission Company
   Street Address: P.O. Box 1188
   City: Houston State: TX Zip Code: 77251
3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
   Telephone: (713) 646-7227 - Fax: (713) 646-6128
4. Owner/Authorized Representative or Responsible Official Statement:

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

   Signature Date: 12/16/03

* Attach letter of authorization if not currently on file.

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 Fax: (407) 838-7101

4. Professional Engineer Statement:

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

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

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

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

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

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [X], 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

12/12/03
Date

(seal)

* Attach any exception to certification statement.

DAVID PARHAM, P.E.
P.E. NUMBER 50834
601 SOUTH LAKE DESTINY DRIVE, SUITE 450
MAITLAND, FLORIDA 32794-5100

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
010	Turbine Compressor Engine No. 1208, 15,700 bhp, Natural Gas Fired	NA	$0

Application Processing Fee

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

Construction/Modification Information

1. Description of Proposed Project or Alterations:

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 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.

2. Projected or Actual Date of Commencement of Construction: 12/01/03

3. Projected Date of Completion of Construction: 12/31/03

Application Comment

This proposed modification is intended to adjust the current permitted emission rates that were based on manufacturer estimates to rates that are based on emissions testing and that more accurately reflect the actual emission rates of the turbine.

The existing facility is currently operating under Permit No. 1130037-005-AV.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: 16 East (km): 510.83 North (km): 3419.03			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 30/54/42 Longitude (DD/MM/SS): 86/53/12			
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 (limit to 500 characters): Compressor Station No. 12 is an existing natural gas pipeline compressor station with six reciprocating compressor engines and two compressor turbines.			

Facility Contact

1. Name and Title of Facility Contact: Wesley Orso, Team Environmental Leader
2. Facility Contact Mailing Address: Organization/Firm: Florida Gas Transmission Company Street Address: Rt. 1, Box 146 City: Milton State: FL Zip Code: 32570-9740
3. Facility Contact Telephone Numbers: Telephone: (850) 850-5200 Fax: (850) 850-5201

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source? [ ] Unknown
2. [X] Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?
3. [ ] Synthetic Minor Source of Pollutants Other than HAPs?
4. [X] Major Source of Hazardous Air Pollutants (HAPs)?
5. [ ] Synthetic Minor Source of HAPs?
6. [ ] One or More Emissions Units Subject to NSPS?
7. [ ] One or More Emission Units Subject to NESHAP?
8. [ ] Title V Source by EPA Designation?
9. Facility Regulatory Classifications Comment (limit to 200 characters):

List of Applicable Regulations

FDEP Title V Core List	
62-296-320(4)(b)1 General Visible Emissions Standards	
40 CFR 60, Subpart GG Standards of Performance for Stationary Gas-fired Turbines	

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	tons/year	4. Basis for Emissions Cap	5. Pollutant Comment
NO_X	A				
CO	A				
VOC	B				
SO_2	B				
PM	B				
HAPs	A				

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: [X]Attached, Document ID: *Narrative Fig. 1-1* [ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [X] Attached, Document ID:_*Att. B*__ [ ] Not Applicable [X] Waiver Requested
3. Process Flow Diagram(s): [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Fugitive Emissions Identification: [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
6. Supplemental Information for Construction Permit Application: [ ] Attached, Document ID:___ [X] Not Applicable
7. Supplemental Requirements Comment: Attachment B contains a plot plan. Attachment C consists three test report summaries for turbine 1208. Attachment D has supporting calculations.

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities:
   [ ] Attached, Document ID:_____ [X] Not Applicable

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

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

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

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

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

14. Compliance Report and Plan:
    [ ] Attached, Document ID:_____ [X] Not Applicable

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

III. EMISSIONS UNIT INFORMATION

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

A. GENERAL EMISSIONS UNIT INFORMATION (All Emissions Units)

Emissions Unit Description and Status

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

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

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

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

2. Regulated or Unregulated Emissions Unit? (Check one)

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

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

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

15,700 bhp natural gas fired turbine compressor unit, Engine No. 1208

4. Emissions Unit Identification Number:
[ ] No ID
ID: 010

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	03/02	49	[ ]

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

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 Control Equipment

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

The proposed engine incorporates dry, low NOX combustion technology.

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

Emissions Unit Details

1. Package Unit:
   Manufacturer: Pignone
   Model Number: PGT10B
2. Generator Nameplate Rating: MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

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

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		134.77	
2. Maximum Incineration Rate:	NA	lb/hr	
3. Maximum Process or Throughput Rate:	NA		
4. Maximum Production Rate:	NA		
5. Requested Maximum Operating Schedule:			
	24 hours/day		7 days/week
	52 weeks/year		8760 hours/year

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

Heat input is 134.77 MM Btu/hr based on vendor specifications of 122.52 MM Btu/hr plus 10%.

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

FDEP Title V Core List	
62-296.320(4)(b)1 General Visible Emissions Standards	
40 CFR 60, Subpart GG Standards of Performance for Stationary Gas-fired	

D. EMISSI2ON POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? 1208	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): 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: 16 East (km): 510.830 North (km): 3419.030		
14. Emission Point Comment (limit to 200 characters):		

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

Segment Description and Rate: Segment __1__ of __1__

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
Natural gas 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 (limit to 200 characters): 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 _NA__ of _____

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

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC			EL
SO_2			EL
PM			EL
NO_X			EL
CO			EL
PM_{10}			EL
HAPs			5.0NS

Emissions Unit Information Section ___1___ of ___1___

Pollutant Detail Information Page ___1__ of ___6___

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

Potential/Fugitive Emissions

1. Pollutant Emitted: NOX	2. Total Percent Efficiency of Control:
3. Potential Emissions: 14.10 lb/hour 61.8 tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 14.1 lb/hr Reference: Vendor's data	7. Emissions Method Code: 5
8. Calculation of Emissions (limit to 600 characters): (14.10 lb/hr)(1 ton/2000 lb)(8760hr/1 yr) = 61.76 tons/year	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Vendor's data based on ISO conditions and site elevation.	

Allowable Emissions Allowable Emissions ___1_ of __1__

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions: NA
3. Requested Allowable Emissions and Units: 25 ppmv	4. Equivalent Allowable Emissions: 14.10 lb/hour 61.8 tons/year
5. Method of Compliance (limit to 60 characters): Initial performance test.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): 40 CFR 60.332(3) limits NOX emissions to 196 ppmv.	

Emissions Unit Information Section ___1___ of ___1___

Pollutant Detail Information Page ___4__ of ___6___

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

Potential/Fugitive Emissions

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control:
3. Potential Emissions: 7.03 lb/hour 30.8 tons/year	4. Synthetically Limited? [Y]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 7.03 lb/hr Reference: Test data	7. Emissions Method Code: 1
8. Calculation of Emissions (limit to 600 characters): (7.03 lb/hr)(1 ton/2000 lb)(8760 hr/yr) = 30.79 tons/yr	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Emissions based on three separate test events.	

Allowable Emissions Allowable Emissions ___1__ of __1___

1. Basis for Allowable Emissions Code: ESCPSD	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: 7.03 lb/hour 30.8 tons/year
5. Method of Compliance (limit to 60 characters): Compliance test and Recordkeeping of hours of operation and load.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

Emissions Unit Information Section ___1___ of ___1___

Pollutant Detail Information Page ___4__ of ___6___

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

Potential/Fugitive Emissions

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:
3. Potential Emissions: 1.46 lb/hour 6.4 tons/year	4. Synthetically Limited? [Y]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 1.46 lb/hr Reference: Vendor's data	7. Emissions Method Code: 5
8. Calculation of Emissions (limit to 600 characters): (1.46 lb/hr)(1 ton/2000 lb)(8760 hr/yr) = 6.39 tons/yr	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Vendor's data based on ISO conditions at lowest load for total hydrocarbons (THC). VOCs assumed to be 10% of THC	

Allowable Emissions Allowable Emissions __1__ of __1_

1. Basis for Allowable Emissions Code: ESCPSD	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: 1.46 lb/hour 6.4 tons/year
5. Method of Compliance (limit to 60 characters): CO compliance test and good combustion practices	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

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

Potential/Fugitive Emissions

1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control:
3. Potential Emissions: 3.70 lb/hour 16.2 tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 10 gr/100scf Reference: Vendor's fuel use and FERC limitation	7. Emissions Method Code: 3

8. Calculation of Emissions (limit to 600 characters):

(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) = 16.22 ton/yr

9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):

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.

Allowable Emissions Allowable Emissions ___1_ of __1__

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 4 ppmv	4. Equivalent Allowable Emissions: 3.70 lb/hour 16.2 tons/year

5. Method of Compliance (limit to 60 characters):

Initial performance test and fuel monitoring.

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

40 CFR 60.332(3) limits SO2 emissions to 150 ppmv.

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

Potential/Fugitive Emissions

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.89 lb/hour 3.90 tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ 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 (limit to 600 characters): (0.0066 lb/MM Btu)(134.77 MM Btu/hr) = 0.89 lb/hr (0.89 lb/hr)(8760 hr/yr)(1 ton/2000 lb) = 3.90 ton/yr	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions ___NA_ of _____

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

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

Potential/Fugitive Emissions

1. Pollutant Emitted: HAPs	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.14 lb/hour 0.6 tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 0.00103 lb/MM Btu Reference: AP-42 Table 3.1-3, 4/00	7. Emissions Method Code: 5
10. Calculation of Emissions (limit to 600 characters): (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/Fugitive Emissions Comment (limit to 200 characters): Detailed calculations provided in Attachment D. HAP emissions are also included in VOC emissions.	

Allowable Emissions Allowable Emissions ___NA__ of _____

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

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

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested 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 (limit to 200 characters):	

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

Continuous Monitoring System: Continuous Monitor __NA_ of _____

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

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

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID:_*Narrative*__ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: Supplemental information is provided in the narrative description and Attachment D accompanying these forms.

Additional Supplemental Requirements for Title V Air Operation Permit Applications

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

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

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

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable

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

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

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

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

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

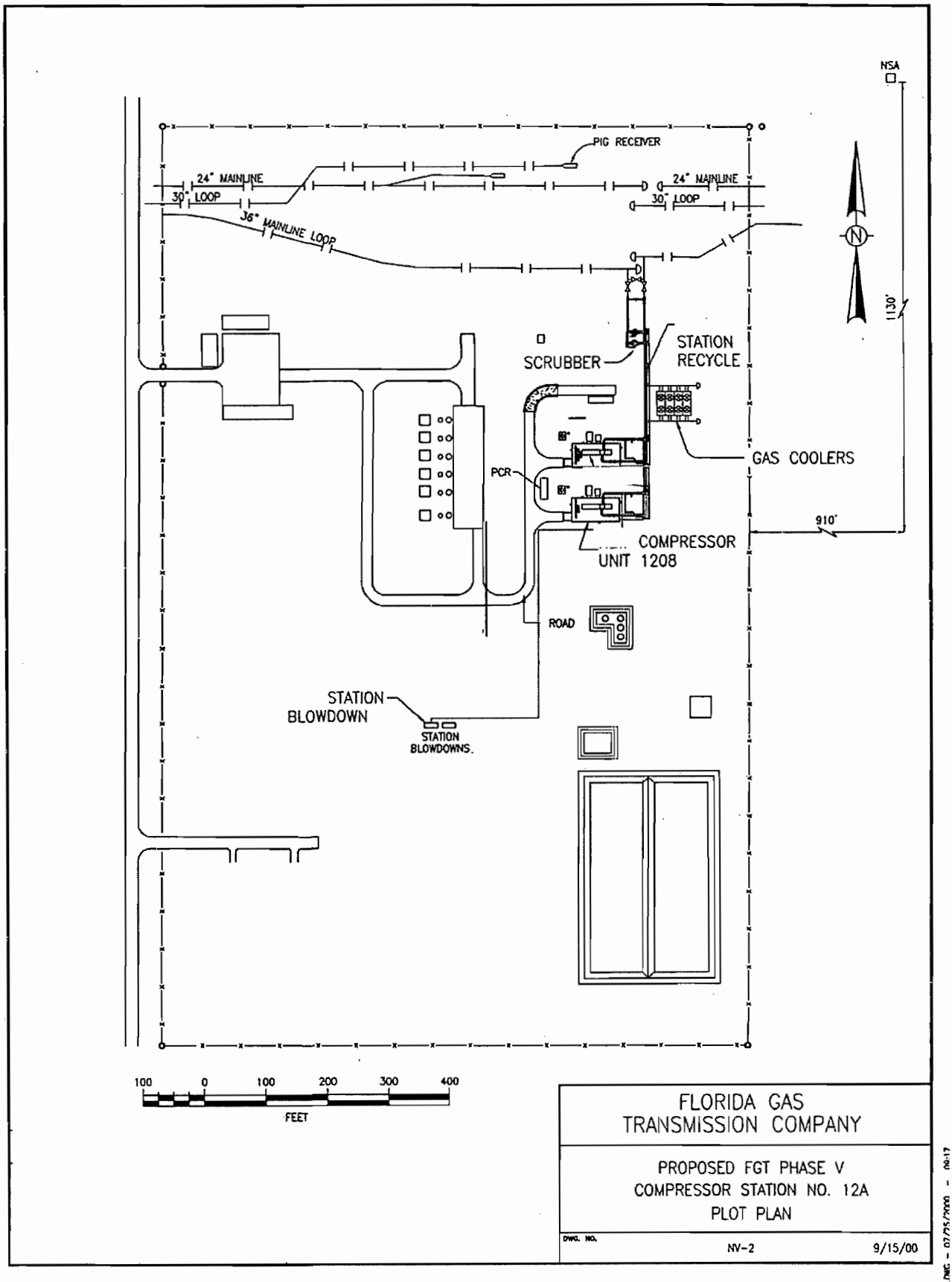
[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

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

[ ] Not Applicable

Attachment B

Plot Plan


NSA
PIG RECEIVER
24" MAINLINE
30" LOOP
24" MAINLINE
30" LOOP
36" MAINLINE LOOP
1130'
SCRUBBER
STATION
RECYCLE
GAS COOLERS
PCR
910'
COMPRESSOR
UNIT 1208
ROAD
STATION
BLOWDOWN
STATION
BLOWDOWNS.
100 0 100 200 300 400
FEET
FLORIDA GAS
TRANSMISSION COMPANY
PROPOSED FGT PHASE V
COMPRESSOR STATION NO. 12A
PLOT PLAN
DWG. NO.
NV-2
9/15/00

Attachment C

Test Reports

Engine 1208 Report Dated 06/20/02
Engine 1208 Report Dated 11/06/02
Engine 1208 Report Dated 06/12/03

Engine 1208 Report Dated 06/20/02

Table 3
Unit 1208
Full Load Testing

Company: Florida Gas Transmission Company
Facility: Compressor Station No. 12
Location: Munson, Santa Rosa County, Florida
Source: GE Nuovo Pignone Model No. PGT-10B combustion turbine
Technicians: TR, SO

Test Number	1208-C-4	1208-C-5	1208-C-6		
Date	6/20/02	6/20/02	6/20/02		
Start Time	13:03	14:12	15:19		FDEP Permit Limits
Stop Time	14:03	15:12	16:19		
Turbine/Compressor Operation		**Full Load**		*Averages*	
Gas Producer Speed (NGP, %)	10997	10997	10998	*10997*	
Power Turbine Speed (NPT, %)	6497	6486	6478	*6487*	
Turbine Load (Engine Horsepower, Hp)	9,986	9,977	9,943	*9969*	**15,700 ISO**
Turbine Capacity (as Horsepower Output)`	12,967	12,932	12,936	*12,945*	
Percent Load (% of max HP at inlet temp and %NPT)	77.0%	77.2%	76.9%	*77.0%*	
Thermal Load (% load available, Pignone)	76.5%	76.3%	76.3%	*76.4%*	
Engine Compressor Discharge Pressure (96CD, psia)	194.7	194.2	194.1	*194.4*	
Turbine Air Inlet Temperature (CT-1A, °F)	91.9	92.2	92.2	*92.1*	
Air Inlet Duct Losses (combined, psig)	1.11	1.11	1.11	*1.11*	
Power Turbine Inlet Temperature (TT-XD, °F)	960.8	961.7	961.8	*961.4*	
Gas Compressor Suction Pressure (psig)	841.2	844.2	848.2	*844.5*	
Gas Compressor Suction Temperature (°F)	82.0	82.9	82.7	*82.5*	
Gas Compressor Discharge Pressure (psig)	1159.0	1161.0	1164.2	*1161.4*	
Gas Compressor Discharge Temperature (°F)	133.8	134.2	374.2	*214.1*	
Gas Pilot Valve Command (% open)	8.70	8.74	8.74	*8.73*	
Turbine Fuel Data (Natural Gas)					
Fuel Heating Value (Btu/SCF, HHV)	1048.4	1033.5	1033.5	*1038.5*	
Fuel Specific Gravity	0.5942	0.5838	0.5838	*0.5873*	
O_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8647	8641	8641	*8643*	
CO_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1030	1026	1026	*1028*	
Total Sulfur in Fuel (grains S/per 100SCF of NG)	0.031	0.031	0.031	*0.031*	**10**
Fuel Flow (MSCFH)	105.824	105.556	105.692	*105.691*	
Heat Input (MMBtu/hr, Higher Heat Value)	110.94	109.09	109.23	*109.76*	**134.8 ISO**
Heat Input (MMBtu/hr, Lower Heat Value)	99.85	98.18	98.31	*98.78*	
Ambient Conditions					
Atmospheric Pressure ("Hg)	30.09	30.09	30.08	*30.09*	
Temperature (°F): Dry bulb	92.0	90.5	90.5	*91.0*	
(°F): Wet bulb	79.0	79.0	79.0	*79.0*	
Humidity (lbs moisture/lb of air)	0.0177	0.0180	0.0180	*0.0179*	
Measured Emissions					
NO_X (ppmv, dry basis)	15.24	15.24	15.17	*15.22*	
NO_X (ppmv, dry @ 15% O_2)	**17.7**	**17.6**	**17.5**	*17.6*	**25.0**
NO_X (ppmv @ 15% O_2, ISO Day)	19.9	20.0	19.9	*19.9*	
CO (ppmv, dry basis)	1.52	1.34	1.89	*1.58*	
CO (ppmv, dry @ 15% O_2)	**1.76**	**1.55**	**2.19**	*1.83*	**15.0**
O_2 (% volume, dry basis)	15.81	15.79	15.80	*15.80*	
CO_2 (% volume, dry basis)	2.97	2.97	2.96	*2.96*	
Visible Emissions (% opacity)	-	-	0.00	*0*	**10**
F_O (fuel factor, range = 1.600-1.836 for NG)	1.71	1.72	1.73	*1.72*	
Stack Volumetric Flow Rates					
via O_2 "F_d-factor" (SCFH, dry basis)	3.94E+06	3.86E+06	3.87E+06	*3.89E+06*	
via CO_2 "F_c-factor" (SCFH, dry basis)	3.85E+06	3.77E+06	3.79E+06	*3.80E+06*	
Calculated Emission Rates (via EPA Method 19)					
NO_X (lbs/hr)	**7.17**	**7.02**	**7.00**	*7.06*	**14.1**
CO (lbs/hr)	**0.436**	**0.376**	**0.532**	*0.448*	**5.1**

Company: Florida Gas Transmission Company
Facility: Compressor Station No. 12
Location: Munson, Santa Rosa County, Florida
Source: GE Nuovo Pignone Model No. PGT-10B combustion turbine
Technicians: TR, SO

Table 4: Summary of Results
Unit 1208, Reduced Load Testing

Test Number	1208-C-1	1208-C-2	1208-C-3	1208-C-7	1208-C-8	1208-C-9	1208-C-10	1208-C-11	1208-C-12
Date	6/20/02	6/20/02	6/20/02	6/20/02	6/20/02	6/20/02	6/20/02	6/20/02	6/20/02
Start Time	10:50	11:57	12:25	16:39	17:09	17:40	18:14	18:43	19:12
Stop Time	11:43	12:17	12:45	16:59	17:29	18:00	18:34	19:03	19:32
Turbine/Compressor Operation	Low Load			Mid-High Load			Mid-Low Load		
Gas Producer Speed (NGP, rpm)	10590	10604	10604	10986	10993	10999	10723	10692	10685
Power Turbine Speed (NPT, rpm)	5694	5694	5694	6238	6238	6238	5980	5982	5982
Turbine Horsepower (Hp)	6,916	6,830	6,788	8,944	8,980	9,022	7,976	7,983	7,894
Turbine Capacity (Pignone Curve, bhp vs. T-1/NPT)	13,196	13,063	13,023	12,944	12,944	13,003	13,142	13,281	13,326
Percent Load (% of max HP at inlet temp and %NPT)	52.4%	52.3%	52.1%	69.1%	69.4%	69.4%	60.7%	60.1%	59.2%
Thermal Load (% load available, Pignone)	60.7%	60.3%	60.4%	73.1%	70.7%	73.5%	67.8%	67.4%	67.1%
Engine Compressor Discharge Pressure (96CD, psia)	172.4	172.5	172.5	192.4	192.8	192.4	183.5	183.2	182.7
Turbine Air Inlet Temperature (CT-1A, °F)	87.5	89.9	90.7	91.7	91.9	91.5	88.4	86.3	85.5
Air Inlet Duct Losses (combined, "H_2O)	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Power Turbine Inlet Temperature (TT-XD, °F)	977.0	976.6	976.5	965.1	937.7	964.5	919.9	915.3	913.1
Gas Compressor Suction Pressure (psig)	884.4	880.7	878.0	865.4	867.4	868.8	879.3	878.2	879.6
Gas Compressor Suction Temperature (°F)	88.4	87.7	87.9	85.6	85.7	85.8	86.5	86.4	87.7
Gas Compressor Discharge Pressure (psig)	1130.8	1125.4	1122.0	1162.1	1165.0	1166.9	1152.7	1152.2	1151.3
Gas Compressor Discharge Temperature (°F)	127.9	127.2	126.9	133.2	133.2	133.1	130.3	130.0	130.8
Gas Pilot Valve Command (% open)	13.83	13.89	13.90	9.38	9.34	9.31	10.87	11.07	11.20
Turbine Fuel Data (Natural Gas)									
Fuel Heating Value (Btu/SCF, HHV)	1048.4	1048.4	1048.4	1048.4	1048.4	1048.4	1048.4	1048.4	1048.4
Fuel Specific Gravity	0.5942	0.5942	0.5942	0.5942	0.5942	0.5942	0.5942	0.5942	0.5942
O_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8647	8647	8647	8647	8647	8647	8647	8647	8647
CO_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1030	1030	1030	1030	1030	1030	1030	1030	1030
Total Sulfur in Fuel (grains/100SCF)	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031
Fuel Flow (MSCFH)	84.625	84.447	84.037	100.057	100.657	100.593	93.397	92.830	92.567
Heat Input (MMBtu/hr, Higher Heat Value)	88.72	88.53	88.10	104.90	105.52	105.46	97.91	97.32	97.04
Heat Input (MMBtu/hr, Lower Heat Value)	79.85	79.68	79.29	94.41	94.97	94.91	88.12	87.59	87.34
Ambient Conditions									
Atmospheric Pressure ("Hg)	30.12	30.12	30.12	30.06	30.06	30.06	30.06	30.06	30.06
Temperature (°F): Dry bulb	90.0	90.0	93.0	89.0	89.0	90.0	87.0	85.0	82.0
(°F): Wet bulb	80.0	79.0	80.0	79.0	79.0	79.0	78.0	77.0	77.0
Humidity (lbs moisture/lb of air)	0.0191	0.0181	0.0184	0.0184	0.0184	0.0182	0.0180	0.0176	0.0183
Cubix Measurements									
NO_X (ppmv, dry basis)	14.40	14.71	14.97	13.26	13.18	12.98	12.51	12.57	12.52
CO (ppmv, dry basis)	1.76	1.67	1.46	1.89	1.76	2.30	1.80	3.64	3.95
O_2 (% volume, dry basis)	16.32	16.38	16.44	16.02	16.04	16.05	16.24	16.23	16.22
CO_2 (% volume, dry basis)	2.63	2.62	2.61	2.84	2.84	2.81	2.71	2.71	2.71
F_O (fuel factor, range = 1.600-1.836 for NG)	1.75	1.73	1.71	1.72	1.71	1.72	1.72	1.72	1.73
Stack Volumetric Flow Rates									
via O_2 "F_d-factor" (SCFH, dry basis)	3.50E+06	3.54E+06	3.57E+06	3.89E+06	3.93E+06	3.93E+06	3.80E+06	3.77E+06	3.75E+06
via CO_2 "F_c-factor" (SCFH, dry basis)	3.48E+06	3.49E+06	3.48E+06	3.81E+06	3.82E+06	3.87E+06	3.72E+06	3.70E+06	3.69E+06
Cubix Calculated Values									
NO_X (ppmv, dry @ 15% O_2)	**18.5**	**19.2**	**19.8**	**16.0**	**16.0**	**15.8**	**15.9**	**15.9**	**15.8**
NO_X (ppmv @ 15% O_2, ISO Day)	21.7	21.9	22.7	18.3	18.3	18.0	18.1	18.2	18.3
CO (ppmv, dry @ 15% O_2)	2.26	2.18	1.94	2.29	2.13	2.80	2.29	4.60	4.98
NO_X (lbs/hr)	6.02	6.21	6.39	6.15	6.18	6.10	5.68	5.66	5.61
CO (lbs/hr)	0.447	0.429	0.380	0.535	0.502	0.657	0.499	0.998	1.078

Testing by Cubix Corporation - Austin, Texas - Gainesville, Florida

Engine 1208 Report Dated 11/06/02

TABLE 3
Summary of Results
Unit 1208

Company: Florida Gas Transmission Company
Facility: Compressor Station No. 12
Location: Munson, Santa Rosa County, Florida
Source: GE Nuovo Pignone Model No. PGT-10B combustion turbine
Technicians: LJB, JTH

Test Number	1208-C-1	1208-C-2	1208-C-3		
Date	11/6/02	11/6/02	11/6/02		
Start Time	9:25	10:45	12:00		FDEP
Stop Time	10:25	11:45	13:00		Permit
Turbine/Compressor Operation		Full Load		*Averages*	Limits
Gas Producer Speed (NGP, %)	11,003	10,997	10,998	*10,999*	
Power Turbine Speed (NPT, %)	7,130	7,103	7,071	*7,101*	
Turbine Load (Engine Horsepower, Hp)	13,648	13,523	13,442	*13,538*	15,700 ISO
Turbine Capacity (as Horsepower Output)	14,293	14,149	13,990	*14,144*	
Percent Load (% of max HP at inlet temp and %NPT)	95.5%	95.6%	96.1%	*95.7%*	
Thermal Load (% load available, Pignone)	87.3%	87.0%	86.6%	*87.0%*	
Engine Compressor Discharge Pressure (96CD, psia)	208.5	207.7	206.9	*207.7*	
Turbine Air Inlet Temperature (CT-1A, °F)	61.5	63.5	65.5	*63.5*	
Air Inlet Duct Losses (combined, psig)	1.62	1.62	1.62	*1.62*	
Power Turbine Inlet Temperature (TT-XD, °F)	936.3	938.0	939.2	*937.9*	
Gas Compressor Suction Pressure (psig)	814.3	815.7	811.5	*813.8*	
Gas Compressor Suction Temperature (°F)	78.0	78.1	78.1	*78.1*	
Gas Compressor Discharge Pressure (psig)	1189.6	1188.3	1177.8	*1185.3*	
Gas Compressor Discharge Temperature (°F)	139.0	138.7	137.9	*138.5*	
Gas Pilot Valve Command (% open)	8.00	8.00	8.00	*8.00*	
Compressor Flow (MMSCFD)	636.1	632.8	638.4	*635.8*	
Turbine Fuel Data (Natural Gas)					
Fuel Heating Value (Btu/SCF, HHV)	1035.9	1035.9	1035.9	*1035.9*	
Fuel Specific Gravity	0.5858	0.5858	0.5858	*0.5858*	
O_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8641	8641	8641	*8641*	
CO_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1028	1028	1028	*1028*	
Total Sulfur in Fuel (grains S/per 100SCF of NG)	0.133	0.133	0.133	*0.133*	10
Fuel Flow (SCFH)	121,033	120,355	119,611	*120,333*	
Heat Input (MMBtu/hr, Higher Heat Value)	125.38	124.68	123.90	*124.65*	134.8 ISO
Heat Input (MMBtu/hr, Lower Heat Value)	112.84	112.21	111.51	*112.19*	
Ambient Conditions					
Atmospheric Pressure ("Hg)	29.86	29.86	29.85	*29.86*	
Temperature (°F): Dry bulb	61.0	62.2	64.0	*62.4*	
(°F): Wet bulb	53.9	54.4	54.4	*54.2*	
Humidity (lbs moisture/lb of air)	0.0071	0.0071	0.0067	*0.0070*	
Measured Emissions					
NO_X (ppmv, dry basis)	19.10	19.17	19.07	*19.11*	
NO_X (ppmv, dry @ 15% O_2)	**21.4**	**21.4**	**21.5**	*21.4*	25.0
NO_X (ppmv @ 15% O_2, ISO Day)	21.6	21.5	21.2	*21.4*	
CO (ppmv, dry basis)	2.05	2.02	0.97	*1.68*	
CO (ppmv, dry @ 15% O_2)	**2.30**	**2.25**	**1.09**	*1.88*	15.0
O_2 (% volume, dry basis)	15.64	15.61	15.65	*15.64*	
CO_2 (% volume, dry basis)	3.12	3.11	3.10	*3.11*	
Visible Emissions (% opacity)	-	0	-	*0*	10
F_O (fuel factor, range = 1.600-1.836 for NG)	1.68	1.70	1.69	*1.69*	
Stack Volumetric Flow Rates					
via O_2 "F_d-factor" (SCFH, dry basis)	4.38E+06	4.34E+06	4.34E+06	*4.35E+06*	
via CO_2 "F_c-factor" (SCFH, dry basis)	4.20E+06	4.19E+06	4.18E+06	*4.19E+06*	
Calculated Emission Rates (via EPA Method 19)					
NO_X (lbs/hr)	**10.0**	**9.92**	**9.89**	*9.94*	14.1
CO (lbs/hr)	**0.653**	**0.636**	**0.305**	*0.531*	5.1
SO_2 (lbs/hr, based on fuel flow and fuel sulfur)	**0.0459**	**0.0457**	**0.0454**	*0.0457*	3.7

Engine 1208 Report Dated 06/12/03

Table 3: Summary of Results
Unit 1208
Full Load Testing

Company: Florida Gas Transmission Company
Facility: Compressor Station No. 12
Location: Munson, Santa Rosa County, Florida
Source: GE Nuovo Pignone Model No. PGT-10B combustion turbine
Technicians: LJB, JTH

Test Number	1208-C-10	1208-C-11	1208-C-12		
Date	6/12/03	6/12/03	6/12/03		
Start Time	13:40	16:31	17:42		FDEP
Stop Time	14:40	17:31	18:42		Permit
Turbine/Compressor Operation		**Full Load**		*Averages*	Limits
Gas Producer Speed (NGP, rpm)	10,999	11,000	10,993	*10,997*	
Power Turbine Speed (NPT, rpm)	7,256	7,473	7,499	*7,409*	
Compressor Shaft Horsepower (Turbine Horsepower, bhp)	12,425	13,102	12,973	*12,833*	15,700 ISO
Turbine Capacity (Calculated, bhp @ current conditions)	12,952	13,630	13,605	*13,396*	
Percent Load (% of turbine capacity @ current conditions)	95.9%	96.1%	95.4%	*95.8%*	
Engine Compressor Discharge Pressure (96CD, psia)	208.8	214.5	214.5	*212.6*	
Turbine Air Inlet Temperature (CT-1A, °F)	85.1	75.5	76.4	*79.0*	
Air Inlet Duct Losses (combined, psig)	2.75	2.81	2.81	*2.79*	
Power Turbine Inlet Temperature (TT-XD, °F)	946.1	934.0	933.7	*937.9*	
Inlet Guide Main Valve Command (% open)	93.8	93.8	93.8	*93.8*	
Gas Pilot Valve Command (% open)	8.70	8.56	8.58	*8.61*	
Gas Compressor Suction Pressure (psig)	824	797	797	*806*	
Gas Compressor Suction Temperature (°F)	75.6	75.4	76.4	*75.8*	
Gas Compressor Discharge Pressure (psig)	1188	1171	1183	*1181*	
Gas Compressor Discharge Temperature (°F)	131.3	134.0	136.9	*134.0*	
Compressor Flow (MMSCFD)	653.2	652.7	625.5	*643.8*	
Turbine Fuel Data (Natural Gas)					
Fuel Heating Value (Btu/SCF, HHV)	1049.3	1049.3	1049.3	*1049.3*	
Fuel Specific Gravity	0.5956	0.5956	0.5956	*0.5956*	
O_2 "F-factor" (DSCFcx/MMBtu @ 0% excess air)	8648	8648	8648	*8648*	
CO_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1032	1032	1032	*1032*	
Total Sulfur in Fuel (ppm, weight basis)	2.531	2.531	2.531	*2.531*	8000
Total Sulfur in Fuel (grains S/100 SCF natural gas fuel)	0.165	0.165	0.165	*0.165*	10
Fuel Flow (SCFH)	114,976	119,084	118,143	*117401*	
Heat Input (MMBtu/hr, Higher Heat Value)	120.64	124.95	123.96	*123.18*	134.8 ISO
Heat Input (MMBtu/hr, Lower Heat Value)	108.57	112.45	111.57	*110.86*	
Ambient Conditions					
Atmospheric Pressure ("Hg)	29.72	29.73	29.70	*29.71*	
Temperature (°F): Dry bulb	80.2	73.1	73.5	*75.6*	
(°F): Wet bulb	77.1	72.6	72.8	*74.2*	
Humidity (lbs moisture/lb of air)	0.0190	0.0169	0.0169	*0.0176*	
Measured Emissions					
NO_x (ppmv, dry basis)	16.12	16.79	16.10	*16.33*	
NO_x (ppmv, dry @ 15% O_2)	**18.3**	**19.2**	**18.3**	*18.6*	**25.0**
NO_x (ppmv @ 15% O_2, ISO Day)	**21.7**	**22.5**	**21.5**	*21.9*	**196**
CO (ppmv, dry basis)	1.12	1.78	2.02	*1.64*	
CO (ppmv, dry @ 15% O_2)	**1.28**	**2.04**	**2.31**	*1.87*	**15.0**
O_2 (% volume, dry basis)	15.70	15.74	15.72	*15.72*	
CO_2 (% volume, dry basis)	3.10	3.11	3.08	*3.10*	
Visible Emissions (% opacity)	**0**	-	-	*0*	**10**
F_O (fuel factor, range = 1.600-1.836 for NG)	1.68	1.66	1.68	*1.67*	
Stack Volumetric Flow Rates					
via O_2 "F_d-factor" (SCFH, dry basis)	4.27E+06	4.46E+06	4.41E+06	*4.38E+06*	
via CO_2 "F_c-factor" (SCFH, dry basis)	4.09E+06	4.22E+06	4.22E+06	*4.18E+06*	
Calculated Emission Rates (via EPA Method 19)					
NO_x (lbs/hr)	**8.22**	**8.94**	**8.47**	*8.54*	**14.1**
CO (lbs/hr)	**0.349**	**0.578**	**0.648**	*0.525*	**5.1**
SO_2 (lbs/hr, based on fuel flow and fuel sulfur)	**0.0541**	**0.0560**	**0.0556**	*0.0552*	**3.70**
NO_x (tons/yr)	**36.0**	**39.1**	**37.1**	*37.4*	**61.8**
SO_2 (tons/yr, based on fuel flow and fuel sulfur)	**0.24**	**0.25**	**0.24**	*0.24*	**16.2**

Testing conducted by Cubix Corporation - Gainesville, Florida

Company: Florida Gas Transmission Company
Facility: Compressor Station No. 12
Location: Munson, Santa Rosa County, Florida
Source: GE Nuovo Pignone Model No. PGT-10B combustion turbine
Technicians: LJB, JTH

Table 4: Summary of Results
Unit 1208
Reduced Load Testing

	O_2 Traverse								
Test Number	**1208-C-1**	**1208-C-2**	**1208-C-3**	**1208-C-4**	**1208-C-5**	**1208-C-6**	**1208-C-7**	**1208-C-8**	**1208-C-9**
Date	6/12/03	6/12/03	6/12/03	6/12/03	6/12/03	6/12/03	6/12/03	6/12/03	6/12/03
Start Time	8:32	9:32	10:01	10:32	11:05	11:34	12:04	12:33	13:02
Stop Time	9:22	9:52	10:21	10:52	11:25	11:54	12:24	12:53	13:22
Turbine/Compressor Operation		**Low Load**			**Mid-Low Load**			**Mid-High Load**	
Gas Producer Speed (NGP, rpm)	10,330	10,334	10,343	10,630	10,615	10,626	10,930	10,743	10,718
Power Turbine/Compressor Speed (NPT, rpm)	5,484	5,477	5,482	6,123	6,072	6,076	6,507	6,626	6,734
Compressor Shaft Horsepower (Turbine Horsepower, bhp)	6,020	5,875	5,812	8,163	8,114	8,227	10,195	9,992	9,897
Turbine Capacity (Available bhp @ current conditions)	11,731	11,688	11,598	12,106	12,025	11,961	12,207	12,286	12,373
Percent Load (% of turbine capacity @ current conditions)	51.3%	50.3%	50.1%	67.4%	67.5%	68.8%	83.5%	81.3%	80.0%
Engine Compressor Discharge Pressure (96CD, psia)	161.6	160.7	161.0	184.1	183.3	183.5	201.8	193.5	192.5
Turbine Air Inlet Temperature (CT-1A, °F)	86.9	88.0	89.0	89.9	90.4	92.0	91.8	92.3	91.6
Air Inlet Duct Losses (combined, "H_2O)	2.53	2.53	2.53	2.72	2.72	2.53	2.81	2.81	2.81
Power Turbine Inlet Temperature (TT-XD, °F)	854.2	853.6	855.4	900.6	903.6	907.1	934.6	928.0	921.6
Inlet Guide Vane Command (% open)	71.6	71.2	71.2	87.5	86.4	86.1	93.8	92.2	91.3
Gas Pilot Valve Command (% open)	15.9	16.3	16.2	9.3	9.4	9.3	9.0	9.0	9.0
Gas Compressor Suction Pressure (psig)	960	963	966	952	951	948	923	859	849
Gas Compressor Suction Temperature (°F)	78.4	78.2	78.2	77.7	77.8	77.7	79.2	75.5	75.9
Gas Compressor Discharge Pressure (psig)	1055	1048	1050.3	1067	1072	1074	1101	1159	1175
Gas Compressor Discharge Temperature (°F)	97.3	96.0	96.1	100.8	101.2	101.6	109.4	120.9	125.2
Compressor Flow (MMSCFD)	948.1	973.9	967.2	1051.8	1031.4	1021.7	1000.7	648.2	588.9
Turbine Fuel Data (Natural Gas)									
Fuel Heating Value (Btu/SCF, HHV)	1049.3	1049.3	1049.3	1049.3	1049.3	1049.3	1049.3	1049.3	1049.3
Fuel Specific Gravity	0.5956	0.5956	0.5956	0.5956	0.5956	0.5956	0.5956	0.5956	0.5956
O_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8648	8648	8648	8648	8648	8648	8648	8648	8648
CO_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1032	1032	1032	1032	1032	1032	1032	1032	1032
Total Sulfur in Fuel (grains S/100 SCF natural gas fuel)	0.0807	0.0807	0.0807	0.0807	0.0807	0.0807	0.0807	0.0807	0.0807
Fuel Flow (SCFH)	75,326	74,918	75,092	93,369	92,508	92,651	106,599	100,848	99,604
Heat Input (MMBtu/hr, Higher Heat Value)	79.04	78.61	78.79	97.97	97.06	97.21	111.85	105.82	104.51
Heat Input (MMBtu/hr, Lower Heat Value)	71.13	70.75	70.91	88.17	87.36	87.49	100.66	95.23	94.06
Ambient Conditions									
Atmospheric Pressure ("Hg)	29.77	29.75	29.75	29.75	29.75	29.74	29.74	29.74	29.74
Temperature (°F): Dry bulb	81.9	83.9	86.2	86.9	87.2	88.9	89.1	90.3	89.0
(°F): Wet bulb	78.4	78.1	78.0	78.8	78.2	78.2	77.8	78.0	78.0
Humidity (lbs moisture/lb of air)	0.0197	0.0190	0.0184	0.0189	0.0183	0.0179	0.0175	0.0174	0.0177
Measured Emissions									
NO_x (ppmv, dry basis)	14.03	14.26	14.68	12.76	13.12	13.31	14.81	14.43	14.03
CO (ppmv, dry basis)	1.77	1.60	1.47	2.07	1.63	1.55	1.60	1.51	1.52
O_2 (% volume, dry basis)	16.76	16.75	16.74	16.29	16.30	16.28	16.00	16.07	16.11
CO_2 (% volume, dry basis)	2.50	2.50	2.50	2.76	2.77	2.76	2.93	2.88	2.86
F_o (fuel factor, range = 1.600-1.836 for NG)	1.66	1.66	1.66	1.67	1.66	1.67	1.67	1.67	1.68
Stack Volumetric Flow Rates									
via O_2 "F_o-factor" (SCFH, dry basis)	3.51E+06	3.49E+06	3.48E+06	3.91E+06	3.88E+06	3.88E+06	4.20E+06	4.03E+06	4.02E+06
via CO_2 "F_c-factor" (SCFH, dry basis)	3.33E+06	3.31E+06	3.31E+06	3.73E+06	3.68E+06	3.70E+06	4.02E+06	3.86E+06	3.85E+06
Calculated Emission Rates									
NO_x (ppmv, dry @ 15% O_2)	**20.0**	**20.3**	**20.8**	**16.3**	**16.8**	**17.0**	**17.8**	**17.6**	**17.3**
NO_x (ppmv @ 15% O_2, ISO Day)	**23.9**	**23.9**	**24.1**	**19.1**	**19.4**	**19.4**	**20.2**	**19.9**	**19.7**
CO (ppmv, dry @ 15% O_2)	**2.52**	**2.28**	**2.09**	**2.65**	**2.09**	**1.99**	**1.92**	**1.84**	**1.88**
NO_x (lbs/hr)	**5.88**	**5.93**	**6.11**	**5.95**	**6.08**	**6.16**	**7.43**	**6.95**	**6.73**
CO (lbs/hr)	**0.452**	**0.406**	**0.374**	**0.589**	**0.460**	**0.438**	**0.488**	**0.443**	**0.445**
NO_x (tons/yr)	**25.8**	**26.0**	**26.8**	**26.1**	**26.6**	**27.0**	**32.6**	**30.5**	**29.5**
CO (tons/yr)	**1.98**	**1.78**	**1.64**	**2.58**	**2.01**	**1.92**	**2.14**	**1.94**	**1.95**

Testing by Cubix Corporation - Gainesville, Florida

Attachment D

Emission Calculations

Engine No. 1208 EPN: 010

CO Emissions: (Based on Vendor Data)

lb CO/hr = 7.03

tons CO = (lb CO/hr)(hr/yr)(1 ton/2000 lb)
= (7.03 lb CO/hr)(8760 hr/yr)(1 ton/2000 lb)
= 30.79

VOC Emissions: (Based on Vendor Data)

lb VOC/hr = 1.46

tons VOC/yr = (lb VOC/hr)(hr/yr)(1 ton/2000 lb)
= (1.46 lb VOC/hr)(8760 hr/yr)(1 ton/2000 lb)
= 6.39

HAPs Emissions: (Based on AP-42 Table 3.1-3, 4/00)

lb HAP/hr = (lb HAP/MMBtu)(MMBtu/hr)
= (0.00102733 lb/MMBtu)(134.7700 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)
= 16.22

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)
= 0.89

tons PM/yr = (lb PM/hr)(hr/yr)(1 ton/2000 lb)
= (0.89 lb PM/hr)(8760 hr/yr)(1 ton/2000 lb)
= 3.90

Turbine 1208 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, Table3.1-3

Florida Gas Transmission Company

1967 Commonwealth Lane, Tallahassee, FL 32303, (850) 350-5000, Fax Downstairs (850) 350-5001

January 14, 2004

UPS 2nd Day – 1Z F62 059 37 1001 159 6

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

Reference: Facility: 1130037
Compressor Station No. 12, Santa Rosa 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. 1130037-003-AC.

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 lower 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.

Attached is an application with supporting documentation for an air permit modification to change the CO and VOC emission rates and to 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.

If you have any questions or need additional information, please call me at (850) 350-5042.

Sincerely,

Jacob Krautsch
Environmental Specialist

ATTACHMENTS

CC: Rick Craig, w/o attachments
David Parham, P.E.
Duane Pierce, AQMcs, LLC
Compressor Station No. 12

Florida Gas Transmission Company

Phase V Expansion Project

Compressor Station No. 12

APPLICATION
For
AIR PERMIT
MODIFICATION

November 2003

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 Permit No. 1130037-005-AV for its existing natural gas pipeline facility near Munson, in Santa Rosa County, Florida (Compressor Station No. 12). 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. 12 is located in Santa Rosa County, Florida, north of Munson on Highway 191, approximately 5 miles north of Highway 4. 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 two existing 2,000 bhp reciprocating compressor engines by modifying the engines. 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.

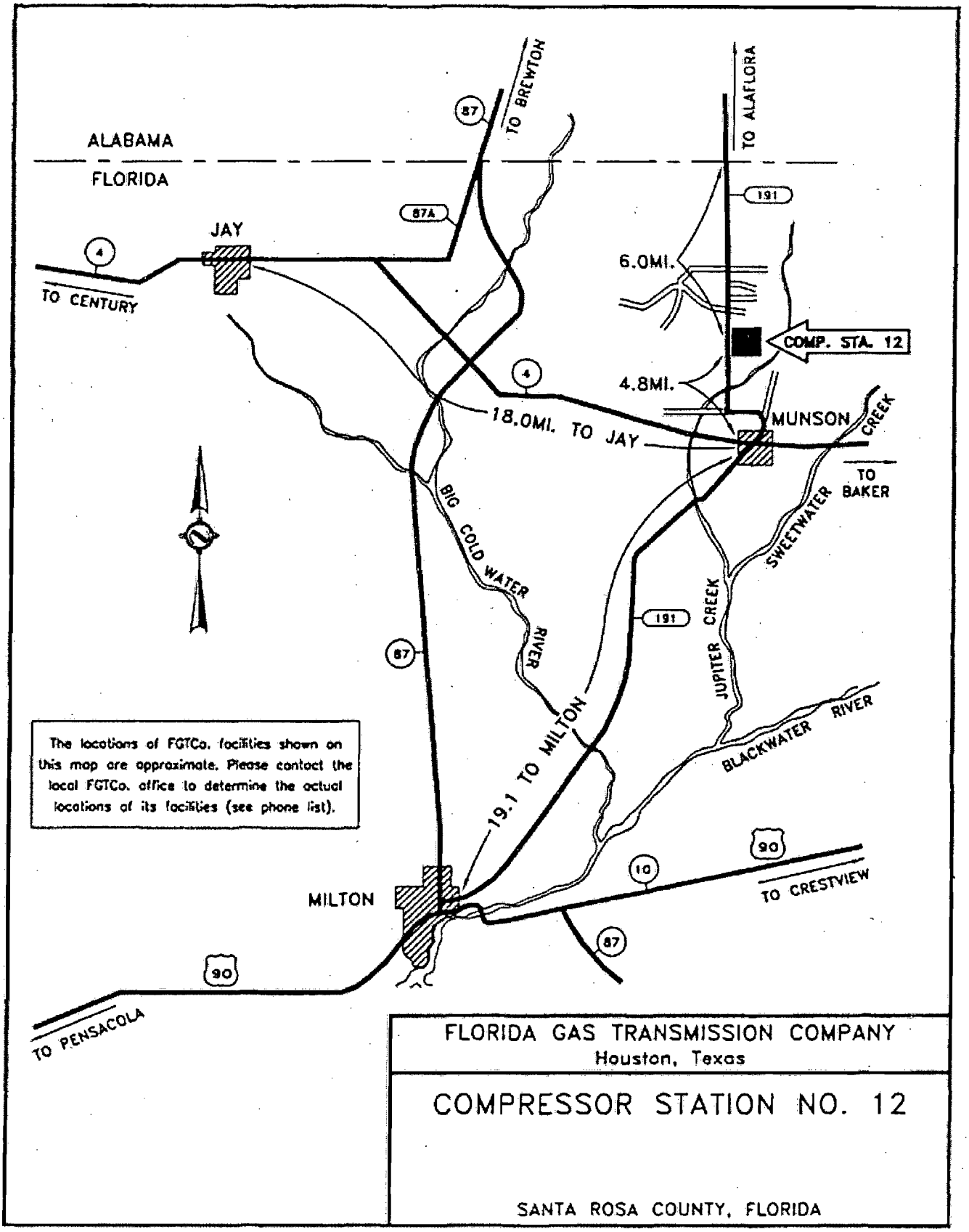
Subsequent emissions testing demonstrated that CO emissions from the turbine were much lower than expected at all loads and that the load restrictions would not have been necessary if permitting had been based on CO emission rates consistent with the emission test values. FGT is proposing to delete the 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 four additional sections. Descriptions of the existing operation at FGT's Compressor Station No. 12 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.

AQMcs


ALABAMA
FLORIDA
JAY
TO CENTURY
87
87A
TO BREWTON
TO ALAFLORA
191
6.0MI.
COMP. STA. 12
4.8MI.
MUNSON
CREEK
18.0MI. TO JAY
TO BAKER
BIG COLD WATER RIVER
SWEETWATER
JUPITER CREEK
191
87
19.1 TO MILTON
BLACKWATER RIVER
MILTON
90
10
TO CRESTVIEW
87
90
TO PENSACOLA
The locations of FGTCo. facilities shown on this map are approximate. Please contact the local FGTCo. office to determine the actual locations of its facilities (see phone list).
FLORIDA GAS TRANSMISSION COMPANY
Houston, Texas
COMPRESSOR STATION NO. 12
SANTA ROSA COUNTY, FLORIDA

2.0 PROJECT DESCRIPTION

A plot plan of FGT's Compressor Station No. 12, showing the location of the plant boundaries, the existing emission sources, and the location of the proposed engine addition, 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 project.

2.1 Existing Operations

FGT's Compressor Station No. 12 currently consists of five 2,000 bhp and one 4,100 bhp natural-gas-fired reciprocating internal combustion (IC) engines, and two natural gas-fired turbines rated at 13,000 bhp and 15,700 bhp. Table 2-1 summarizes engine manufacturer, model, and the date of installation for each of the existing engines. The original installation was made in 1958 (Compressor Engines 1201 through 1203). Engine 1204 was installed in 1966 and engine 1205 was installed in 1968. An addition referred to as Phase II was constructed in 1991 (Compressor Engine 1206) and was subject to PSD review. Compressor Engine 1207 was installed in 2001 as part of the Phase IV Expansion Project at 10,350 bhp. In 2002, as part of the Phase V Expansion, Compressor Engine No. 1207 was upgraded to 13,000 bhp and Engine No. 1208 was installed. Engines Nos. 1204 and 1205 were also modified to reduce NO_X and CO emissions in 2002 as part of the Phase V Expansion Project.

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. 1208 (EU 010). 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. Also HAP emission estimates are 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. 1208 Change

Turbine engine No. 1208 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 No.	Year of Installation	Engine Type	Manufacturer	Model	Brake Horse Power (bhp)
1201	1958	Reciprocating	Cooper-Bessemer	LS-8-SG	2,000
1202	1958	Reciprocating	Cooper-Bessemer	LS-8-SG	2,000
1203	1958	Reciprocating	Cooper-Bessemer	LS-8-SG	2,000
1204	1966	Reciprocating	Cooper-Bessemer	LS-8-SG	2,000
1205	1968	Reciprocating	Cooper-Bessemer	LS-8-SG	2,000
1206	1991	Reciprocating	Dresser-Rand	TVC-10	4,100
1207	2001	Turbine	Solar	Mars 90 T-13000S	13,000
1208	2002	Turbine	Nuovo Pignone	PGT-10B	15,700

Table 2-2 Compressor Turbine (1208) Specifications and Stack Parameters

Parameter	Design
Compressor Engine	1208
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).

The currently permitted hourly and annual emissions of regulated pollutants from the engine under normal operating conditions as presented in Table 2-3. Emissions of oxides of nitrogen (NO_X), carbon monoxide (CO) and non-methane hydrocarbons (NMHC) 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 were based on operation at 100% load for 75% of the time (6570 hr/yr) 70% load for 20% (1752 hr/yr) and 50% load for 5% of the time (438 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. 010 (Engine No. 1208) have demonstrated significantly lower CO emission rates than those represented by the manufacturer. Three separate emissions tests showed lb/hr emission rates ranging from 0.410 lb/hr to 1.694 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 worse case emission rate is at 50% load and is 1.5 lb/hr. FGT is proposing to use this limit for all loads. This will obviously be 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 7.03 lb/hr and 1.5 lb/hr at all loads.

Finally, HAP emissions have changed since 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 (1208)

Pollutant	Emission Factor	Reference	lb/hr	TPY
Nitrogen Oxides	14.1 lb/hr	Manufacturer Data	14.10	61.8
Carbon Monoxide	5.14 lb/hr @ 100% load 10.23 lb/hr @ 70% load 22.50 lb/hr @ 50% load	Manufacturer Data	7.03[a]	30.8[b]
Volatile Organic Compounds	0.29 lb/hr @ 100% load 0.80 lb/hr @ 70% load 1.46 lb/hr @ 50% load	Manufacturer Data	0.45[c]	2.0[b]
Particulate Matter	0.0066 lb/MMBtu	AP-42, Table 3.1-2a	0.89	3.9
Sulfur Dioxide	10 grains/100 scf	FERC Limit	3.70	16.2
HAPs	Various	GRI HapCalc 3.0	0.75	3.3

a) Nominal CO (annual) rate, maximum 22.50 lb/hr
b) @ 100% load for 75% of time, 70% load for 20% of time & 50% load for 5% of time
c) Nominal VOC (annual) rate, maximum 1.46 lb/hr

Table 2-4 CO Emissions Test Results for Compressor Turbine Engine (1208)

Test on 06/20/02						
	Test Results			Permit Limits		
Load	CO ppmv @ 15% O2	CO lb/hr	CO tpy*	CO ppmv @ 15% O2	CO lb/hr	CO tpy**
52.3%	2.13	0.419	1.83	75	22.5	30.8
60.0%	3.40	0.858	3.76	75	22.5	30.8
69.3%	2.41	1.694	7.42	30	10.2	30.8
77.0%	1.83	0.448	1.96	15	5.1	30.8

* Assumes 8760 hrs/yr

** 30.8 tpy limit is based on load restrictions

Test on 11/06/02						
	Test Results			Permit Limits		
Load	CO ppmv @ 15% O2	CO lb/hr	CO tpy*	CO ppmv @ 15% O2	CO lb/hr	CO tpy**
95.7%	1.88	0.531	2.33	15	5.1	30.8

* Assumes 8760 hrs/yr

** 30.8 tpy limit is based on load restrictions

Test on 06/12/03						
	Test Results			Permit Limits		
Load	CO ppmv @ 15% O2	CO lb/hr	CO tpy*	CO ppmv @ 15% O2	CO lb/hr	CO tpy**
50.6%	2.30	0.410	1.80	75	22.5	30.8
67.9%	2.24	0.496	2.17	75	22.5	30.8
81.6%	1.88	0.459	2.01	30	10.2	30.8
95.8%	1.87	0.525	2.30	15	5.1	30.8

* Assumes 8760 hrs/yr

** 30.8 tpy limit is based on load restrictions

Table 2-5 Proposed Emissions for Compressor Turbine Engine (1208)

Pollutant	Emission Factor	Reference	lb/hr	TPY
Nitrogen Oxides	14.1 lb/hr	Manufacturer Data	14.10	61.8
Carbon Monoxide	7.03 lb/hr	Test Data [a]	7.03	30.8
Volatile Organic Compounds	1.5 lb/hr	Manufacturer Data	1.5	6.6
Particulate Matter	0.0066 lb/MMBtu	AP-42, Table 3.1-2a	0.89	3.9
Sulfur Dioxide	10 grains/100 scf	FERC Limit	3.70	16.2
HAPs	Various see Attachment D	AP-42, Table 3.1-3	0.14	0.6

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 4.4 tpy. The calculations used to estimate emissions are presented in Attachment C.

2.2.3 Proposed Permit Provision Changes

FGT proposes the following changes to the current operating permit (Permit No. 1130037-005-AV).

Section III. Subsection E. Requirement E3

Current:

E.3 Restricted Hours of 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 2190 hours during any consecutive 12 months. Of this authorized low-load operation, operation between 50% and 70% of base load shall not exceed 438 hours during any consecutive 12 months. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; construction permit 1130037-003-AC, issued August 15, 2001]

Proposed:

E.3 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.; Construction Permit 1130037-003-AC, issued August 15, 2001]

Section III. Subsection E. Requirement E4

Current:

E.4 Emissions from the gas turbine shall not exceed the following limits:

		Equivalent Emissions	
Pollutant	Standards	lb/hr	tons/year
Nitrogen Oxides	25.0 ppmvd @ 15% O2	14.1	61.8
CO	15.0 ppmvd at 90-100%	5.1	30.8
	30.0 ppmvd at 70-90%	10.2	
	75.0 ppmvd at 50-70%	22.5	
	(all @ 15% O_2)		
SO2	10.0 grains of sulfur/100 SCF	3.7	16.2
Opacity	10% opacity, 6-minute average		
PM	Good combustion practices	0.9	3.9
VOC	Good combustion practice at 90-100%	0.3	2.0
	Good combustion practice at 70-90%	0.8	
	Good combustion practice at 50-70%	1.5	

Proposed:

E.4 Emissions from the gas turbine shall not exceed the following limits:

		Equivalent Emissions	
Pollutant	Standards	lb/hr	tons/year
Nitrogen Oxides	25.0 ppmvd @ 15% O_2	14.1	61.8
CO	21.0 ppmvd	7.03	30.8
SO2	10.0 grains of sulfur/100 SCF	3.7	16.2
Opacity	10% opacity, 6-minute average		
PM	Good combustion practices	0.9	3.9
VOC	Good combustion practice	1.5	6.6

Section III. Subsection E. Requirement E11

Current:

E.11 Operation of this turbine compressor shall be monitored by an autoniated gas turbine control system monitoring and recording heat input (MMBtu), power output (bhp), and hours of gas turbine operation within each of the following load ranges: 50% to 70% load, 70% 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 70% load; hours of gas turbine operation between 70% 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 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., Construction Permit 1130037-003-AC issued August 15, 2001]

Proposed:

E.11 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., Construction Permit 1130037-003-AC issued August 15, 2001]

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. 12.

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. 12.

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. 12 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. 1208

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 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.

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(a)(2)	Engine No. 1208 Gas Turbine	Gas	NO_2	>10 MM Btu/hr	122 MM Btu/hr	196 ppm_v	25 ppm_v
GG	60.333(a)	Engine No. 1208 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)

Currently the only 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.

40 CFR 63 Subpart YYYY has been proposed for turbines, but these regulations have not been promulgated at this time.

3.2 Florida State Air Quality Regulations

Compressor Station No. 12 is currently operating under Permit No.1130037-005-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. 12 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.

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 Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

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

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: Florida Gas Transmission Company	
2. Site Name: Compressor Station No. 12	
3. Facility Identification Number: 1130037 [ ] Unknown	
4. Facility Location: Street Address or Other Locator: Rt. 1, Box 146 City: Milton County: Santa Rosa Zip Code: 32570-9740	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: Jacob Krautsch, Division Environmental Specialist
2. Application Contact Mailing Address: Organization/Firm: Florida Gas Transmission Company Street Address: 1967 Commonwealth Lane City: Tallahassee State: FL Zip Code: 32303
3. Application Contact Telephone Numbers: Telephone: (850) 350-5042 Fax: (850) 350-5001

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	1-15-04
2. Permit Number:	1130037- 008-AC
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

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

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

[ ] Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

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

Current construction permit number: _____

Operation permit number to be revised: _____

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

Operation permit number to be revised/corrected: ____ 1130037-004-AV_____

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

Operation permit number to be revised: _____

Reason for revision: _____

Air Construction Permit Application

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

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

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

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

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:
   Rick Craig, Vice President, Southeastern Operations

2. Owner/Authorized Representative or Responsible Official Mailing Address:
   Organization/Firm: Florida Gas Transmission Company
   Street Address: P.O. Box 1188
   City: Houston State: TX Zip Code: 77251

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
   Telephone: (713) 646-7227 - Fax: (713) 646-6128

4. Owner/Authorized Representative or Responsible Official Statement:

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

Rick Craig 12/16/03

Signature Date

* Attach letter of authorization if not currently on file.

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 Fax: (407)838-7101

4. Professional Engineer Statement:

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

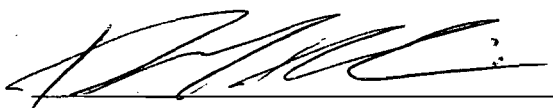
(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions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

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

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

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

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [X], 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

12/12/03

Date

(seal)

* Attach any exception to certification statement.

DAVID PARHAM, P.E.
P.E. NUMBER 50834
601 SOUTH LAKE DESTINY DRIVE, SUITE 450
MAITLAND, FLORIDA 32794-5100

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
010	Turbine Compressor Engine No. 1208, 15,700 bhp, Natural Gas Fired	NA	$0

Application Processing Fee

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

Construction/Modification Information

1. Description of Proposed Project or Alterations:

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 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.

2. Projected or Actual Date of Commencement of Construction: 12/01/03

3. Projected Date of Completion of Construction: 12/31/03

Application Comment

This proposed modification is intended to adjust the current permitted emission rates that were based on manufacturer estimates to rates that are based on emissions testing and that more accurately reflect the actual emission rates of the turbine.

The existing facility is currently operating under Permit No. 1130037-005-AV.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: 16 East (km): 510.83 North (km): 3419.03			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 30/54/42 Longitude (DD/MM/SS): 86/53/12			
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 (limit to 500 characters): Compressor Station No. 12 is an existing natural gas pipeline compressor station with six reciprocating compressor engines and two compressor turbines.			

Facility Contact

1. Name and Title of Facility Contact: Wesley Orso, Team Environmental Leader
2. Facility Contact Mailing Address: Organization/Firm: Florida Gas Transmission Company Street Address: Rt. 1, Box 146 City: Milton State: FL Zip Code: 32570-9740
3. Facility Contact Telephone Numbers: Telephone: (850) 850-5200 Fax: (850) 850-5201

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source? [ ] Unknown
2. [X] Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?
3. [ ] Synthetic Minor Source of Pollutants Other than HAPs?
4. [X] Major Source of Hazardous Air Pollutants (HAPs)?
5. [ ] Synthetic Minor Source of HAPs?
6. [ ] One or More Emissions Units Subject to NSPS?
7. [ ] One or More Emission Units Subject to NESHAP?
8. [ ] Title V Source by EPA Designation?
9. Facility Regulatory Classifications Comment (limit to 200 characters):

List of Applicable Regulations

FDEP Title V Core List	
62-296-320(4)(b)1 General Visible Emissions Standards	
40 CFR 60, Subpart GG Standards of Performance for Stationary Gas-fired Turbines	

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	tons/year	4. Basis for Emissions Cap	5. Pollutant Comment
NO_X	A				
CO	A				
VOC	B				
SO_2	B				
PM	B				
HAPs	A				

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location:
   [X]Attached, Document ID: *Narrative Fig. 1-1* [ ] Not Applicable [ ] Waiver Requested

2. Facility Plot Plan:
   [X] Attached, Document ID: *Att. B* [ ] Not Applicable [X] Waiver Requested

3. Process Flow Diagram(s):
   [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested

4. Precautions to Prevent Emissions of Unconfined Particulate Matter:
   [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested

5. Fugitive Emissions Identification:
   [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested

6. Supplemental Information for Construction Permit Application:
   [ ] Attached, Document ID:___ [X] Not Applicable

7. Supplemental Requirements Comment:

Attachment B contains a plot plan.

Attachment C consists three test report summaries for turbine 1208.

Attachment D has supporting calculations.

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities:
   [ ] Attached, Document ID:_____ [X] Not Applicable

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

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

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

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

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

14. Compliance Report and Plan:
    [ ] Attached, Document ID:_____ [X] Not Applicable

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

III. EMISSIONS UNIT INFORMATION

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

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

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

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

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

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

2. Regulated or Unregulated Emissions Unit? (Check one)

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

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

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

15,700 bhp natural gas fired turbine compressor unit, Engine No. 1208

4. Emissions Unit Identification Number:
[ ] No ID
ID: 010

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	03/02	49	[ ]

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

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 Control Equipment

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

The proposed engine incorporates dry, low NOX combustion technology.

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

Emissions Unit Details

1. Package Unit:
   Manufacturer: Pignone
   Model Number: PGT10B
2. Generator Nameplate Rating: MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

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

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		134.77	
2. Maximum Incineration Rate:	NA	lb/hr	
3. Maximum Process or Throughput Rate:	NA		
4. Maximum Production Rate:	NA		
5. Requested Maximum Operating Schedule:			
	24 hours/day		7 days/week
	52 weeks/year		8760 hours/year

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

Heat input is 134.77 MM Btu/hr based on vendor specifications of 122.52 MM Btu/hr plus 10%.

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

FDEP Title V Core List	
62-296.320(4)(b)1 General Visible Emissions Standards	
40 CFR 60, Subpart GG Standards of Performance for Stationary Gas-fired	

D. EMISSI2ON POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? 1208	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): 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: 16 East (km): 510.830 North (km): 3419.030		
14. Emission Point Comment (limit to 200 characters):		

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

Segment Description and Rate: Segment __1__ of __1__

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
Natural gas 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 (limit to 200 characters): 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 _NA__ of _____

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

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC			EL
SO_2			EL
PM			EL
NO_X			EL
CO			EL
PM_{10}			EL
HAPs			5.0NS

Emissions Unit Information Section ___1___ **of** ___1___

Pollutant Detail Information Page ___1__ **of** ___6___

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

Potential/Fugitive Emissions

1. Pollutant Emitted: NOX	2. Total Percent Efficiency of Control:
3. Potential Emissions: 14.10 lb/hour 61.8 tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 14.1 lb/hr Reference: Vendor's data	7. Emissions Method Code: 5
8. Calculation of Emissions (limit to 600 characters): (14.10 lb/hr)(1 ton/2000 lb)(8760hr/1 yr) = 61.76 tons/year	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Vendor's data based on ISO conditions and site elevation.	

Allowable Emissions Allowable Emissions ___1__ of __1__

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions: NA
3. Requested Allowable Emissions and Units: 25 ppmv	4. Equivalent Allowable Emissions: 14.10 lb/hour 61.8 tons/year
5. Method of Compliance (limit to 60 characters): Initial performance test.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): 40 CFR 60.332(3) limits NOX emissions to 196 ppmv.	

Emissions Unit Information Section ___1___ **of** ___1___

Pollutant Detail Information Page ___4__ **of** ___6___

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

Potential/Fugitive Emissions

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control:
3. Potential Emissions: 7.03 lb/hour 30.8 tons/year	4. Synthetically Limited? [Y]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 7.03 lb/hr Reference: Test data	7. Emissions Method Code: 1
8. Calculation of Emissions (limit to 600 characters): (7.03 lb/hr)(1 ton/2000 lb)(8760 hr/yr) = 30.79 tons/yr	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Emissions based on three separate test events.	

Allowable Emissions Allowable Emissions ___1_ of __1___

1. Basis for Allowable Emissions Code: ESCPSD	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: 7.03 lb/hour 30.8 tons/year
5. Method of Compliance (limit to 60 characters): Compliance test and Recordkeeping of hours of operation and load.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

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

Potential/Fugitive Emissions

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:
3. Potential Emissions: 1.46 lb/hour 6.4 tons/year	4. Synthetically Limited? [Y]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 1.46 lb/hr Reference: Vendor's data	7. Emissions Method Code: 5
8. Calculation of Emissions (limit to 600 characters): (1.46 lb/hr)(1 ton/2000 lb)(8760 hr/yr) = 6.39 tons/yr	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Vendor's data based on ISO conditions at lowest load for total hydrocarbons (THC). VOCs assumed to be 10% of THC	

Allowable Emissions Allowable Emissions __1__ of __1_

1. Basis for Allowable Emissions Code: ESCPSD	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: 1.46 lb/hour 6.4 tons/year
5. Method of Compliance (limit to 60 characters): CO compliance test and good combustion practices	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

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

Potential/Fugitive Emissions

1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control:
3. Potential Emissions: 3.70 lb/hour 16.2 tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 10 gr/100scf Reference: Vendor's fuel use and FERC limitation	7. Emissions Method Code: 3

8. Calculation of Emissions (limit to 600 characters):

(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) = 16.22 ton/yr

9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):

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.

Allowable Emissions Allowable Emissions ___1_ of __1__

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 4 ppmv	4. Equivalent Allowable Emissions: 3.70 lb/hour 16.2 tons/year

5. Method of Compliance (limit to 60 characters):

Initial performance test and fuel monitoring.

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

40 CFR 60.332(3) limits SO2 emissions to 150 ppmv.

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

Potential/Fugitive Emissions

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.89 lb/hour 3.90 tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ 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 (limit to 600 characters): (0.0066 lb/MM Btu)(134.77 MM Btu/hr) = 0.89 lb/hr (0.89 lb/hr)(8760 hr/yr)(1 ton/2000 lb) = 3.90 ton/yr	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions ___NA_ of _____

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

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

Potential/Fugitive Emissions

1. Pollutant Emitted: HAPs	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.14 lb/hour 0.6 tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 0.00103 lb/MM Btu Reference: AP-42 Table 3.1-3, 4/00	7. Emissions Method Code: 5
10. Calculation of Emissions (limit to 600 characters): (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/Fugitive Emissions Comment (limit to 200 characters): Detailed calculations provided in Attachment D. HAP emissions are also included in VOC emissions.	

Allowable Emissions Allowable Emissions ___NA__ of _____

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

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

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested 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 (limit to 200 characters):	

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

Continuous Monitoring System: Continuous Monitor __NA_ of _____

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

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

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID:_*Narrative*__ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: Supplemental information is provided in the narrative description and Attachment D accompanying these forms.

Additional Supplemental Requirements for Title V Air Operation Permit Applications

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

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

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

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable

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

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

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

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

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

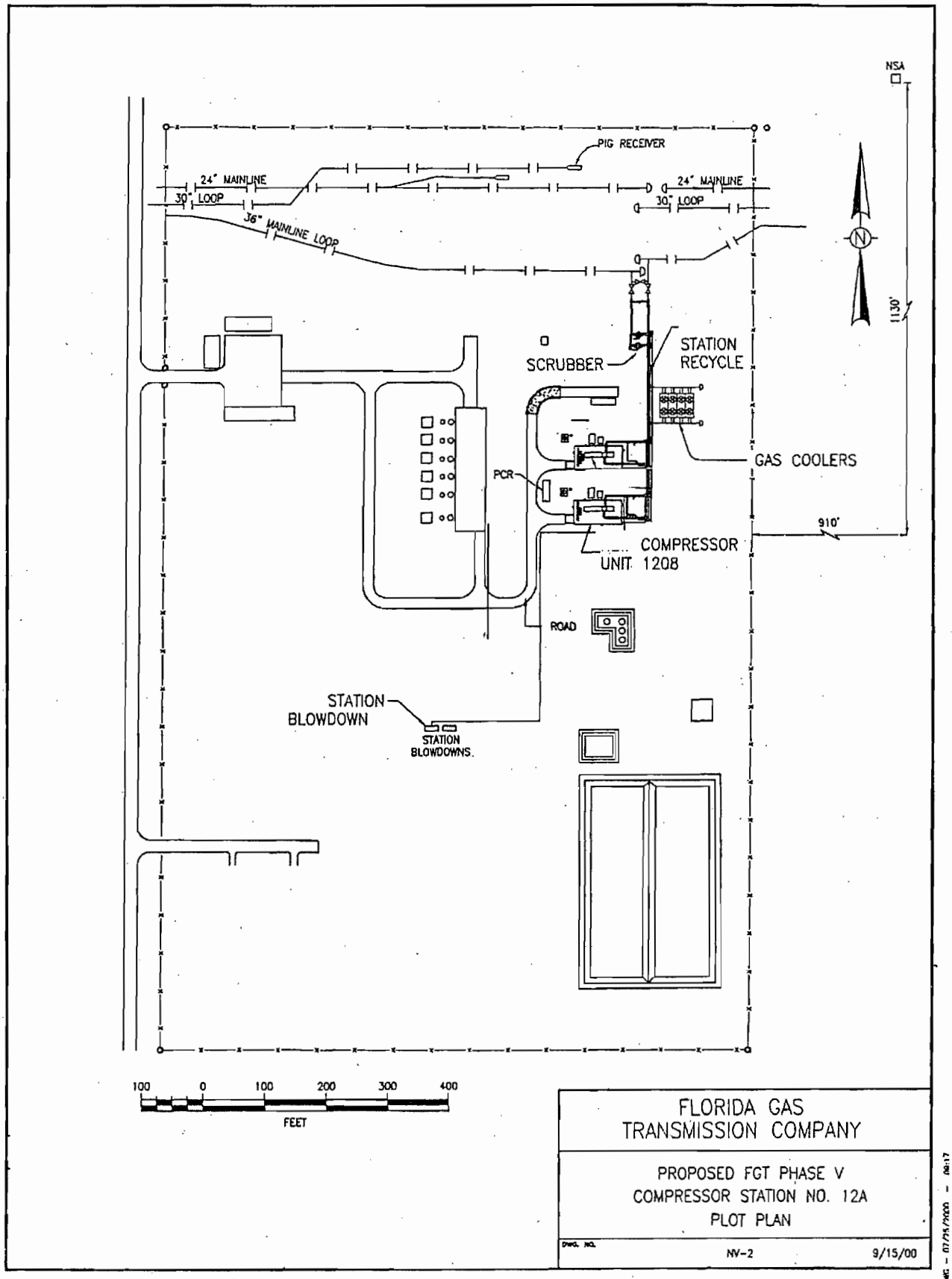
[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

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

[ ] Not Applicable

Attachment B

Plot Plan


NSA
PIG RECEIVER
24" MAINLINE
30" LOOP
24" MAINLINE
30" LOOP
36" MAINLINE LOOP
N
1130'
SCRUBBER
STATION
RECYCLE
GAS COOLERS
PCR
910'
COMPRESSOR
UNIT 1208
ROAD
STATION
BLOWDOWN
STATION
BLOWDOWNS.
100 0 100 200 300 400
FEET
FLORIDA GAS
TRANSMISSION COMPANY
PROPOSED FGT PHASE V
COMPRESSOR STATION NO. 12A
PLOT PLAN
DWG. NO.
NV-2
9/15/00

Attachment C

Test Reports

Engine 1208 Report Dated 06/20/02
Engine 1208 Report Dated 11/06/02
Engine 1208 Report Dated 06/12/03

Engine 1208 Report Dated 06/20/02

Table 3
Unit 1208
Full Load Testing

Company: Florida Gas Transmission Company
Facility: Compressor Station No. 12
Location: Munson, Santa Rosa County, Florida
Source: GE Nuovo Pignone Model No. PGT-10B combustion turbine
Technicians: TR, SO

Test Number	1208-C-4	1208-C-5	1208-C-6		
Date	6/20/02	6/20/02	6/20/02		
Start Time	13:03	14:12	15:19		FDEP Permit Limits
Stop Time	14:03	15:12	16:19		
Turbine/Compressor Operation		**Full Load**		*Averages*	
Gas Producer Speed (NGP, %)	10997	10997	10998	*10997*	
Power Turbine Speed (NPT, %)	6497	6486	6478	*6487*	
Turbine Load (Engine Horsepower, Hp)	9,986	9,977	9,943	*9969*	15,700 ISO
Turbine Capacity (as Horsepower Output)`	12,967	12,932	12,936	*12,945*	
Percent Load (% of max HP at inlet temp and %NPT)	77.0%	77.2%	76.9%	*77.0%*	
Thermal Load (% load available, Pignone)	76.5%	76.3%	76.3%	*76.4%*	
Engine Compressor Discharge Pressure (96CD, psia)	194.7	194.2	194.1	*194.4*	
Turbine Air Inlet Temperature (CT-1A, °F)	91.9	92.2	92.2	*92.1*	
Air Inlet Duct Losses (combined, psig)	1.11	1.11	1.11	*1.11*	
Power Turbine Inlet Temperature (TT-XD, °F)	960.8	961.7	961.8	*961.4*	
Gas Compressor Suction Pressure (psig)	841.2	844.2	848.2	*844.5*	
Gas Compressor Suction Temperature (°F)	82.0	82.9	82.7	*82.5*	
Gas Compressor Discharge Pressure (psig)	1159.0	1161.0	1164.2	*1161.4*	
Gas Compressor Discharge Temperature (°F)	133.8	134.2	374.2	*214.1*	
Gas Pilot Valve Command (% open)	8.70	8.74	8.74	*8.73*	
Turbine Fuel Data (Natural Gas)					
Fuel Heating Value (Btu/SCF, HHV)	1048.4	1033.5	1033.5	*1038.5*	
Fuel Specific Gravity	0.5942	0.5838	0.5838	*0.5873*	
O_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8647	8641	8641	*8643*	
CO_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1030	1026	1026	*1028*	
Total Sulfur in Fuel (grains S/per 100SCF of NG)	0.031	0.031	0.031	*0.031*	10
Fuel Flow (MSCFH)	105.824	105.556	105.692	*105.691*	
Heat Input (MMBtu/hr, Higher Heat Value)	110.94	109.09	109.23	*109.76*	134.8 ISO
Heat Input (MMBtu/hr, Lower Heat Value)	99.85	98.18	98.31	*98.78*	
Ambient Conditions					
Atmospheric Pressure ("Hg)	30.09	30.09	30.08	*30.09*	
Temperature (°F): Dry bulb	92.0	90.5	90.5	*91.0*	
(°F): Wet bulb	79.0	79.0	79.0	*79.0*	
Humidity (lbs moisture/lb of air)	0.0177	0.0180	0.0180	*0.0179*	
Measured Emissions					
NO_X (ppmv, dry basis)	15.24	15.24	15.17	*15.22*	
NO_X (ppmv, dry @ 15% O_2)	**17.7**	**17.6**	**17.5**	*17.6*	**25.0**
NO_X (ppmv @ 15% O_2, ISO Day)	19.9	20.0	19.9	*19.9*	
CO (ppmv, dry basis)	1.52	1.34	1.89	*1.58*	
CO (ppmv, dry @ 15% O_2)	**1.76**	**1.55**	**2.19**	*1.83*	**15.0**
O_2 (% volume, dry basis)	15.81	15.79	15.80	*15.80*	
CO_2 (% volume, dry basis)	2.97	2.97	2.96	*2.96*	
Visible Emissions (% opacity)	-	-	0.00	*0*	10
F_O (fuel factor, range = 1.600-1.836 for NG)	1.71	1.72	1.73	*1.72*	
Stack Volumetric Flow Rates					
via O_2 "F_d-factor" (SCFH, dry basis)	3.94E+06	3.86E+06	3.87E+06	*3.89E+06*	
via CO_2 "F_c-factor" (SCFH, dry basis)	3.85E+06	3.77E+06	3.79E+06	*3.80E+06*	
Calculated Emission Rates (via EPA Method 19)					
NO_X (lbs/hr)	**7.17**	**7.02**	**7.00**	*7.06*	**14.1**
CO (lbs/hr)	**0.436**	**0.376**	**0.532**	*0.448*	**5.1**

Company: Florida Gas Transmission Company
Facility: Compressor Station No. 12
Location: Munson, Santa Rosa County, Florida
Source: GE Nuovo Pignone Model No. PGT-10B combustion turbine
Technicians: TR, SO

Table 4: Summary of Results
Unit 1208, Reduced Load Testing

Test Number	1208-C-1	1208-C-2	1208-C-3	1208-C-7	1208-C-8	1208-C-9	1208-C-10	1208-C-11	1208-C-12
Date	6/20/02	6/20/02	6/20/02	6/20/02	6/20/02	6/20/02	6/20/02	6/20/02	6/20/02
Start Time	10:50	11:57	12:25	16:39	17:09	17:40	18:14	18:43	19:12
Stop Time	11:43	12:17	12:45	16:59	17:29	18:00	18:34	19:03	19:32
Turbine/Compressor Operation	Low Load			Mid-High Load			Mid-Low Load		
Gas Producer Speed (NGP, rpm)	10590	10604	10604	10986	10993	10999	10723	10692	10685
Power Turbine Speed (NPT, rpm)	5694	5694	5694	6238	6238	6238	5980	5982	5982
Turbine Horsepower (Hp)	6,916	6,830	6,788	8,944	8,980	9,022	7,976	7,983	7,894
Turbine Capacity (Pignone Curve, bhp vs. T-1/NPT)	13,196	13,063	13,023	12,944	12,944	13,003	13,142	13,281	13,326
Percent Load (% of max HP at inlet temp and %NPT)	52.4%	52.3%	52.1%	69.1%	69.4%	69.4%	60.7%	60.1%	59.2%
Thermal Load (% load available, Pignone)	60.7%	60.3%	60.4%	73.1%	70.7%	73.5%	67.8%	67.4%	67.1%
Engine Compressor Discharge Pressure (96CD, psia)	172.4	172.5	172.5	192.4	192.8	192.4	183.5	183.2	182.7
Turbine Air Inlet Temperature (CT-1A, °F)	87.5	89.9	90.7	91.7	91.9	91.5	88.4	86.3	85.5
Air Inlet Duct Losses (combined, "H_2O)	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Power Turbine Inlet Temperature (TT-XD, °F)	977.0	976.6	976.5	965.1	937.7	964.5	919.9	915.3	913.1
Gas Compressor Suction Pressure (psig)	884.4	880.7	878.0	865.4	867.4	868.8	879.3	878.2	879.6
Gas Compressor Suction Temperature (°F)	88.4	87.7	87.9	85.6	85.7	85.8	86.5	86.4	87.7
Gas Compressor Discharge Pressure (psig)	1130.8	1125.4	1122.0	1162.1	1165.0	1166.9	1152.7	1152.2	1151.3
Gas Compressor Discharge Temperature (°F)	127.9	127.2	126.9	133.2	133.2	133.1	130.3	130.0	130.8
Gas Pilot Valve Command (% open)	13.83	13.89	13.90	9.38	9.34	9.31	10.87	11.07	11.20
Turbine Fuel Data (Natural Gas)									
Fuel Heating Value (Btu/SCF, HHV)	1048.4	1048.4	1048.4	1048.4	1048.4	1048.4	1048.4	1048.4	1048.4
Fuel Specific Gravity	0.5942	0.5942	0.5942	0.5942	0.5942	0.5942	0.5942	0.5942	0.5942
O_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8647	8647	8647	8647	8647	8647	8647	8647	8647
CO_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1030	1030	1030	1030	1030	1030	1030	1030	1030
Total Sulfur in Fuel (grains/100SCF)	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031
Fuel Flow (MSCFH)	84.625	84.447	84.037	100.057	100.657	100.593	93.397	92.830	92.567
Heat Input (MMBtu/hr, Higher Heat Value)	88.72	88.53	88.10	104.90	105.52	105.46	97.91	97.32	97.04
Heat Input (MMBtu/hr, Lower Heat Value)	79.85	79.68	79.29	94.41	94.97	94.91	88.12	87.59	87.34
Ambient Conditions									
Atmospheric Pressure ("Hg)	30.12	30.12	30.12	30.06	30.06	30.06	30.06	30.06	30.06
Temperature (°F): Dry bulb	90.0	90.0	93.0	89.0	89.0	90.0	87.0	85.0	82.0
(°F): Wet bulb	80.0	79.0	80.0	79.0	79.0	79.0	78.0	77.0	77.0
Humidity (lbs moisture/lb of air)	0.0191	0.0181	0.0184	0.0184	0.0184	0.0182	0.0180	0.0176	0.0183
Cubix Measurements									
NO_x (ppmv, dry basis)	14.40	14.71	14.97	13.26	13.18	12.98	12.51	12.57	12.52
CO (ppmv, dry basis)	1.76	1.67	1.46	1.89	1.76	2.30	1.80	3.64	3.95
O_2 (% volume, dry basis)	16.32	16.38	16.44	16.02	16.04	16.05	16.24	16.23	16.22
CO_2 (% volume, dry basis)	2.63	2.62	2.61	2.84	2.84	2.81	2.71	2.71	2.71
F_o (fuel factor, range = 1.600-1.836 for NG)	1.75	1.73	1.71	1.72	1.71	1.72	1.72	1.72	1.73
Stack Volumetric Flow Rates									
via O_2 "F_d-factor" (SCFH, dry basis)	3.50E+06	3.54E+06	3.57E+06	3.89E+06	3.93E+06	3.93E+06	3.80E+06	3.77E+06	3.75E+06
via CO_2 "F_c-factor" (SCFH, dry basis)	3.48E+06	3.49E+06	3.48E+06	3.81E+06	3.82E+06	3.87E+06	3.72E+06	3.70E+06	3.69E+06
Cubix Calculated Values									
NO_x (ppmv, dry @ 15% O_2)	**18.5**	**19.2**	**19.8**	**16.0**	**16.0**	**15.8**	**15.9**	**15.9**	**15.8**
NO_x (ppmv @ 15% O_2, ISO Day)	21.7	21.9	22.7	18.3	18.3	18.0	18.1	18.2	18.3
CO (ppmv, dry @ 15% O_2)	2.26	2.18	1.94	2.29	2.13	2.80	2.29	4.60	4.98
NO_x (lbs/hr)	6.02	6.21	6.39	6.15	6.18	6.10	5.68	5.66	5.61
CO (lbs/hr)	0.447	0.429	0.380	0.535	0.502	0.657	0.499	0.998	1.078

Testing by Cubix Corporation - Austin, Texas - Gainesville, Florida

Engine 1208 Report Dated 11/06/02

TABLE 3
Summary of Results
Unit 1208

Company: Florida Gas Transmission Company
Facility: Compressor Station No. 12
Location: Munson, Santa Rosa County, Florida
Source: GE Nuovo Pignone Model No. PGT-10B combustion turbine
Technicians: LJB, JTH

Test Number	1208-C-1	1208-C-2	1208-C-3		
Date	11/6/02	11/6/02	11/6/02		
Start Time	9:25	10:45	12:00		FDEP Permit
Stop Time	10:25	11:45	13:00		
Turbine/Compressor Operation		Full Load		*Averages*	Limits
Gas Producer Speed (NGP, %)	11,003	10,997	10,998	*10,999*	
Power Turbine Speed (NPT, %)	7,130	7,103	7,071	*7,101*	
Turbine Load (Engine Horsepower, Hp)	13,648	13,523	13,442	*13,538*	15,700 ISO
Turbine Capacity (as Horsepower Output)	14,293	14,149	13,990	*14,144*	
Percent Load (% of max HP at inlet temp and %NPT)	95.5%	95.6%	96.1%	*95.7%*	
Thermal Load (% load available, Pignone)	87.3%	87.0%	86.6%	*87.0%*	
Engine Compressor Discharge Pressure (96CD, psia)	208.5	207.7	206.9	*207.7*	
Turbine Air Inlet Temperature (CT-1A, °F)	61.5	63.5	65.5	*63.5*	
Air Inlet Duct Losses (combined, psig)	1.62	1.62	1.62	*1.62*	
Power Turbine Inlet Temperature (TT-XD, °F)	936.3	938.0	939.2	*937.9*	
Gas Compressor Suction Pressure (psig)	814.3	815.7	811.5	*813.8*	
Gas Compressor Suction Temperature (°F)	78.0	78.1	78.1	*78.1*	
Gas Compressor Discharge Pressure (psig)	1189.6	1188.3	1177.8	*1185.3*	
Gas Compressor Discharge Temperature (°F)	139.0	138.7	137.9	*138.5*	
Gas Pilot Valve Command (% open)	8.00	8.00	8.00	*8.00*	
Compressor Flow (MMSCFD)	636.1	632.8	638.4	*635.8*	
Turbine Fuel Data (Natural Gas)					
Fuel Heating Value (Btu/SCF, HHV)	1035.9	1035.9	1035.9	*1035.9*	
Fuel Specific Gravity	0.5858	0.5858	0.5858	*0.5858*	
O_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8641	8641	8641	*8641*	
CO_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1028	1028	1028	*1028*	
Total Sulfur in Fuel (grains S/per 100SCF of NG)	0.133	0.133	0.133	*0.133*	10
Fuel Flow (SCFH)	121,033	120,355	119,611	*120,333*	
Heat Input (MMBtu/hr, Higher Heat Value)	125.38	124.68	123.90	*124.65*	134.8 ISO
Heat Input (MMBtu/hr, Lower Heat Value)	112.84	112.21	111.51	*112.19*	
Ambient Conditions					
Atmospheric Pressure ("Hg)	29.86	29.86	29.85	*29.86*	
Temperature (°F): Dry bulb	61.0	62.2	64.0	*62.4*	
(°F): Wet bulb	53.9	54.4	54.4	*54.2*	
Humidity (lbs moisture/lb of air)	0.0071	0.0071	0.0067	*0.0070*	
Measured Emissions					
NO_X (ppmv, dry basis)	19.10	19.17	19.07	*19.11*	
NO_X (ppmv, dry @ 15% O_2)	**21.4**	**21.4**	**21.5**	*21.4*	25.0
NO_X (ppmv @ 15% O_2, ISO Day)	21.6	21.5	21.2	*21.4*	
CO (ppmv, dry basis)	2.05	2.02	0.97	*1.68*	
CO (ppmv, dry @ 15% O_2)	**2.30**	**2.25**	**1.09**	*1.88*	15.0
O_2 (% volume, dry basis)	15.64	15.61	15.65	*15.64*	
CO_2 (% volume, dry basis)	3.12	3.11	3.10	*3.11*	
Visible Emissions (% opacity)	-	0	-	*0*	10
F_O (fuel factor, range = 1.600-1.836 for NG)	1.68	1.70	1.69	*1.69*	
Stack Volumetric Flow Rates					
via O_2 "F_d-factor" (SCFH, dry basis)	4.38E+06	4.34E+06	4.34E+06	*4.35E+06*	
via CO_2 "F_c-factor" (SCFH, dry basis)	4.20E+06	4.19E+06	4.18E+06	*4.19E+06*	
Calculated Emission Rates (via EPA Method 19)					
NO_X (lbs/hr)	**10.0**	**9.92**	**9.89**	*9.94*	14.1
CO (lbs/hr)	**0.653**	**0.636**	**0.305**	*0.531*	5.1
SO_2 (lbs/hr, based on fuel flow and fuel sulfur)	**0.0459**	**0.0457**	**0.0454**	*0.0457*	3.7

Engine 1208 Report Dated 06/12/03

Table 3: Summary of Results
Unit 1208
Full Load Testing

Company: Florida Gas Transmission Company
Facility: Compressor Station No. 12
Location: Munson, Santa Rosa County, Florida
Source: GE Nuovo Pignone Model No. PGT-10B combustion turbine
Technicians: LJB, JTH

Test Number	1208-C-10	1208-C-11	1208-C-12		
Date	6/12/03	6/12/03	6/12/03		
Start Time	13:40	16:31	17:42		FDEP Permit Limits
Stop Time	14:40	17:31	18:42		
Turbine/Compressor Operation		Full Load		*Averages*	
Gas Producer Speed (NGP, rpm)	10,999	11,000	10,993	*10,997*	
Power Turbine Speed (NPT, rpm)	7,256	7,473	7,499	*7,409*	
Compressor Shaft Horsepower (Turbine Horsepower, bhp)	12,425	13,102	12,973	*12,833*	15,700 ISO
Turbine Capacity (Calculated, bhp @ current conditions)	12,952	13,630	13,605	*13,396*	
Percent Load (% of turbine capacity @ current conditions)	95.9%	96.1%	95.4%	*95.8%*	
Engine Compressor Discharge Pressure (96CD, psia)	208.8	214.5	214.5	*212.6*	
Turbine Air Inlet Temperature (CT-1A, °F)	85.1	75.5	76.4	*79.0*	
Air Inlet Duct Losses (combined, psig)	2.75	2.81	2.81	*2.79*	
Power Turbine Inlet Temperature (TT-XD, °F)	946.1	934.0	933.7	*937.9*	
Inlet Guide Main Valve Command (% open)	93.8	93.8	93.8	*93.8*	
Gas Pilot Valve Command (% open)	8.70	8.56	8.58	*8.61*	
Gas Compressor Suction Pressure (psig)	824	797	797	*806*	
Gas Compressor Suction Temperature (°F)	75.6	75.4	76.4	*75.8*	
Gas Compressor Discharge Pressure (psig)	1188	1171	1183	*1181*	
Gas Compressor Discharge Temperature (°F)	131.3	134.0	136.9	*134.0*	
Compressor Flow (MMSCFD)	653.2	652.7	625.5	*643.8*	
Turbine Fuel Data (Natural Gas)					
Fuel Heating Value (Btu/SCF, HHV)	1049.3	1049.3	1049.3	*1049.3*	
Fuel Specific Gravity	0.5956	0.5956	0.5956	*0.5956*	
O_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8648	8648	8648	*8648*	
CO_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1032	1032	1032	*1032*	
Total Sulfur in Fuel (ppm, weight basis)	2.531	2.531	2.531	*2.531*	8000
Total Sulfur in Fuel (grains S/100 SCF natural gas fuel)	0.165	0.165	0.165	*0.165*	10
Fuel Flow (SCFH)	114,976	119,084	118,143	*117401*	
Heat Input (MMBtu/hr, Higher Heat Value)	120.64	124.95	123.96	*123.18*	134.8 ISO
Heat Input (MMBtu/hr, Lower Heat Value)	108.57	112.45	111.57	*110.86*	
Ambient Conditions					
Atmospheric Pressure ("Hg)	29.72	29.73	29.70	*29.71*	
Temperature (°F): Dry bulb	80.2	73.1	73.5	*75.6*	
(°F): Wet bulb	77.1	72.6	72.8	*74.2*	
Humidity (lbs moisture/lb of air)	0.0190	0.0169	0.0169	*0.0176*	
Measured Emissions					
NO_x (ppmv, dry basis)	16.12	16.79	16.10	*16.33*	
NO_x (ppmv, dry @ 15% O_2)	**18.3**	**19.2**	**18.3**	*18.6*	**25.0**
NO_x (ppmv @ 15% O_2, ISO Day)	**21.7**	**22.5**	**21.5**	*21.9*	**196**
CO (ppmv, dry basis)	1.12	1.78	2.02	*1.64*	
CO (ppmv, dry @ 15% O_2)	**1.28**	**2.04**	**2.31**	*1.87*	**15.0**
O_2 (% volume, dry basis)	15.70	15.74	15.72	*15.72*	
CO_2 (% volume, dry basis)	3.10	3.11	3.08	*3.10*	
Visible Emissions (% opacity)	**0**	-	-	*0*	**10**
F_O (fuel factor, range = 1.600-1.836 for NG)	1.68	1.66	1.68	*1.67*	
Stack Volumetric Flow Rates					
via O_2 "F_d-factor" (SCFH, dry basis)	4.27E+06	4.46E+06	4.41E+06	*4.38E+06*	
via CO_2 "F_c-factor" (SCFH, dry basis)	4.09E+06	4.22E+06	4.22E+06	*4.18E+06*	
Calculated Emission Rates (via EPA Method 19)					
NO_x (lbs/hr)	**8.22**	**8.94**	**8.47**	*8.54*	**14.1**
CO (lbs/hr)	**0.349**	**0.578**	**0.648**	*0.525*	**5.1**
SO_2 (lbs/hr, based on fuel flow and fuel sulfur)	**0.0541**	**0.0560**	**0.0556**	*0.0552*	**3.70**
NO_x (tons/yr)	**36.0**	**39.1**	**37.1**	*37.4*	**61.8**
SO_2 (tons/yr, based on fuel flow and fuel sulfur)	**0.24**	**0.25**	**0.24**	*0.24*	**16.2**

Testing conducted by Cubix Corporation - Gainesville, Florida

Company: Florida Gas Transmission Company
Facility: Compressor Station No. 12
Location: Munson, Santa Rosa County, Florida
Source: GE Nuovo Pignone Model No. PGT-10B combustion turbine
Technicians: LJB, JTH

Table 4: Summary of Results
Unit 1208
Reduced Load Testing

Test Number	O_2 Traverse 1208-C-1	1208-C-2	1208-C-3	1208-C-4	1208-C-5	1208-C-6	1208-C-7	1208-C-8	1208-C-9
Date	6/12/03	6/12/03	6/12/03	6/12/03	6/12/03	6/12/03	6/12/03	6/12/03	6/12/03
Start Time	8:32	9:32	10:01	10:32	11:05	11:34	12:04	12:33	13:02
Stop Time	9:22	9:52	10:21	10:52	11:25	11:54	12:24	12:53	13:22
Turbine/Compressor Operation		Low Load			Mid-Low Load			Mid-High Load	
Gas Producer Speed (NGP, rpm)	10,330	10,334	10,343	10,630	10,615	10,626	10,930	10,743	10,718
Power Turbine/Compressor Speed (NPT, rpm)	5,484	5,477	5,482	6,123	6,072	6,076	6,507	6,626	6,734
Compressor Shaft Horsepower (Turbine Horsepower, bhp)	6,020	5,875	5,812	8,163	8,114	8,227	10,195	9,992	9,897
Turbine Capacity (Available bhp @ current conditions)	11,731	11,688	11,598	12,106	12,025	11,961	12,207	12,286	12,373
Percent Load (% of turbine capacity @ current conditions)	51.3%	50.3%	50.1%	67.4%	67.5%	68.8%	83.5%	81.3%	80.0%
Engine Compressor Discharge Pressure (96CD, psia)	161.6	160.7	161.0	184.1	183.3	183.5	201.8	193.5	192.5
Turbine Air Inlet Temperature (CT-1A, °F)	86.9	88.0	89.0	89.9	90.4	92.0	91.8	92.3	91.6
Air Inlet Duct Losses (combined, "H_2O)	2.53	2.53	2.53	2.72	2.72	2.53	2.81	2.81	2.81
Power Turbine Inlet Temperature (TT-XD, °F)	854.2	853.6	855.4	900.6	903.6	907.1	934.6	928.0	921.6
Inlet Guide Vane Command (% open)	71.6	71.2	71.2	87.5	86.4	86.1	93.8	92.2	91.3
Gas Pilot Valve Command (% open)	15.9	16.3	16.2	9.3	9.4	9.3	9.0	9.0	9.0
Gas Compressor Suction Pressure (psig)	960	963	966	952	951	948	923	859	849
Gas Compressor Suction Temperature (°F)	78.4	78.2	78.2	77.7	77.8	77.7	79.2	75.5	75.9
Gas Compressor Discharge Pressure (psig)	1055	1048	1050.3	1067	1072	1074	1101	1159	1175
Gas Compressor Discharge Temperature (°F)	97.3	96.0	96.1	100.8	101.2	101.6	109.4	120.9	125.2
Compressor Flow (MMSCFD)	948.1	973.9	967.2	1051.8	1031.4	1021.7	1000.7	648.2	588.9
Turbine Fuel Data (Natural Gas)									
Fuel Heating Value (Btu/SCF, HHV)	1049.3	1049.3	1049.3	1049.3	1049.3	1049.3	1049.3	1049.3	1049.3
Fuel Specific Gravity	0.5956	0.5956	0.5956	0.5956	0.5956	0.5956	0.5956	0.5956	0.5956
O_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8648	8648	8648	8648	8648	8648	8648	8648	8648
CO_2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1032	1032	1032	1032	1032	1032	1032	1032	1032
Total Sulfur in Fuel (grains S/100 SCF natural gas fuel)	0.0807	0.0807	0.0807	0.0807	0.0807	0.0807	0.0807	0.0807	0.0807
Fuel Flow (SCFH)	75,326	74,918	75,092	93,369	92,508	92,651	106,599	100,848	99,604
Heat Input (MMBtu/hr, Higher Heat Value)	79.04	78.61	78.79	97.97	97.06	97.21	111.85	105.82	104.51
Heat Input (MMBtu/hr, Lower Heat Value)	71.13	70.75	70.91	88.17	87.36	87.49	100.66	95.23	94.06
Ambient Conditions									
Atmospheric Pressure ("Hg)	29.77	29.75	29.75	29.75	29.75	29.74	29.74	29.74	29.74
Temperature (°F): Dry bulb	81.9	83.9	86.2	86.9	87.2	88.9	89.1	90.3	89.0
(°F): Wet bulb	78.4	78.1	78.0	78.8	78.2	78.2	77.8	78.0	78.0
Humidity (lbs moisture/lb of air)	0.0197	0.0190	0.0184	0.0189	0.0183	0.0179	0.0175	0.0174	0.0177
Measured Emissions									
NO_x (ppmv, dry basis)	14.03	14.26	14.68	12.76	13.12	13.31	14.81	14.43	14.03
CO (ppmv, dry basis)	1.77	1.60	1.47	2.07	1.63	1.55	1.60	1.51	1.52
O_2 (% volume, dry basis)	16.76	16.75	16.74	16.29	16.30	16.28	16.00	16.07	16.11
CO_2 (% volume, dry basis)	2.50	2.50	2.50	2.76	2.77	2.76	2.93	2.88	2.86
F_o (fuel factor, range = 1.600-1.836 for NG)	1.66	1.66	1.66	1.67	1.66	1.67	1.67	1.67	1.68
Stack Volumetric Flow Rates									
via O_2 "F_o-factor" (SCFH, dry basis)	3.51E+06	3.49E+06	3.48E+06	3.91E+06	3.88E+06	3.88E+06	4.20E+06	4.03E+06	4.02E+06
via CO_2 "F_o-factor" (SCFH, dry basis)	3.33E+06	3.31E+06	3.31E+06	3.73E+06	3.68E+06	3.70E+06	4.02E+06	3.86E+06	3.85E+06
Calculated Emission Rates									
NO_x (ppmv, dry @ 15% O_2)	**20.0**	**20.3**	**20.8**	**16.3**	**16.8**	**17.0**	**17.8**	**17.6**	**17.3**
NO_x (ppmv @ 15% O_2, ISO Day)	**23.9**	**23.9**	**24.1**	**19.1**	**19.4**	**19.4**	**20.2**	**19.9**	**19.7**
CO (ppmv, dry @ 15% O_2)	**2.52**	**2.28**	**2.09**	**2.65**	**2.09**	**1.99**	**1.92**	**1.84**	**1.88**
NO_x (lbs/hr)	**5.88**	**5.93**	**6.11**	**5.95**	**6.08**	**6.16**	**7.43**	**6.95**	**6.73**
CO (lbs/hr)	**0.452**	**0.406**	**0.374**	**0.589**	**0.460**	**0.438**	**0.488**	**0.443**	**0.445**
NO_x (tons/yr)	**25.8**	**26.0**	**26.8**	**26.1**	**26.6**	**27.0**	**32.6**	**30.5**	**29.5**
CO (tons/yr)	**1.98**	**1.78**	**1.64**	**2.58**	**2.01**	**1.92**	**2.14**	**1.94**	**1.95**

Testing by Cubix Corporation - Gainesville, Florida

Attachment D

Emission Calculations

Engine No. 1208 EPN: 010

CO Emissions: (Based on Vendor Data)

lb CO/hr = 7.03

tons CO = (lb CO/hr)(hr/yr)(1 ton/2000 lb)
= (7.03 lb CO/hr)(8760 hr/yr)(1 ton/2000 lb)
= 30.79

VOC Emissions: (Based on Vendor Data)

lb VOC/hr = 1.46

tons VOC/yr = (lb VOC/hr)(hr/yr)(1 ton/2000 lb)
= (1.46 lb VOC/hr)(8760 hr/yr)(1 ton/2000 lb)
= 6.39

HAPs Emissions: (Based on AP-42 Table 3.1-3, 4/00)

lb HAP/hr = (lb HAP/MMBtu)(MMBtu/hr)
= (0.00102733 lb/MMBtu)(134.7700 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)
= 16.22

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)
= 0.89

tons PM/yr = (lb PM/hr)(hr/yr)(1 ton/2000 lb)
= (0.89 lb PM/hr)(8760 hr/yr)(1 ton/2000 lb)
= 3.90

Turbine 1208 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, Table3.1-3

BEST AVAILABLE COPY

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1. Article Addressed to:

'CK CRAIG, V.P. SOUTHEASTERN OPERATIONS
DA GAS TRANSMISSION COMPANY
)FFICE BOX 1188
'ON, TEXAS 77251

A. Received by *(Please Print Clearly)*: E.O. Rice — B. Date of Delivery: 6/30/04

C. Signature: X E.O. Rice — ☑ Agent ☐ Addressee

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 *(Copy from …el)*: 7000 2870 … 7028 3710

PS Form 3811, Ju… 102595-99-M-1789

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MR. RICK CRAIG, V.P. SOUTHEASTERN OPERATIONS
FLORIDA GAS TRANSMISSION COMPANY
POST OFFICE BOX 1188
HOUSTON, TEXAS 77251

PS Form 3800, May 2000 — See Reverse for Instructions

PENSACOLA
News Journal
Informed. In Tune. In Touch.

Published Daily-Pensacola, Escambia County, FL

STATE OF FLORIDA
County of Escambia

Before the undersigned authority, personally appeared **NIKKI WINDHAM** who is personally known to me and who on oath says that he/she is a representative of The Pensacola News Journal, a daily newspaper published in Pensacola in Escambia County, Florida; that the attached copy of advertisement, being a legal in the matter of **PUBLIC NOTICE OF INTENT** said newspaper in the issues **FEBRUARY 19, 2004.** Affidavit further says that the said Pensacola News Journal is a newspaper published in Pensacola, in said Escambia County, Florida, and that the said newspaper has heretofore been continuously published in said Escambia County, Florida each day and has been entered as second class mail matter at the post office in Pensacola, in said Escambia County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and Affidavit further says that he/she 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.

Sworn to and subscribed before me this **19TH DAY OF FEBRUARY A.D., 2004.**

Bereth Ferguson
Notary Public

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Draft Air Permit No. 1130037-008-AC
Florida Gas Transmission Company
Santa Rosa Compressor Station No. 12

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification to the Florida Gas Transmission Company Department to modify the permit to change the Carbon Monoxide (CO) and Volatile Organic Compounds (VOC) emission rates and to remove certain load restrictions related to turbine no. 1208 (EU 010). The equipment is installed at existing Compressor Station No. 12, which is located north of Munson on Highway 191 approximately 5 miles north of Highway 4 in Santa Rosa County, Florida. The applicant's authorized representative is Mr. Rick Craig, Vice President Southeastern Operations. The applicant's mailing address is Florida Gas Transmission Company, p. o. Box 1188, Houston, TX 77251.

The originally permitted limits for turbine no. 1208 and the related restrictions were set based upon information provided by the turbine manufacturer. During years 2002 and 2003, FGT conducted testing which showed the emission rates of CO to be much lower than originally permitted. Based upon this test data, FGT seeks to decrease such emission rates and related load restrictions. As a result of this request, there will be no increase in the annual emissions of CO, nor any other permitted air pollutant except for VOC's. An incidental increase in VOC emissions (4.6 TPY) will occur as an effect of the removal of the load restrictions.

Because potential emissions of at least one regulated pollutant exceed 250 tons per year, the existing facility is classified as a major source of air pollution with respect to Rule 62-212.400, F.A.C, the Prevention of Significant Deterioration (PSD) of Air Quality. The existing station 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). This project is not subject to PSD preconstruction review because the net emissions increases are less than each of the corresponding PSD significant emissions rates.

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. 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 public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication0. 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 Department'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 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 indicate; (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 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 Department'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 Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
(111 S. Magnolia Drive, Suite 4)
2600 Blair Stone Road, MS #5505
Tall+ahassee, Florida, 32399-2400
Telephone: 850/488-0114
Fax: 850/922-6979

Department of Environmental Protection
Northwest District Office
Air Resources Section
160 Governmental Center
Pensacola, FL 32501-5794
Telephone: 850/595-8300
Fax: 850/595-4417

The complete project file includes the application, Technical Evaluation and Preliminary Determination, Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Department's reviewing engineer for this project for additional information at the address and phone numbers listed above.

Legal No. 66158 1T February 19, 2004

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1. Article Addressed to:

Mr. Rick Craig
Florida Gas Transmission Company
Post Office Box 1188
Houston, TX 77251

COMPLETE THIS SECTION ON DELIVERY

A. Signature
x E.O. Rice ☑ Agent ☐ Addressee

B. Received by (Printed Name) E.O. Rice C. Date of Delivery 03/15/04

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

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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

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Street, Apt. No.; or PO Box No.: P O Box 1188
City, State, ZIP+4: Houston TX - 77251

PS Form 3800, May 2000 See Reverse for Instructions

U.S. Postal Service
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(Domestic Mail Only; No Insurance Coverage Provided)

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OFFICIAL USE

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Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Sent To: MR. Rick CRaig, TGT
Street, Apt. No.; or PO Box No.: P. O. Box 1188
City, State, ZIP+4: Houston TX - 77251

PS Form 3800, May 2000 See Reverse for Instructions

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- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Florida Gas Transmission Company
Post Office Box 1188
Houston, TX 77251

COMPLETE THIS SECTION ON DELIVERY

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x E.O. Rice ☑ Agent ☐ Addressee

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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

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