Memorandum

Florida Department of
Environmental Protection

TO: Howard Rhodes, Division of Air Resources Management

THRU: Trina Vielhauer, Bureau of Air Regulation
Al Linero, New Source Review Section

FROM: Jeff Koerner, New Source Review Section

DATE: June 18, 2003

SUBJECT: Final Air Construction Permit No. 1130037-007-AC
Florida Gas Transmission Company, Santa Rosa Compressor Station 12
Phase VI - Upgraded Gas Turbine and Addition of Jet Cells Pre-Combustors

Florida Gas Transmission Company operates existing natural gas Compressor Station 12 located north of Munson on Highway 191, approximately 5 miles north of Highway 4 in Santa Rosa County, Florida. Enclosed is Final Air Permit No. 1130037-007-AC, which authorizes the replacement and up-rating of existing gas turbine compressor Engine 1207; modification of existing reciprocating internal combustion compressor Engines 1204 and 1205 to include jet cell pre-combustion chamber technology; and covers the previously constructed new gas turbine compressor Engine 1208. The project is minor with respect to PSD review.

Day #90 is August 22, 2003. I recommend your approval of the attached Final Permit for this project.

Attachments

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Florida Gas Transmission Company
1400 Smith Street
Houston, TX 77002

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

Air Permit No. 1130037-007-AC
Compressor Station No. 12
Phase VI Modifications
Santa Rosa County, Florida

Florida Gas Transmission Company operates existing natural gas Compressor Station 12 located north of Munson on Highway 191, approximately 5 miles north of Highway 4 in Santa Rosa County, Florida. Enclosed is Final Air Permit No. 1130037-007-AC, which authorizes the replacement and up-rating of existing gas turbine compressor Engine 1207; modification of existing reciprocating internal combustion compressor Engines 1204 and 1205 to include jet cell pre-combustion chamber technology; and covers the previously constructed new gas turbine compressor Engine 1208. As noted in the Final Determination (attached), only minor changes were made to correct typographical errors.

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 6/24/03 to the persons listed:

Mr. Richard Craig, FGTC*
Mr. Jim Thompson, FGTC
Mr. Wesley Orso, FGTC
Mr. Kevin McGlynn, McGlynn Consulting Co.
Mr. V. Duane Pierce, AQMcs
Ms. Sandra Veazey, NWD

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.

Victoria Gibson June 24, 2003
(Clerk) (Date)

PERMITTEE

Florida Gas Transmission Company
1400 Smith Street
Houston, TX 77002

PERMITTING AUTHORITY

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

PROJECT

Air Permit No. 1130037-007-AC
Santa Rosa Compressor Station No. 12
Phase VI Modifications

Florida Gas Transmission Company operates existing natural gas Compressor Station 12 located north of Munson on Highway 191, approximately 5 miles north of Highway 4 in Santa Rosa County, Florida. Enclosed is Final Air Permit No. 1130037-007-AC, which authorizes the replacement and up-rating of existing gas turbine compressor Engine 1207; modification of existing reciprocating internal combustion compressor Engines 1204 and 1205 to include jet cell pre-combustion chamber technology; and covers the previously constructed new gas turbine compressor Engine 1208.

NOTICE, PUBLICATION, AND ADMINISTRATIVE PROCEDURES

The Department distributed an "Intent to Issue Permit" package on May 21, 2003. The applicant published the "Public Notice of Intent to Issue" in the Pensacola News Journal on May 30, 2003. The Department received the proof of publication on June 9, 2003. No requests for administrative hearings were filed.

COMMENTS

No comments on the Draft Permit were received.

CONCLUSION

The final action of the Department is to issue the permit with only minor revisions to correct typographical errors.

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
P.O. Box 1188
Houston, TX 77251

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

Santa Rosa Compressor Station No. 12
Air Permit No. 1130037-007-AC
Facility ID No. 1130037
SIC No. 4922
Permit Expires: October 1, 2004

PROJECT AND LOCATION

Florida Gas Transmission Company operates existing natural gas Compressor Station 12 located north of Munson on Highway 191, approximately 5 miles north of Highway 4 in Santa Rosa County, Florida. Enclosed is Final Air Permit No. 1130037-007-AC, which authorizes the replacement and up-rating of existing gas turbine compressor Engine 1207; modification of existing reciprocating internal combustion compressor Engines 1204 and 1205 to include jet cell pre-combustion chamber technology; and covers the previously constructed new gas turbine compressor Engine 1208.

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.

CONTENTS

Howard L. Rhodes, Director
Division of Air Resources Management

6/23/03
(Date)

FACILITY AND PROJECT DESCRIPTION

The existing facility operates as a compressor station in Santa Rosa County for Florida Gas Transmission Company's natural gas pipeline. The project will replace existing gas turbine compressor engine (1207), modify two existing reciprocating internal combustion compressor engines (1204 and 1205), and covers construction of the new 15,700 bhp gas turbine (1208). Upon completion of the proposed project, Compressor Station 12 will consist of five 2000 bhp reciprocating compressor engines, one 4100 bhp reciprocating compressor engine, one 15,000 bhp gas turbine compressor engine, one 15,700 bhp gas turbine compressor engine, and miscellaneous support equipment.

{Permitting Note: Station 12 is an existing major facility with respect to the PSD preconstruction review program. This project included a netting analysis based on requested constraints to avoid PSD preconstruction review. 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. Relaxations of requirements that would increase actual emissions are subject to Rule 62-212.400(2)(g), F.A.C.}

REGULATORY CLASSIFICATION

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

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

Title V: The facility is a Title V major source of air pollution (Chapter 213, F.A.C.).

PSD: The facility is a PSD major source of air pollution (Rule 62-212.400, F.A.C.).

NSPS: The facility operates units subject to the New Source Performance Standards (40 CFR 60).

RELEVANT DOCUMENTS

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action and are on file with the Department.

- Permit application received on 04/23/03; and
- Permit No. 1130037-003-AC previously issued on 08/14/01.

1. Permitting Authority: 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 NSPS Gas Turbines); Appendix GC (General Conditions); Appendix GG (NSPS Subpart GG Requirements for Gas Turbines); and Appendix SC (Standard Conditions).

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, F.S.; Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C.; and Title 40, Part 60 of the Code of Federal Regulations, adopted by reference in Rule 62-204.800, F.A.C. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the 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: 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. Source Obligation: This project is subject to Rule 62-212.400(2)(g), F.A.C., which states, "If a previously permitted facility or modification becomes a facility or modification which would be subject to the preconstruction review requirements of this rule if it were a proposed new facility or modification solely by virtue of a relaxation in any federally enforceable limitation on the capacity of the facility or modification to emit a pollutant (such as a restriction on hours of operation), which limitation was established after August 7,1980, then at the time of such relaxation the preconstruction review requirements of this rule shall apply to the facility or modification as though construction had not yet commenced on it." This includes, but is not limited to, increases in the heat input or pollutant emission rates. [Rule 62-212.400(2)(g), F.A.C.]

8. 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 require by law. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

A. EU-004 and 005: Engines 1204 and 1205, Reciprocating Compressor Engines

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

Emissions Units 004 and 005: Engines 1204 and 1205, Reciprocating Compressor Engines (2000 bhp)
Description: Each 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 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: Natural gas contains little or no ash, sulfur, or other contaminants, which minimizes emissions of particulate matter and sulfur dioxide. The efficient combustion of natural gas at high temperatures results in lower emissions of carbon monoxide and volatile organic compounds, which are further reduced by a catalytic converter in the stack. Modifications to the engine turbocharger increase the air manifold pressure and airflow to each cylinder, which reduces NOx emissions. The engines also include jet cell pre-combustors, which may also reduce 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.

EQUIPMENT

1. Engine 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. The permittee is also authorized to install jet cell pre-combustors on each reciprocating compressor engine. The jet cells are expected to smooth engine operation and reduce overall maintenance. 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; Rule 62-212.400(2)(g), F.A.C.]

2. Catalytic Converters: Catalytic converters shall be installed on the stack of each reciprocating compressor engine. [Applicant Request; Rule 62-212.400(2)(g), F.A.C.]

PERFORMANCE RESTRICTIONS

3. Permitted Capacity: The maximum heat input rate to each 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.]

4. Authorized Fuel: The reciprocating compressor engines shall fire only pipeline natural gas with a maximum of 10 grains of sulfur per 100 standard cubic feet of natural gas. The custom fuel monitoring plan described in Appendix CF shall serve as the compliance demonstration for the fuel sulfur limit. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

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

EMISSIONS STANDARDS

6. Emissions Standards: Emissions from each modified reciprocating compressor engine 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	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]	Efficient combustion of natural gas	0.2	0.7	Avoid Rule 62-212.400, F.A.C.
VOC [e]	Efficient combustion of natural gas	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 is determined 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 natural gas is indicated by compliance with opacity and CO standards. Equivalent maximum PM emissions are based on an emission factor of 0.00999 lb/MMBtu from Table 3.2-2 in AP-42. Equivalent maximum VOC emissions are based on actual test data. No testing is required for these pollutants.

f. Equivalent maximum emissions are based on the emission standards (CO, NOx, and SO_2) or the maximum expected emission rates (PM and VOC) 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

7. Initial Compliance Tests: Each 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 after installation of the jet cell pre-combustors within 60 days after achieving at least 90% of the maximum production rate, 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 the fuel sulfur content. [Rule 62-297.310(7)(a)1, F.A.C.]

8. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), each 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 the 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. Tests Prior to Renewal: Within the 12 months before expiration of the operation permit, each 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.]

10. 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.]

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

RECORDS AND REPORTS

12. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in 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.]

13. 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: Engine 1207, Gas Turbine Compressor Engine

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

Emissions Unit 008: Engine 1207, Gas Turbine Compressor Engine (15,000 bhp)
Description: The 15,000 bhp (ISO) gas turbine is a Solar Mars 100 T-15000S that will be used as a compressor engine for the natural gas pipeline.
Fuel: The gas turbine fires pipeline natural gas (SCC No 2-02-002-01). The maximum natural gas firing rate is approximately 119,700 cubic feet per hour based on a heat content of 1040 Btu per scf of gas.
Capacity: At 124.5 MMBtu per hour of heat input, the gas turbine produces approximately 15,000 bhp (ISO). After initial startup, the gas turbine is intended to operate at or near capacity.
Controls: Natural gas contains little or no ash, sulfur, or other contaminants, which minimizes emissions of particulate matter and sulfur dioxide. The efficient combustion of natural gas at high temperatures results in low emissions of carbon monoxide and volatile organic compounds. NOx emissions are reduced with lean premix 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 193,400 acfm at 903° F.

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 as the NSPS requirements of Subpart GG. [Rule 62-4.070(3), F.A.C.; Subpart GG in 40 CFR 60]

EQUIPMENT

2. Engine 1207: The permittee is authorized to replace the existing Solar Mars 90 T-13000S gas turbine compressor engine rated at 13,000 bhp (ISO) with an upgraded Solar Mars 100 T-15000S gas turbine compressor engine rated at 15,000 bhp (ISO). The existing Solar Mars 90 T-13000S gas turbine shall be removed from the site. The permittee shall tune, operate and maintain the lean premix combustion system to optimize the reduction of NOx emissions from the new gas turbine. 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 124.5 MMBtu per hour while producing approximately 15,0000 bhp (ISO) based on a gas turbine 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 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 standards 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	13.71	60.1	Avoid Rule 62-212.400, F.A.C.
NOx [b]	25.0 ppmvd @ 15% O_2	11.26	49.3	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	3.42	15.0	Avoid Rule 62-212.400, 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]	Efficient combustion of natural gas	0.82	3.6	Rule 62-4.070(3), F.A.C.
VOC [e]	Efficient combustion of natural gas	0.39	1.7	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.

e. For both PM and VOC, the efficient combustion of clean fuels is indicated by compliance with the opacity and CO standards. Equivalent maximum PM emissions are based on a factor of 0.0066 lb/MMBtu heat input from AP-42 Table 3.1-2a. Equivalent maximum VOC emissions are based on vendor data. No testing is required.

f. Equivalent maximum emissions are based on a gas turbine inlet air temperature of 59° F, 8760 hours of operation per year, and the emission standards (CO, NOx, and SO_2) or the maximum expected emission rates (PM and VOC).

g. Compliance with the emissions standards of this permit ensures that the project remains minor with respect to PSD.

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

RECORDS AND REPORTS

11. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix SC of this permit. For each required test, 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 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 of base load, and the gas turbine inlet air temperature. [Rule 62-297.310(8), F.A.C.; 40 CFR 60.332]

12. Custom Fuel Monitoring Schedule: In lieu of the NSPS fuel monitoring requirements of 40 CFR 60.334 of Subpart GG, the Department approves the custom fuel-monitoring schedule specified in Appendix FM of this permit. [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 actual heating value (MMBtu per scf) of the pipeline natural gas. 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: Engine 1208, Gas Turbine Compressor Engine

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

Emissions Unit 010: Engine 1208, Gas Turbine Compressor Engine (15,700 bhp)
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 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: Natural gas contains little or no ash, sulfur, or other contaminants, which minimizes emissions of particulate matter and sulfur dioxide. The efficient combustion of natural gas at high temperatures results in low emissions of carbon monoxide and volatile organic compounds. NOx emissions are reduced with lean premix 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

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

EQUIPMENT

2. Engine 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 lean premix combustion technology to achieve the permitted standards. 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 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 gas turbine 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 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% O_2	5.1	30.8	Avoid Rule 62-212.400, F.A.C.
	70-90%	30.0 ppmvd @ 15% O_2	10.2		
	50-70%	75.0 ppmvd @ 15% O_2	22.5		
NOx [b]	50-100%	25.0 ppmvd @ 15% O_2	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%	Efficient combustion of natural gas	0.9	3.9	Avoid Rule 62-212.400, F.A.C.
VOC [e]	90-100%	Efficient combustion of natural gas	0.3	2.0	Avoid Rule 62-212.400, F.A.C.
	70-90%		0.8		
	50-70%		1.5		

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

b. The NOx standards are based 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 a factor of 0.0066 lb/MMBtu heat input from AP-42 Table 3.1-2a. Equivalent maximum VOC emissions are based on vendor data. No testing is required.

f. Equivalent maximum emissions are based on a gas turbine inlet air temperature of 59° F, permitted capacity at restricted hours of operation, and the emission standards (CO, NOx, and SO_2) or the maximum expected emission rates (PM and VOC).

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

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 Appendix SC of this permit. For each required test, 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 run, the test report shall also indicate the natural gas firing rate (cubic feet per hour), the heat input rate (MMBtu per hour), the power output (bhp), the percent of base load, and the gas turbine inlet air temperature. [Rule 62-297.310(8), F.A.C.; 40 CFR 60.332]

12. Custom Fuel Monitoring Schedule: In lieu of the NSPS fuel monitoring requirements of 40 CFR 60.334 of Subpart GG, the Department approves the custom fuel-monitoring schedule specified in Appendix FM of this permit. [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; 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 heating value (MMBtu per scf) of the pipeline natural gas. 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 Support Activities

This permit recognizes the following miscellaneous support activities.

Emissions Unit 009: Miscellaneous Support Activities	
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; • Blow down stacks; and • Miscellaneous fugitive emission leaks from valves, flanges, etc.

CONTENTS

CITATION FORMAT

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

REFERENCES TO PREVIOUS PERMITTING ACTIONS

Old Permit Numbers

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

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

New Permit Numbers

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

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

PSD Permit Numbers

Example: Permit No. PSD-FL-317

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

RULE CITATION FORMATS

Florida Administrative Code (F.A.C.)

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

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

Code of Federal Regulations (CFR)

Example: [40 CRF 60.7]

Means: Title 40, Part 60, Section 7

CUSTOM FUEL MONITORING PLAN FOR NSPS GAS TURBINES

Custom Fuel Monitoring Schedule

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

1. Because natural gas is the exclusive fuel for the gas turbine and contains negligible amounts of nitrogen, no monitoring of the fuel nitrogen content is required.
2. Fuel sulfur monitoring shall be performed in accordance with the following requirements:
   a. The natural gas shall be sampled and analyzed for the sulfur content as determined by ASTM methods D4084-82, D3246-81 or more recent versions.
   b. After first fire in the gas turbine, fuel sulfur monitoring shall be conducted at least twice each month. If this monitoring indicates little variability and compliance with the fuel sulfur limit of this permit for a period of six months, monitoring shall be reduced to once each calendar quarter. If this monitoring indicates little variability and compliance with the fuel sulfur limit of this permit for six calendar quarters, monitoring shall be reduced to twice each year (once each during the first and third calendar quarters).
   c. The permittee shall provide written notification to the Compliance Authority prior to reducing the frequency of monitoring in accordance with the above custom schedule. The notification shall include the results of the previous fuel sulfur analyses, the current frequency of monitoring, and the future frequency of monitoring.
3. This custom fuel-monitoring plan shall be reevaluated if there is a change in the fuel supply, a substantial change in the fuel quality, or any required monitoring indicates failure to comply with the fuel sulfur limit of this permit. For such cases, fuel sulfur monitoring shall resume on a weekly basis while the Department reevaluates the monitoring schedule.

[Rule 62-4.070(3), F.A.C.; 40 CFR 60.334]

GENERAL CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

13. This permit also constitutes:

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

14. The permittee shall comply with the following:

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

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

    c. Records of monitoring information shall include:

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

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

SECTION 4. APPENDIX GG
NSPS SUBPART GG REQUIREMENTS FOR GAS TURBINES

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

EU ID No.	Description
008	15,000 bhp (ISO) Gas Turbine Compressor Engine 1207
010	15,700 bhp (ISO) Gas Turbine Compressor Engine 1208

NSPS GENERAL PROVISIONS

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

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

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

Section 60.330 Applicability and designation of affected facility.

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

Section 60.331 Definitions.

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

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

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

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

Section 60.332 Standard for nitrogen oxides.

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

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

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

where:

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

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

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

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

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

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

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

{Note: The equivalent emission standards are 202 ppmvd @ 15% oxygen for Engine 1207 and 196 ppmvd @ 15% oxygen for Engine 1208. The emissions standards in Section 3 of this permit are much more stringent than this requirement.}

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

Section 60.333 Standard for sulfur dioxide.

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

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

Section 60.334 Monitoring of operations.

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

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

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

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

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

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

{Note: The excess NOx emissions reporting requirements do not apply. The gas turbine uses lean premix combustion technology and not wet injection to control NOx emissions. Also, NOx emissions due to fuel

bound nitrogen are considered negligible because natural gas is the exclusive fuel and contains little nitrogen.}

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

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

Section 60.335 Test methods and procedures.

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

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

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

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

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

where:

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

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

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

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

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

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

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

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

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

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

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

{Permitting Note: Unless otherwise specified by permit, the following conditions apply to all emissions units and activities at this facility.}

EMISSIONS AND CONTROLS

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

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

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

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

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

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

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

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

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

TESTING REQUIREMENTS

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

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

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

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

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

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

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

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

14. Determination of Process Variables

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

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

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

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

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

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

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

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

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

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

RECORDS AND REPORTS

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

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

SENDER: *COMPLETE THIS SECTION*

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

1. Article Addressed to:

Mr. Richard Craig
Vice President of Southeastern Operations
Florida Gas Transmission Company
1400 Smith Street
Houston, TX 77002

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* T BRADBURY B. Date of Delivery 6/27/02

C. Signature X ☐ 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. 7001 0320 0001 3692 5733

PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-0952

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

OFFICIAL USE

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

Postmark Here

Sent To Richard Craig
Street, Apt. No.; or PO Box No. 1400 Smith St.
City, State, ZIP+4 Houston, TX 77002

PS Form 3800, January 2001 See Reverse for Instructions

7001 0320 0001 3692 5733

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 **Glenda Nall** 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 to Issue Air Construction Permit** was published in said newspaper in the issues **of May 30, 2003.** Affiant 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 Affiant 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 **30th day of May A.D., 2003.**

Bereth Ferguson — Notary Public

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

RECEIVED
JUN 09 2003
BUREAU OF AIR REGULATION

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Draft Air Permit No. 1130037-007-AC

Florida Gas Transmission Company
Existing Santa Rosa Compressor Station 12
Phase VI Project

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Florida Gas Transmission Company that authorizes modifications for Engines 1204, 1205, and 1207. The equipment is installed at existing Compressor Station 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. Richard Craig, Vice President of Southeastern Operations. The applicant's mailing address is Florida Gas Transmission Company, P.O. Box 1188, Houston, Texas 77251.

The proposed project is part of Florida Gas Transmission Company's overall Phase VI projects intended to increase the availability and reliability of natural gas supplied by the existing natural gas pipeline. Engine 1207 currently consists of a Solar Model No. Mars 90-T-13000S gas turbine compressor engine rated at 13,000 bhp. The applicant proposes to upgrade this engine to a Solar Mars 100 T-15000S gas turbine rated at 15,000 bhp. The project also includes adding jet cell pre-combustor technology to existing compressor Engines 1204 and 1205. The new jets cells are expected to reduce fuel consumption, lower emissions, and decrease engine maintenance. All engines exclusively fire natural gas.

The proposed increase in gas turbine output from 13,000 to 15,000 bhp will result in a slight increase in the maximum heat input rate and emissions. The upgraded gas turbine remains subject to the federal standards in NSPS Subpart GG. The applicant requested standards more stringent than the federal standards and within the capabilities of the engine to avoid preconstruction review in accordance with the Prevention of Significant Deterioration (PSD) of Air Quality pursuant to Rule 62-212.400, F.A.C. The addition of jet cell pre-combustors to Engines 1204 and 1205 is expected to lower fuel consumption, which should reduce emissions. However, the applicant has not requested any changes to the current emissions standards for these engines.

Upon completion, upgraded Engine 1207 will have the potential to emit the following pollutants: 60 tons of carbon monoxide per year; 49 tons of nitrogen oxides per year; 4 tons of particulate matter per year; 15 tons of sulfur dioxide per year; and 2 ton of volatile organic compounds per year. However, recent contemporaneous projects also include the following: emissions increases due to the addition of a new 15,700 bhp gas turbine compressor engine (Unit 1208); decreases of carbon monoxide emissions from the installation of catalytic converters on Engines 1204 and 1205; decreases in nitrogen oxide emissions from modifications to the turbochargers and control systems on Engines 1204 and 1205; and potential emissions decreases from the addition of jet cell pre-combustor technology on Engines 1204 and 1205. A review of the recent actions shows that the net emissions increases from the combined projects are below the PSD significant emission rates. Therefore, the project remains minor with respect to the PSD preconstruction review program.

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, 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:

Florida 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

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

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 Bureau of Air Regulation's review engineer for this project for additional information at the address and phone numbers listed above.

Legal No. 65074 1T May 30, 2003

6/6/03

Florida Cas - VI
C.S. 12
Proof of Publication

Thanks,
Heather
813-655-7411

Memorandum

Florida Department of Environmental Protection

TO: Trina Vielhauer, Chief
Bureau of Air Regulation

THROUGH: Al Linero, Manager
New Source Review Section

FROM: Jeff Koerner, New Source Review Section

DATE: May 20, 2003

SUBJECT: Draft Air Construction Permit No. 1130037-007-AC
Florida Gas Transmission Company, Santa Rosa Compressor Station 12
Phase VI - Upgraded Gas Turbine and Addition of Jet Cells Pre-Combustors

Attached for your review are the following items:

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

The draft permit authorizes the upgrade of Engine 1207 from 13,000 bhp to 15,000 bhp and adds jet cell pre-combustor technology to Engines 1204 and 1205. The equipment is installed at existing Compressor Station 12, which is located north of Munson in Santa Rosa County, Florida. The Technical Evaluation and Preliminary Determination provide a detailed description of the project, rule applicability, and emissions standards. The P.E. certification briefly summarizes the project.

The proposed project is part of Florida Gas Transmission Company's overall Phase VI project intended to increase the availability and reliability of the natural gas supply to service domestic, commercial, and industrial customers in Florida. The Bureau of Air Regulation agreed to process all Phase VI projects for Florida Gas Transmission Company to provide statewide consistency during construction. The project is a minor source air construction permit for an existing minor facility. Day #74 is July 5, 2003. I recommend your approval of the attached Draft Permit for this project.

Attachments

P.E. CERTIFICATION STATEMENT

PERMITTEE

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

Draft Air Permit No. 1130037-007-AC
Existing Compressor Station 12
Phase VI, Engines 1204, 1205, and 1207
Santa Rosa County, Florida

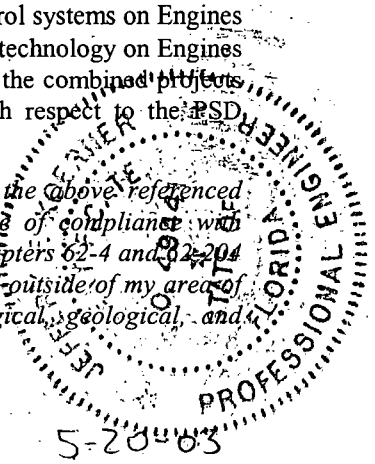
PROJECT DESCRIPTION

The proposed project is part of Florida Gas Transmission Company's overall Phase VI projects intended to increase the availability and reliability of natural gas supplied by the existing natural gas pipeline. Engine 1207 currently consists of a Solar Model No. Mars 90-T-13000S gas turbine compressor engine rated at 13,000 bhp (ISO). The applicant proposes to upgrade this engine to a Solar Mars 100 T-15000S gas turbine rated at 15,000 bhp (ISO). The project also includes adding jet cell pre-combustor technology to existing compressor Engines 1204 and 1205. The new jet cells are expected to reduce fuel consumption, lower emissions, and decrease engine maintenance. All engines exclusively fire natural gas.

The proposed increase in gas turbine output from 13,000 to 15,000 bhp will result in a slight increase in the maximum heat input rate and emissions. The upgraded gas turbine remains subject to the federal standards in NSPS Subpart GG. The applicant requested standards more stringent than the federal standards and within the capabilities of the engine to avoid preconstruction review in accordance with the Prevention of Significant Deterioration (PSD) of Air Quality pursuant to Rule 62-212.400, F.A.C. The addition of jet cell pre-combustors to Engines 1204 and 1205 is expected to lower fuel consumption, which should reduce emissions. However, the applicant has not requested any changes to the current emissions standards for these engines.

Upon completion, upgraded Engine 1207 will have the potential to emit the following pollutants: 60 tons of carbon monoxide per year; 49 tons of nitrogen oxides per year; 4 tons of particulate matter per year; 15 tons of sulfur dioxide per year; and 2 ton of volatile organic compounds per year. However, recent contemporaneous projects also include the following: emissions increases due to the addition of a new 15,700 bhp gas turbine compressor Engine 1208; decreases of carbon monoxide emissions from the installation of catalytic converters on Engines 1204 and 1205; decreases in nitrogen oxide emissions from modifications to the turbochargers and control systems on Engines 1204 and 1205; and potential emissions decreases from the addition of jet cell pre-combustor technology on Engines 1204 and 1205. A review of the recent actions shows that the net emissions increases from the combined projects are below the PSD significant emission rates. Therefore, the project remains minor with respect to the PSD preconstruction review program.

I HEREBY CERTIFY *that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable 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, geological, and meteorological features).*



Jeffery J. Koerner 5-20-03

Jeffery F. Koerner, P.E. (Date)
Registration Number: 49441

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

May 20, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Richard Craig, V.P. of Southeast Operations
Florida Gas Transmission Company
P.O. Box 1188
Houston, TX 77251

Re: Draft Air Permit No. 1130037-007-AC
Florida Gas Transmission Company, Station 12
Phase VI Modifications: Upgrade of Engine 1207 and Addition of Jet Cells to Engines 1204 and 1205

Dear Mr. Craig:

Enclosed is one copy of the draft permit that authorizes the upgrade of Engine 1207 from 13,000 bhp to 15,000 bhp and adds jet cell pre-combustor technology to Engines 1204 and 1205. The equipment is installed at existing Compressor Station 12, which is located north of Munson on Highway 191, approximately 5 miles north of Highway 4 in Santa Rosa County, Florida. The Department's "Technical Evaluation and Preliminary Determination", "Intent to Issue Permit", and the "Public Notice of Intent to Issue Permit" are also included.

The "Public Notice of Intent to Issue Permit" 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 of Chapter 50 of the 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 A. A. Linero, Administrator of the New Source Review Section, at the above letterhead address. If you have any other questions, please contact Jeff Koerner at 850/921-9536.

Sincerely,

for Trina Vielhauer, Chief
Bureau of Air Regulation

Enclosures

NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

In the Matter of an
Application for Air Permit by:

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

Authorized Representative:
Mr. Richard Craig, V.P. of Southeast Operations

Air Permit No. 1130037-007-AC
Compressor Station 12
Phase VI Modifications
Santa Rosa County, Florida

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit (copy of Draft Permit 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 April 23, 2003 to the Department for a permit that authorizes the upgrading of existing gas turbine compressor Engine 1207 from 13,000 bhp to 15,000 bhp. The project also includes the addition of jet cell pre-combustor technology to Engines 1204 and 1205. The equipment is installed at existing Compressor Station 12 located near Munson 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. 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. 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. 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.

for Trina 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 package (including the Public Notice of Intent to Issue Air Construction Permit, Technical Evaluation and Preliminary Determination, and the Draft Permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 5/21/03 to the persons listed:

Mr. Richard Craig, FGTC*
Mr. Jim Thompson, FGTC
Mr. Wesley Orso, FGTC
Mr. Kevin McGlynn, McGlynn Consulting Co.
Mr. V. Duane Pierce, AQMcs
Ms. Sandra Veazey, NWD

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.

Victoria Gibson (Clerk) May 21, 2003 (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Draft Air Permit No. 1130037-007-AC

Florida Gas Transmission Company
Existing Santa Rosa Compressor Station 12
Phase VI Project

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Florida Gas Transmission Company that authorizes modifications for Engines 1204, 1205, and 1207. The equipment is installed at existing Compressor Station 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. Richard Craig, Vice President of Southeastern Operations. The applicant's mailing address is Florida Gas Transmission Company, P.O. Box 1188, Houston, Texas 77251.

The proposed project is part of Florida Gas Transmission Company's overall Phase VI projects intended to increase the availability and reliability of natural gas supplied by the existing natural gas pipeline. Engine 1207 currently consists of a Solar Model No. Mars 90-T-13000S gas turbine compressor engine rated at 13,000 bhp. The applicant proposes to upgrade this engine to a Solar Mars 100 T-15000S gas turbine rated at 15,000 bhp. The project also includes adding jet cell pre-combustor technology to existing compressor Engines 1204 and 1205. The new jets cells are expected to reduce fuel consumption, lower emissions, and decrease engine maintenance. All engines exclusively fire natural gas.

The proposed increase in gas turbine production from 13,000 to 15,000 bhp will result in a slight increase in the maximum heat input rate and emissions. The upgraded gas turbine remains subject to the federal standards in NSPS Subpart GG. The applicant requested standards more stringent than the federal standards and within the capabilities of the engine to avoid preconstruction review in accordance with the Prevention of Significant Deterioration (PSD) of Air Quality pursuant to Rule 62-212.400, F.A.C. The addition of jet cell pre-combustors to Engines 1204 and 1205 is expected to lower fuel consumption, which should reduce emissions. However, the applicant has not requested any changes to the current emissions standards for these engines.

Upon completion, upgraded Engine 1207 will have the potential to emit the following pollutants: 60 tons of carbon monoxide per year; 49 tons of nitrogen oxides per year; 4 tons of particulate matter per year; 15 tons of sulfur dioxide per year; and 2 ton of volatile organic compounds per year. However, recent contemporaneous projects also include the following: emissions increases due to the addition of a new 15,700 bhp gas turbine compressor engine (Unit 1208); decreases of carbon monoxide emissions from the installation of catalytic converters on Engines 1204 and 1205; decreases in nitrogen oxide emissions from modifications to the turbochargers and control systems on Engines 1204 and 1205; and potential emissions decreases from the addition of jet cell pre-combustor technology on Engines 1204 and 1205. A review of the recent actions shows that the net emissions increases from the combined projects are below the PSD significant emission rates. Therefore, the project remains minor with respect to the PSD preconstruction review program.

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

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

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, 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:

Florida 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

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

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 Bureau of Air Regulation's review 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

PROJECT

ARMS Facility ID No. 1130037
Draft Air Construction Permit No. 1130037-007-AC
Florida Gas Transmission Company
Existing Compressor Station 12
Phase VI Modifications – Engines 1204, 1205, 1207, and 1208
Emissions Unit Nos. 004, 005, 008, and 010

COUNTY

Santa Rosa County

APPLICANT

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

Mr. Richard Craig, V.P. of Southeastern Operations
(Authorized Representative)

PERMITTING AUTHORITY

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

May 20, 2003

{Filename: FGT 12VI TEPD}

1. GENERAL PROJECT INFORMATION

Processing Schedule

04/23/03: Received application for an air construction permit.

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 12 is located north of Munson on Highway 191, approximately 5 miles north of Highway 4 in Santa Rosa County, Florida. This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to a National Ambient Air Quality Standard (NAAQS). Upon completion of the proposed project, the compressor station will consist of five 2000 bhp reciprocating compressor engines, one 4100 bhp reciprocating compressor engine, one 15,000 bhp gas turbine compressor engine, one 15,700 bhp gas turbine compressor engine, and miscellaneous support equipment.

Standard Industrial Classification Code (SIC)

SIC No. 4922 – Natural Gas Transmission

Regulatory Categories

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

Title IV: The facility does not operate units subject to the acid rain provisions of the Clean Air Act.

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

PSD: The facility is a PSD major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility operates units subject to the federal New Source Performance Standards (40 CFR 60).

Project Description

Florida Gas Transmission Company proposes to replace the existing Solar Mars 90 T-13000S gas turbine compressor engine (Engine 1207) rated at 13,000 bhp (ISO) with an upgraded Solar Mars 100 T-15000S gas turbine compressor engine rated at 15,000 bhp (ISO). In addition, existing reciprocating compressor engines 1204 and 1205 will be modified to include jet cell pre-combustor technology. The previous turbocharger modifications made to these units to reduce NOx emissions will remain in place. The applicant believes that the new jet cells will smooth operation and allow a return to the engine maintenance levels that existed before the turbocharger modifications. The jet cell vendor, Cooper Energy Services, also claims that the pre-combustors will reduce fuel consumption and emission rates. However, the applicant was unable to obtain information to support these claims. The project includes no request to change the permitted emissions standards for Engines 1204 and 1205. The Bureau of Air Regulation processed this application due to a previous agreement with Florida Gas Transmission Company to provide a centralized review for the Phase V and VI projects intended to increase the availability and reliability of natural gas from the existing pipeline system.

2. APPLICABLE REGULATIONS

State Regulations

This project is subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the Florida Administrative Code (F.A.C.). This project is subject to the applicable rules and regulations defined in the following Chapters of the F.A.C.

Chapter	Description
62-4	Permitting Requirements
62-204	Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference
62-210	Required Permits, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms

62-212	Preconstruction Review, PSD Requirements, and BACT Determinations
62-213	Operation Permits for Major Sources of Air Pollution
62-296	Emission Limiting Standards
62-297	Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures

Federal Regulations

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

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

General PSD Applicability

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

≥ 250 tons per year of any regulated pollutant, or

≥ 100 tons per year of any regulated pollutant and belonging to one of 28 PSD Major Facility Categories, or

≥ 5 tons per year of lead.

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

The proposed project is located in Santa Rosa County, Florida, an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to a National Ambient Air Quality Standard (NAAQS). As previously indicated, Station 12 is an existing PSD major facility and therefore, a PSD applicability review is required. The following section provides a detailed evaluation of the proposed project.

3. PROJECT REVIEW

Brief Discussion of Emissions – Natural Gas-Fired Reciprocating Engines

The following excerpts on natural gas-fired reciprocating engines are from of EPA's AP-42 emission factor document (July 2000).

"The primary criteria pollutants from natural gas-fired reciprocating engines are oxides of nitrogen (NOx), carbon monoxide (CO), and volatile organic compounds (VOC). The formation of nitrogen oxides is exponentially related to combustion temperature in the engine cylinder. The other pollutants, CO and VOC species, are primarily the result of incomplete combustion. Particulate matter (PM) emissions include trace amounts of metals, non-combustible inorganic material, and condensable, semi-volatile organics which result from volatized lubricating oil, engine wear, or from products of incomplete combustion. Sulfur oxides are very

low since sulfur compounds are removed from natural gas at processing plants. However, trace amounts of sulfur containing odorant are added to natural gas at city gates prior to distribution for the purpose of leak detection.

It should be emphasized that the actual emissions may vary considerably from the published emission factors due to variations in the engine operating conditions. This variation is due to engines operating at different conditions, including air-to-fuel ratio, ignition timing, torque, speed, ambient temperature, humidity, and other factors. It is not unusual to test emissions from two identical engines in the same plant, operated by the same personnel, using the same fuel, and have the test results show significantly different emissions. This variability in the test data is evidenced in the high relative standard deviation reported in the data set."

"Lean-burn engines may operate up to the lean flame extinction limit, with exhaust oxygen levels of 12 percent or greater. The air to fuel ratios of lean-burn engines range from 20:1 to 50:1 and are typically higher than 24:1. The exhaust excess oxygen levels of lean-burn engines are typically around 8 percent, ranging from 4 to 17 percent. Some lean-burn engines are characterized as clean-burn engines. The term "clean-burn" technology is a registered trademark of Cooper Energy Systems and refers to engines designed to reduce NOx by operating at high air-to-fuel ratios. Engines operating at high air-to-fuel ratios (greater than 30:1) may require combustion modification to promote stable combustion with the high excess air. These modifications may include a turbo charger or a pre-combustion chamber (PCC). A turbo charger is used to force more air into the combustion chamber, and a PCC is used to ignite a fuel-rich mixture that propagates into the main cylinder and ignites the very lean combustion charge. Lean-burn engines typically have lower oxides of nitrogen (NOx) emissions than rich-burn engines."

Engines 1204 and 1205 are 4-cycle lean burn reciprocating internal combustion engines that exclusively fire natural gas, which contains little or no ash, sulfur, or other contaminants. This will minimize emissions of particulate matter and sulfur dioxide. These engines employ catalytic converters to reduce emissions of carbon monoxide and volatile organic compounds. The turbochargers and control systems have been modified to reduce NOx emissions. Jet cell pre-combustors will be installed as part of this project to smooth operation and allow a return to previous maintenance levels. The jet cells may also reduce emissions.

Brief Discussion of Emissions – Gas Turbines

The following excerpts on gas turbines are from Section 3.1 of EPA's AP-42 emission factor document.

"The primary pollutants from gas turbine engines are nitrogen oxides (NOx), carbon monoxide (CO), and to a lesser extent, volatile organic compounds (VOC). Particulate matter (PM) is also a primary pollutant for gas turbines using liquid fuels. Nitrogen oxide formation is strongly dependent on the high temperatures developed in the combustor. Carbon monoxide, VOC, hazardous air pollutants (HAP), and PM are primarily the result of incomplete combustion. Trace to low amounts of HAP and sulfur dioxide (SO_2) are emitted from gas turbines. Ash and metallic additives in the fuel may also contribute to PM in the exhaust. Oxides of sulfur (SOx) will only appear in a significant quantity if heavy oils are fired in the turbine. Emissions of sulfur compounds, mainly SO_2, are directly related to the sulfur content of the fuel."

"Since thermal NOx is a function of both temperature (exponentially) and time (linearly), the basis of dry controls are to either lower the combustor temperature using lean mixtures of air and/or fuel staging, or decrease the residence time of the combustor. A combination of methods may be used to reduce NOx emissions such as lean combustion and staged combustion (two stage lean/lean combustion or two stage rich/lean combustion)."

"Two stage rich/lean combustors are essentially air-staged, premixed combustors in which the primary zone is operated fuel rich and the secondary zone is operated fuel lean. The rich mixture produces lower temperatures (compared to stoichiometric) and higher concentrations of CO and H_2, because of incomplete combustion. The rich mixture also decreases the amount of oxygen available for NOx generation. Before entering the secondary zone, the exhaust of the primary zone is quenched (to extinguish the flame) by large amounts of air and a lean mixture is created. The lean mixture is pre-ignited and the combustion completed in the secondary zone. NOx

formation in the second stage is minimized through combustion in a fuel lean, lower temperature environment. Staged combustion is identified through a variety of names, including Dry-Low NOx (DLN), Dry-Low Emissions (DLE), or SoLoNOx."

Engine 1207 will employ the SoLoNOx™ system and Engine 1208 will also incorporate lean premix combustion technology to reduce nitrogen oxide emissions. Both engines will exclusively fire natural gas, which contains little or no ash, sulfur, or other contaminants. This will minimize emissions of particulate matter and sulfur dioxide. Emissions of carbon monoxide and volatile organic compounds will also be minimized by the efficient combustion of natural gas, which is almost completely combusted at the high operating temperatures in the gas turbine.

Permitting History

The existing facility operates as a compressor station in Santa Rosa County as part of Florida Gas Transmission Company's natural gas pipeline system. It currently consists of the following emissions units:

- Engines 1201-1203 consisting of three 2000 bhp reciprocating internal combustion engines installed in 1958 (preceded Florida's air construction permit program requirements);
- Engines 1204 and 1205 consisting of one 2000 bhp reciprocating internal combustion engines installed in 1966 and 1968 (initially preceded Florida's air construction permit program requirements; modified in 2001 to obtain CO and NOx emissions decreases);
- Engine 1206 consisting of one 4100 bhp reciprocating internal combustion engine installed in 1991 subject to PSD preconstruction review (Permit No. PSD-FL-156);
- Existing Engine 1207 consisting of one gas turbine de-rated to 10,350 bhp (ISO) originally installed in January 2001 and later up-rated to 13,000 bhp (ISO) in 2001 (netted out of PSD with project that also included Engines 1204, 1205, and 1208);
- Engine 1208 consisting of one 15,700 bhp (ISO) gas turbine compressor engine installed in 2001 (netted out of PSD with project that also included Engines 1204, 1205, and 1208); and
- Miscellaneous unregulated emissions units.

The permit and review for this project only affects Engines 1204, 1205, 1207, and 1208.

Applicant's PSD Applicability Review

The applicant notes that NOx appears to be the critical pollutant for PSD preconstruction review. The following table summarizes the applicant's PSD applicability analysis.

Table 3A. PSD Applicability Summary - Applicant

Date	Engine / Change	Project Description	Project PTE Tons/Year	2-Year Actuals Tons/Year	Creditable Increase (+) or Decrease (-)
01/01/01	1207 / Phase IV	New gas turbine	38.6	0.0	+38.6
01/01/01	GEN03	New emergency generator	0.7	0.0	+0.7
12/01/01	1204 / Phase V	Modified turbocharger	104.3	130.9	-26.6
12/01/01	1205 / Phase V	Modified turbocharger	104.3	152.2	-47.9
12/01/01	1207 / Phase V*	Up-rated gas turbine	6.1	0.0	+6.1
12/01/01	1208 / Phase V	New gas turbine	61.8	0.0	+61.8
10/15/03	1207 / Phase VI**	Up-rated gas turbine	4.7	0.0	+4.6

Total Net Increase for proposed Project: +37.3

* - Additional potential emissions are due to the upgrade for Phase V.

** - Additional potential emissions are due to the upgrade for Phase VI.

The applicant's analysis evaluates only the additional potential NOx emissions that will occur due to the project.

Department's PSD Applicability Review

The changes requested affect emissions units that were part of a previous netting project. The Department believes that two years of normal operations have not yet occurred for the affected units. Therefore, the Department will revisit the previous netting exercise in light of the new proposals. The following summarizes the key points of this review:

- The review period begins January 1, 2001 with the addition of Engine 1207, which will be reviewed as a 15,000 bhp gas turbine compressor engine with future potential emissions, but no past actual emissions.
- Engines 1204 and 1205 will include turbocharger modifications, jet cell pre-combustors, and catalytic converters. These units will have 2-year average past actual emissions (1999-2000) and new future potential emissions.
- Engine 1208 will be reviewed as a 15,700 bhp gas turbine compressor engine with future potential emissions, but no past actual emissions.

The Department believes this scenario is conservative and will review the full amount of actual and potential emissions added to the facility. The netting analysis is summarized in Attachment A of this report. As shown in the attachment, the combined projects remain minor with respect to PSD preconstruction review. Although the net increase of CO emissions (99 tons/year) is very close to the PSD significant emission rate of 100 tons/year, emission testing shows that actual emissions are only a fraction of the permitted allowable emissions (actual emission rates ranged from only 2% to 13% of the emission limits). Therefore, the Department will not require more rigorous monitoring.

Federal NSPS Requirements

The gas turbine is subject to the New Source Performance Standards of Subpart GG in 40 CFR 60, adopted by reference in Rule 62-204.800, F.A.C. This regulation establishes standards for emissions of NOx and SO_2 as well as testing and monitoring requirements. In general, the emissions standards are:

- NOx emissions for Engine 1207 $\leq$ 202 ppmvd corrected to 15% oxygen;
- NOx emissions for Engine 1208 $\leq$ 196 ppmvd corrected to 15% oxygen; and
- SO_2 emissions from Engines 1207 and 1208 limited to the firing of fuels containing no more than 0.8% sulfur by weight (150 ppmv).

The manufacturers' guaranteed NOx emission rates for these engines are 25 ppmvd @ 15% oxygen, which readily comply with the NOx standard in Subpart GG. Natural gas typically contains almost negligible quantities of sulfur (< 1 grain per 100 scf). The Federal Energy Regulatory Commission (FERC) currently limits the maximum sulfur content of natural gas to 10 grains per 100 scf (~ 4 ppmv). Therefore, the exclusive firing of natural gas also readily complies with the SO_2 standard in Subpart GG.

Federal NESHAP Requirements

The potential emissions of hazardous air pollutants (HAP) from the project do not trigger a case-by-case determination of the Maximum Achievable Control Technology (MACT). The applicant identifies no units subject to Subpart HHH in 40 CFR 63. Eventually, the compressor engines will become subject to Subpart YYYY in 40 CFR 63. The applicant states that a Part I MACT Hammer application has been submitted. The final regulation has not yet been promulgated.

Draft Emissions Standards

The draft permit will include the previous emission standards for Engines 1204, 1205, and 1208 as specified in Air Permit No. 1130037-003-AC. The draft permit will authorize the replacement of Engine 1207 by removing the existing Solar Mars 90 T-13000S gas turbine rated at 13,000 bhp (ISO) and installing an upgraded Solar Mars 100 T-15000S gas turbine rated at 15,000 bhp (ISO). The replacement will result in slight increases of the hourly and annual potential emissions due to a small increase (~ 10%) in the maximum permitted heat input rate for the engine from 113 to 125 MMBtu per hour. The following table summarizes the revised emissions standards for the upgraded Engine 1207.

Table 3B. Draft Emissions Standards for Engine 1207

Pollutant	Standards	Equivalent Maximum Emissions [f]		Rule Basis [g]
		lb/hour	TPY	
CO [a]	50.0 ppmvd @ 15% O2	13.71	60.1	Avoid Rule 62-212.400, F.A.C.
NOx [b]	25.0 ppmvd @ 15% O2	11.26	49.3	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
SO2 [c]	10.0 grains of sulfur per 100 SCF of gas	3.42	15.0	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.333
Opacity [d]	10% opacity, 6-minute average	Not Applicable		
PM [e]	Efficient combustion of natural gas	0.82	3.6	Rule 62-4.070(3), F.A.C.
VOC [e]	Efficient combustion of natural gas	0.39	1.7	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 SO2 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 the opacity and CO standards. Equivalent maximum PM emissions are based on a factor of 0.0066 lb/MMBtu heat input from AP-42 Table 3.1-2a. Equivalent maximum VOC emissions are based on a total hydrocarbon factor of 25.0 ppmvd @ 15% oxygen from the vendor and the conservative assumption that only 10% of the hydrocarbons are regulated VOC (non-methane, non-ethane). No testing is required.

f. Equivalent maximum emissions are based on a compressor inlet air temperature of 59° F, 8760 hours of operation per year, and the emission standards (CO, NOx, and SO2) or the maximum expected emission rates (PM and VOC).

g. Compliance with the emissions standards of this permit ensures that the project remains minor with respect to PSD.

Draft Compliance Methods

The draft permit will include the previous methods of compliance for Engines 1204, 1205, and 1208 as specified in Air Permit No. 1130037-003-AC. Engine 1207 shall be shall be tested initially and annually for emissions of CO, NOx, and visible emissions. Testing for CO and NOx emissions shall be conducted concurrently. SO2 emissions shall be calculated and reported based on an analysis of the natural gas fuel sulfur content. The draft permit includes

a custom fuel-monitoring schedule for fuel sulfur that meets the general requirements of EPA's most recent guidance regarding compliance with the NSPS Subpart GG provisions. The frequency of monitoring shall begin at twice per week and may eventually be reduced to twice per year based on satisfactory results.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the specific conditions of the draft permit. Jeff Koerner is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

DRAFT PERMIT

PERMITTEE:

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

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

Santa Rosa Compressor Station No. 12
Air Permit No. 1130037-007-AC
Facility ID No. 1130037
SIC No. 4922
Permit Expires: October 1, 2004

PROJECT AND LOCATION

Florida Gas Transmission Company operates existing natural gas Compressor Station 12 located north of Munson on Highway 191, approximately 5 miles north of Highway 4 in Santa Rosa County, Florida. This permit authorizes the replacement of existing 13,000 Solar gas turbine compressor engine (1207) with an upgraded 15,000 bhp Solar gas turbine compressor engine. In addition, existing reciprocating internal combustion compressor engines 1204 and 1205 will be modified to include jet cell pre-combustion chamber technology.

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.

CONTENTS

(Draft)

Howard L. Rhodes, Director (Date)
Division of Air Resources Management

FACILITY AND PROJECT DESCRIPTION

The existing facility operates as a compressor station in Santa Rosa County for Florida Gas Transmission Company's natural gas pipeline. The project will replace existing gas turbine compressor engine (1207) and modify two existing reciprocating internal combustion compressor engines (1204 and 1205). Upon completion of the proposed project, Compressor Station 12 will consist of five 2000 bhp reciprocating compressor engines, one 4100 bhp reciprocating compressor engine, one 15,000 bhp gas turbine compressor engine, one 15,700 bhp gas turbine compressor engine, and miscellaneous support equipment.

{Permitting Note: Station 12 is an existing major facility with respect to the PSD preconstruction review program. This project included a netting analysis based on requested constraints to avoid PSD preconstruction review. 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. Relaxations of requirements that would increase actual emissions are subject to Rule 62-212.400(2)(g), F.A.C.}

REGULATORY CLASSIFICATION

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

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

Title V: The facility is a Title V major source of air pollution (Chapter 213, F.A.C.).

PSD: The facility is a PSD major source of air pollution (Rule 62-212.400, F.A.C.).

NSPS: The facility operates units subject to the New Source Performance Standards (40 CFR 60).

RELEVANT DOCUMENTS

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action and are on file with the Department.

- Permit application received on 04/23/03; and
- Permit No. 1130037-003-AC previously issued on 08/14/01.

1. Permitting Authority: 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 NSPS Gas Turbines); Appendix GC (General Conditions); Appendix GG (NSPS Subpart GG Requirements for Gas Turbines); and Appendix SC (Standard Conditions).

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, F.S.; Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C.; and Title 40, Part 60 of the Code of Federal Regulations, adopted by reference in Rule 62-204.800, F.A.C. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the 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: 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. Source Obligation: This project is subject to Rule 62-212.400(2)(g), F.A.C., which states, "If a previously permitted facility or modification becomes a facility or modification which would be subject to the preconstruction review requirements of this rule if it were a proposed new facility or modification solely by virtue of a relaxation in any federally enforceable limitation on the capacity of the facility or modification to emit a pollutant (such as a restriction on hours of operation), which limitation was established after August 7,1980, then at the time of such relaxation the preconstruction review requirements of this rule shall apply to the facility or modification as though construction had not yet commenced on it." This includes, but is not limited to, increases in the heat input or pollutant emission rates. [Rule 62-212.400(2)(g), F.A.C.]

8. 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 require by law. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

A. EU-004 and 005: Engines 1204 and 1205, Reciprocating Compressor Engines

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

Emissions Units 004 and 005: Engines 1204 and 1205, Reciprocating Compressor Engines (2000 bhp)
Description: Each 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 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: Natural gas contains little or no ash, sulfur, or other contaminants, which minimizes emissions of particulate matter and sulfur dioxide. The efficient combustion of natural gas at high temperatures results in lower emissions of carbon monoxide and volatile organic compounds, which are further reduced by a catalytic converter in the stack. Modifications to the engine turbocharger increase the air manifold pressure and airflow to each cylinder, which reduces NOx emissions. The engines also include jet cell pre-combustors, which may also reduce 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.

EQUIPMENT

1. Engine 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. The permittee is also authorized to install jet cell pre-combustors on each reciprocating compressor engine. The jet cells are expected to smooth engine operation and reduce overall maintenance. 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; Rule 62-212.400(2)(g), F.A.C.]

2. Catalytic Converters: Catalytic converters shall be installed on the stack of each reciprocating compressor engine. [Applicant Request; Rule 62-212.400(2)(g), F.A.C.]

PERFORMANCE RESTRICTIONS

3. Permitted Capacity: The maximum heat input rate to each 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.]

4. Authorized Fuel: The reciprocating compressor engines shall fire only pipeline natural gas with a maximum of 10 grains of sulfur per 100 standard cubic feet of natural gas. The custom fuel monitoring plan described in Appendix CF shall serve as the compliance demonstration for the fuel sulfur limit. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

5. Restricted Operation: The hours of operation of each 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: Engines 1204 and 1205, Reciprocating Compressor Engines

EMISSIONS STANDARDS

6. Emissions Standards: Emissions from each modified reciprocating compressor engine 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	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]	Efficient combustion of natural gas	0.2	0.7	Avoid Rule 62-212.400, F.A.C.
VOC [e]	Efficient combustion of natural gas	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 is determined 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 natural gas is indicated by compliance with opacity and CO standards. Equivalent maximum PM emissions are based on an emission factor of 0.00999 lb/MMBtu from Table 3.2-2 in AP-42. Equivalent maximum VOC emissions are based on actual test data. No testing is required for these pollutants.

f. Equivalent maximum emissions are based on the emission standards (CO, NOx, and SO_2) or the maximum expected emission rates (PM and VOC) 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

7. Initial Compliance Tests: Each 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 after installation of the jet cell pre-combustors within 60 days after achieving at least 90% of the maximum production rate, 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 the fuel sulfur content. [Rule 62-297.310(7)(a)1, F.A.C.]

8. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), each 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 the 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. Tests Prior to Renewal: Within the 12 months before expiration of the operation permit, each 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.]

10. 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.]

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

RECORDS AND REPORTS

12. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in 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.]

13. 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: Engine 1207, Gas Turbine Compressor Engine

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

Emissions Unit 008: Engine 1207, Gas Turbine Compressor Engine (15,000 bhp)
Description: The 15,000 bhp (ISO) gas turbine is a Solar Mars 100 T-15000S that will be used as a compressor engine for the natural gas pipeline.
Fuel: The gas turbine fires pipeline natural gas (SCC No 2-02-002-01). The maximum natural gas firing rate is approximately 119,700 cubic feet per hour based on a heat content of 1040 Btu per scf of gas.
Capacity: At 124.5 MMBtu per hour of heat input, the gas turbine produces approximately 15,000 bhp (ISO). After initial startup, the gas turbine is intended to operate at or near capacity.
Controls: Natural gas contains little or no ash, sulfur, or other contaminants, which minimizes emissions of particulate matter and sulfur dioxide. The efficient combustion of natural gas at high temperatures results in low emissions of carbon monoxide and volatile organic compounds. NOx emissions are reduced with lean premix 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 193,400 acfm at 903° F.

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 as the NSPS requirements of Subpart GG. [Rule 62-4.070(3), F.A.C.; Subpart GG in 40 CFR 60]

EQUIPMENT

2. Engine 1207: The permittee is authorized to replace the existing Solar Mars 90 T-13000S gas turbine compressor engine rated at 13,000 bhp (ISO) with an upgraded Solar Mars 100 T-15000S gas turbine compressor engine rated at 15,000 bhp (ISO). The existing Solar Mars 90 T-13000S gas turbine shall be removed from the site. The permittee shall tune, operate and maintain the lean premix combustion system to optimize the reduction of NOx emissions from the new gas turbine. 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 124.5 MMBtu per hour while producing approximately 15,0000 bhp (ISO) based on a gas turbine 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 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.]

B. EU-008: Engine 1207, Gas Turbine Compressor Engine

EMISSIONS STANDARDS

6. Emissions Standards: Emissions from the 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	Equivalent Maximum Emissions [f]		Rule Basis [g]
		lb/hour	TPY	
CO [a]	50.0 ppmvd @ 15% O_2	13.71	60.1	Avoid Rule 62-212.400, F.A.C.
NOx [b]	25.0 ppmvd @ 15% O_2	11.26	49.3	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	3.42	15.0	Avoid Rule 62-212.400, 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]	Efficient combustion of natural gas	0.82	3.6	Rule 62-4.070(3), F.A.C.
VOC [e]	Efficient combustion of natural gas	0.39	1.7	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.

e. For both PM and VOC, the efficient combustion of clean fuels is indicated by compliance with the opacity and CO standards. Equivalent maximum PM emissions are based on a factor of 0.0066 lb/MMBtu heat input from AP-42 Table 3.1-2a. Equivalent maximum VOC emissions are based on vendor data. No testing is required.

f. Equivalent maximum emissions are based on a gas turbine inlet air temperature of 59° F, 8760 hours of operation per year, and the emission standards (CO, NOx, and SO_2) or the maximum expected emission rates (PM and VOC).

g. Compliance with the emissions standards of this permit ensures that the project remains minor with respect to PSD.

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

RECORDS AND REPORTS

11. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix SC of this permit. For each required test, 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 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 of base load, and the gas turbine inlet air temperature. [Rule 62-297.310(8), F.A.C.; 40 CFR 60.332]

12. Custom Fuel Monitoring Schedule: In lieu of the NSPS fuel monitoring requirements of 40 CFR 60.334 of Subpart GG, the Department approves the custom fuel-monitoring schedule specified in Appendix FM of this permit. [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 actual heating value (MMBtu per scf) of the pipeline natural gas. 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: Engine 1208, Gas Turbine Compressor Engine

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

Emissions Unit 010: Engine 1208, Gas Turbine Compressor Engine (15,700 bhp)
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 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: Natural gas contains little or no ash, sulfur, or other contaminants, which minimizes emissions of particulate matter and sulfur dioxide. The efficient combustion of natural gas at high temperatures results in low emissions of carbon monoxide and volatile organic compounds. NOx emissions are reduced with lean premix 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

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

EQUIPMENT

2. Engine 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 lean premix combustion technology to achieve the permitted standards. 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 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 gas turbine 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 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% O_2	5.1	30.8	Avoid Rule 62-212.400, F.A.C.
	70-90%	30.0 ppmvd @ 15% O_2	10.2		
	50-70%	75.0 ppmvd @ 15% O_2	22.5		
NOx [b]	50-100%	25.0 ppmvd @ 15% O_2	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%	Efficient combustion of natural gas	0.9	3.9	Avoid Rule 62-212.400, F.A.C.
VOC [e]	90-100%	Efficient combustion of natural gas	0.3	2.0	Avoid Rule 62-212.400, F.A.C.
	70-90%		0.8		
	50-70%		1.5		

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

b. The NOx standards are based 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 a factor of 0.0066 lb/MMBtu heat input from AP-42 Table 3.1-2a. Equivalent maximum VOC emissions are based on vendor data. No testing is required.

f. Equivalent maximum emissions are based on a gas turbine inlet air temperature of 59° F, permitted capacity at restricted hours of operation, and the emission standards (CO, NOx, and SO_2) or the maximum expected emission rates (PM and VOC).

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.

C. EU-010: Engine 1208, Gas Turbine Compressor Engine

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

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 Appendix SC of this permit. For each required test, 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 run, the test report shall also indicate the natural gas firing rate (cubic feet per hour), the heat input rate (MMBtu per hour), the power output (bhp), the percent of base load, and the gas turbine inlet air temperature. [Rule 62-297.310(8), F.A.C.; 40 CFR 60.332]

12. Custom Fuel Monitoring Schedule: In lieu of the NSPS fuel monitoring requirements of 40 CFR 60.334 of Subpart GG, the Department approves the custom fuel-monitoring schedule specified in Appendix FM of this permit. [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; 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 heating value (MMBtu per scf) of the pipeline natural gas. 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 Support Activities

This permit recognizes the following miscellaneous support activities.

Emissions Unit 009: Miscellaneous Support Activities	
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; • Blow down stacks; and • Miscellaneous fugitive emission leaks from valves, flanges, etc.

CONTENTS

SECTION 4. APPENDIX CF
CITATION FORMAT

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

REFERENCES TO PREVIOUS PERMITTING ACTIONS

Old Permit Numbers

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

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

New Permit Numbers

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

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

PSD Permit Numbers

Example: Permit No. PSD-FL-317

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

RULE CITATION FORMATS

Florida Administrative Code (F.A.C.)

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

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

Code of Federal Regulations (CFR)

Example: [40 CRF 60.7]

Means: Title 40, Part 60, Section 7

SECTION 4. APPENDIX GC

CUSTOM FUEL MONITORING PLAN FOR NSPS GAS TURBINES

Custom Fuel Monitoring Schedule

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

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

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

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

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

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

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

[Rule 62-4.070(3), F.A.C.; 40 CFR 60.334]

GENERAL CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

13. This permit also constitutes:

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

14. The permittee shall comply with the following:

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

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

    c. Records of monitoring information shall include:

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

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

SECTION 4. APPENDIX GG

NSPS SUBPART GG REQUIREMENTS FOR GAS TURBINES

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

EU ID No.	Description
008	15,000 bhp (ISO) Gas Turbine Compressor Engine 1207
010	15,700 bhp (ISO) Gas Turbine Compressor Engine 1208

NSPS General Provisions

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

40 CFR 60, Subpart GG
Standards of Performance for Stationary Gas Turbines

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

Section 60.330 Applicability and designation of affected facility.

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

Section 60.331 Definitions.

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

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

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

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

Section 60.332 Standard for nitrogen oxides.

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

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

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

where:

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

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

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

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

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

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

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

{Note: The equivalent emission standards are 202 ppmvd @ 15% oxygen for Engine 1207 and 196 ppmvd @ 15% oxygen for Engine 1208. The emissions standards in Section 3 of this permit are much more stringent than this requirement.}

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

Section 60.333 Standard for sulfur dioxide.

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

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

Section 60.334 Monitoring of operations.

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

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

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

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

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

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

{Note: The excess NOx emissions reporting requirements do not apply. The gas turbine uses lean premix combustion technology and not wet injection to control NOx emissions. Also, NOx emissions due to fuel

bound nitrogen are considered negligible because natural gas is the exclusive fuel and contains little nitrogen.}

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

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

Section 60.335 Test methods and procedures.

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

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

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

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

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

where:

NOx = emission rate of NOx at 15 percent O2 and ISO standard ambient conditions, volume percent.

NOxo = observed NOx concentration, ppm by volume.

Pr = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.

Po = observed combustor inlet absolute pressure at test, mm Hg.

Ho = observed humidity of ambient air, g H2O/g air.

e = transcendental constant, 2.718.

Ta = ambient temperature, °K.

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

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

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

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

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

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

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

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

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

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

SECTION 4. APPENDIX SC
STANDARD CONDITIONS

{Permitting Note: Unless otherwise specified by permit, the following conditions apply to all emissions units and activities at this facility.}

EMISSIONS AND CONTROLS

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

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

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

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

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

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

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

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

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

TESTING REQUIREMENTS

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

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

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

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

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

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

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

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

14. Determination of Process Variables

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

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

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

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

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

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

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

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

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

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

RECORDS AND REPORTS

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

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

SENDER: *COMPLETE THIS SECTION*

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

1. Article Addressed to:

Mr. Richard Craig
V.P. of Southeast Operations
Florida Gas Transmission Company
Post Office Box 1188
Houston, TX 77251

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* T Brennan B. Date of Delivery 5/27/3

C. Signature X ☑ Agent ☐ Addressee

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

MAY 07 2003

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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PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-0952

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Sent To Richard Craig
Street, Apt. No.; or PO Box No. PO Box 1188
City, State, ZIP+4 Houston, TX 77251

PS Form 3800, January 2001 See Reverse for Instructions

Florida Gas Transmission Company

Capital Projects Field Office, 111 Kelsey Lane, Ste. A., Tampa, FL 33619
813.655.7441 / 800.381.1477

April 18, 2003

CERTIFIED MAIL – RETURN RECEIPT

Mr. Clair H. Fancy, P.E.
Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Office Bldg.
2600 Blairstone
Tallahassee, FL 32399-2400

Reference: Facility: 0390029
Compressor Station No. 12, Santa Rosa County

Dear Mr. Fancy:

Subject: Application for Air Construction Permit

Florida Gas Transmission Company (FGT) is proposing to upgrade an existing natural gas fired compressor turbine from 13,000 bhp to 15,000 bhp at Compressor Station No. 12 located in Santa Rosa County. The facility is a major source under New Source Review definitions, but the proposed turbine modification will have a NO_x emission increase of less than 40 tpy. Therefore, a state only construction permit is required.

FGT is also installing jet cells on two existing 2,000 bhp reciprocating engines at the above referenced facility.

Enclosed is an Application with supporting documentation for an Air Construction Permit for the proposed modifications. 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 (800) 381-1477.

Sincerely,

Jim Thompson
Project Manager, Environmental

CC: James Alexander, Phase VI w/o attachments
Rick Craig, w/o attachments
Frank Diemont

Jake Krautsch
Kevin Mcglynn
Duane Pierce, AQMcs, LLC
Compressor Station No. 12

Florida Gas Transmission Company

Phase VI Expansion Project

Compressor Station No. 12

APPLICATION
For
AIR CONSTRUCTION
PERMIT

March 2003

Prepared by AQMcs, LLC

Table of Contents

List of Tables

1.0 INTRODUCTION

Florida Gas Transmission Company (FGT), a Delaware Corporation and an ENRON/EL PASO affiliate of Houston, Texas, is proposing to expand its existing natural gas pipeline facility near Munson, in Santa Rosa County, Florida (Compressor Station No. 12). This proposed modification is part of FGT's Phase VI Expansion Project, aimed at increasing the supply capacity of FGT's network servicing domestic suppliers, commercial, and industrial customers in Florida. The scope of work for the Phase VI Expansion Project includes expansion through the addition of state-of-the-art compressor engines at four existing compressor stations within the State of Florida.

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 proposed expansion consists of the upgrading of an existing turbine from 13,000 bhp to 15,000 bhp. The upgrade to a Solar Mars 100 T-15000S unit is being made as part of FGT's Phase VI project. This compressor engine will be used solely for transporting natural gas by pipeline for distribution to markets in Florida.

Based on projected new annual emission rates, the proposed modifications would result in a NO_X potential emission increase of 4.6 tpy. This and other contemporaneous changes will not constitute a significant modification at an existing major stationary source under Prevention of Significant Deterioration (PSD) regulations. The projected net annual NO_X emission rate change for the contemporaneous period will be 37.3 tpy. Since there will be no PSD significant increase in the emissions of any contaminant, a state only construction permit is required.

Additionally, FGT is also proposing to add jet cell technology to two existing 2,000 bhp reciprocating compressor engines to improve operation of the engines.

This narrative contains three additional sections. Descriptions of the existing operation at FGT's Compressor Station No. 12, the proposed upgraded turbine and the jet cells addition to the reciprocating engine 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 vendor information and Attachment D contains emission calculations.

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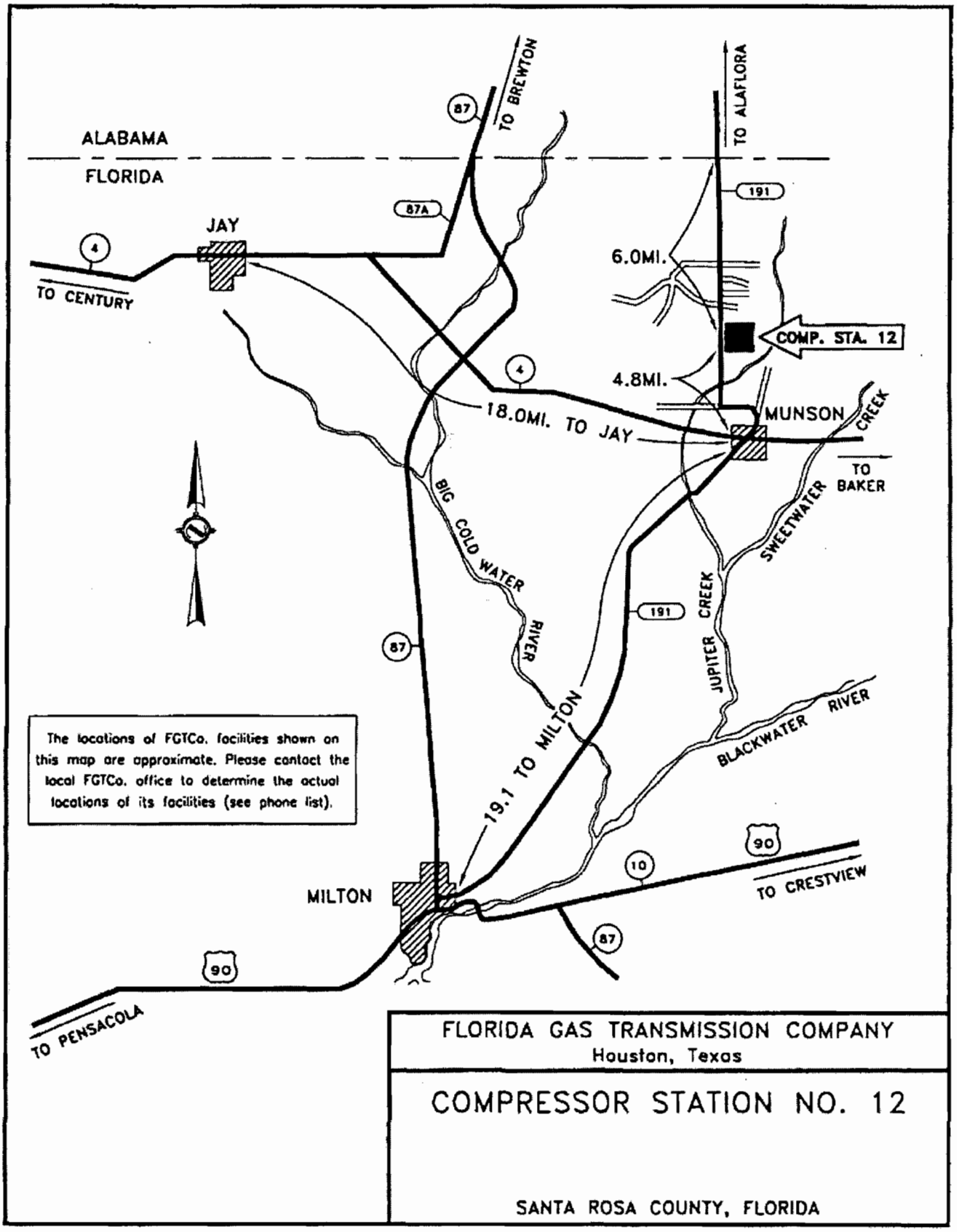
ALABAMA
FLORIDA
JAY
TO CENTURY
87
87A
TO BREWTON
TO ALAFLORA
191
6.0MI.
COMP. STA. 12
4.8MI.
4
18.0MI. TO JAY
MUNSON
CREEK
TO BAKER
SWEETWATER
BIG COLD WATER RIVER
JUPITER CREEK
191
87
19.1 TO MILTON
BLACKWATER RIVER
MILTON
10
90
TO CRESTVIEW
87
90
TO PENSACOLA
The locations of FGTCo. facilities shown 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, and the location of the engine to be modified, 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 existing Compressor Station No. 12 consists of five 2,000 bhp and one 4,100 bhp natural-gas-fired reciprocating internal combustion (IC) engines, and one 13,000 bhp (ISO) and one 15,700 bhp (ISO) natural gas-fired turbines. 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. Reciprocating engines 1204 and 1205 were later modified to reduce emissions as part of the Phase V Expansion Project. 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 February 2001 as part of the Phase IV Expansion Project and up-rated in 2002 as part of the Phase V Expansion Project. Compressor engine 1208 was installed 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 increase the horsepower capacity of Compressor Station No. 12, as part of the Phase VI Expansion Project. This will involve upgrading an existing gas-fired turbine (Compressor Engine 1207). The upgraded engine will be used to increase the volumetric delivery capacity by driving a gas compressor that is a part of a gas transmission line that transports natural gas from source wells in Texas and Louisiana for delivery throughout Florida. Without the proposed modifications, it would not be possible to increase the volumetric delivery capacity necessary to meet both short and long-term demands for natural gas in Florida.

In addition, as part of the project, jet cells are being added to two existing natural gas fired reciprocating engines 1204 and 1205 in order to improve their operation. No emissions from these emission units will be changed and no other engines will be changed. Details of the changes are described in the following sections.

Table 2-1 Summary of Existing Compressor Engines

Engine #	Date of Installation	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

2.2.1 Upgraded Compressor Turbine

FGT proposes to upgrade one existing natural gas-fired turbine engine compressor unit at Compressor Station No. 12. The engine is a Solar Mars 90 T-13000S turbine compressor unit rated at 13,000 bhp (ISO) that will be replaced by a Solar Mars 100 T-15000S turbine compressor rated at 15,000 bhp (ISO). Fuel will be exclusively natural gas from FGT's natural gas pipeline. Engine specifications and stack parameters for the proposed engine are presented in Table 2-2.

Table 2-2 Proposed Upgraded Turbine (1207) Specifications and Stack Parameters

Parameter	Design
Compressor Engine	1207
Type	Gas Turbine
Manufacturer	Solar
Model	Mars 100 T-15000S
Unit Size (shaft)	14,903 bhp (ISO, 90 ft. Elev.)
Specific Heat Input [a]	8,355 Btu/hp-hr
Heat Rate [a]	124.51 MM Btu/hr
Maximum Fuel Consumption [b]	0.1197 MMscf/hr
Speed	8,956 rpm
Stack Parameters	
Stack Height	58 ft
Stack Diameter	7.5 ft x 8 ft (rectangular)
Exhaust Gas Flow	193,357 acfm
Exhaust Temperature	903 °F
Exhaust Gas Velocity	53.7 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 provided lower heating value (LVH) heat rate of 7,595 Btu/hp-hr plus 10% for a higher heating value (HHV) and natural gas with a HHV of 1040 British thermal units per standard cubic foot (Btu/scf).

[b] While producing 14,903 bhp at ISO conditions and 90 ft. elevation and with gas with HHV of 1040 Btu/scf

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Hourly and annual emissions of regulated pollutants from the proposed upgraded turbine at ISO conditions are presented in Table 2-3. Emissions of oxides of nitrogen (NO_X), carbon monoxide (CO) and non-methane hydrocarbons (NMHC) or volatile organic compounds (VOC) are based on the engine manufacturer's supplied data (See Attachment C). These values are based on ISO conditions corrected for an elevation of 90 ft. Other factors such as inlet, outlet losses and ambient temperature can affect these rates.

Typically, turbine vendors do not provide information on particulate matter (PM), sulfur dioxide (SO2) or hazardous air pollutant (HAP) emissions; therefore, particulate matter emissions are based upon USEPA publication AP-42 Section 3.1 (USEPA, 2000), HAP emissions are based on the proposed 40 CFR 63 Subpart YYYY emission factors (68 Fed. Reg. 1,888, January 14, 2003) and emissions of SO_2 are based on FGT's Federal Energy Regulatory Commission (FERC) certificate limit of 10 grains sulfur per 100 cubic feet of natural gas.

Table 2-3 Proposed Upgraded Turbine (1207) Compressor Engine Emissions

Pollutant	Emission Factor	Reference	lb/hr	TPY
Nitrogen Oxides*	11.26 lb/hr	Manufacturer Data	11.26	49.3
Carbon Monoxide*	13.71 lb/hr	Manufacturer Data	13.71	60.1
Volatile Organic* Compounds	0.39 lb/hr	Manufacturer Data	0.39	1.7
Particulate Matter**	0.0066 lb/MMBtu	AP-42, Table 3.1-2a	0.82	3.6
Sulfur Dioxide**	10 grains/100 scf	FERC Limit	3.42	15.0
HAPs	0.000644 lb/MMBtu	Proposed 40 CFR 63 Subpart YYYY***	0.08	0.4

* Emissions based on vendor provided values at ISO conditions and 90 ft. elevation.

** Emissions based on vendor provided heat rate plus 10 per cent

*** 68 Fed. Reg. 1,888 (January 14, 2003)

2.2.2 Jet Cell Addition for Two Reciprocating Engine

The following describes the jet cell modifications to be made to Engines 1204 and 1205.

2.2.3.1 Previous Modifications

Previously as part of the Phase V Expansion Project, FGT modified two older slow speed engines (Engines 1204 and 1205) in order to reduce NO_X emissions. The modifications consisted of modifying the turbocharger aerodynamics and the unit control system. The end result was lower emissions but at a cost of added fuel and harder work from the turbochargers.

2.2.3.2 Jet Cell Description

Since the NO_X reductions were made to the two reciprocating engines, the operation of the engines has deteriorated with increased operational and maintenance costs. In order to improve operation of these two emission units, jet cells will be installed. The following description of Jet Cells was provided by Cooper Energy Services. See Attachment C.

> "The Jet Cell is actually a small pre-combustion chamber that is installed in the power cylinder head. The Jet Cell receives a small amount of fuel gas that is admitted through a poppet style check valve operating on differential pressure. In the fuel line at the check valve is an orifice to control the amount of gas admitted to the pre-chamber. Also in the pre-chamber is a standard spark plug that is fired by a standard type ignition system, which consistently ignites the rich air/fuel mixture in the pre-chamber. Once ignition in the pre-chamber is established the high intensity flame front is introduced into the larger main chamber of the power cylinder via a carefully positioned exit hole in the tip of the Jet Cell. This high intensity flame front acts like a torch ignition source and is capable of consistently igniting various degrees of air/fuel mixture in the main combustion chamber. In regards to natural gas spark ignited engines this concept was pioneered to ignite extremely lean air/fuel mixtures necessary to significantly reduce NOx formation. These mixtures allow for low emissions engines that are typically too lean for a standard ignition system alone to consistently ignite. A secondary benefit was that this torch ignition source also consistently ignites the non-homogeneous or extremely lean air/fuel mixtures commonly found when the engines operate at off peak conditions. The result is more complete combustion and reduced fuel consumption."

2.2.3 Emissions Summary

The total changes in emissions resulting from the project are listed on Table 2-4. The calculations used to estimate these emissions are presented in Attachment D.

Table 2-4 Potential Annual Emissions (tpy) Summary

SOURCE ID	DESCRIPTION	NO_x	CO	VOC[a]	SO_2	PM
	EXISTING FACILITY					
1201	2000 bhp Recip. Engine	212.5	27.0	8.5	1.8	0.6
1202	2000 bhp Recip. Engine	212.5	27.0	8.5	1.8	0.6
1203	2000 bhp Recip. Engine	212.5	27.0	8.5	1.8	0.6
1204	2,000 bhp recip engine	104.3	15.5	1.9	2.0	0.7
1205	2,000 bhp recip engine	104.3	15.5	1.9	2.0	0.7
1206	4100 bhp Recip. Engine	77.2	96.6	38.6	3.5	0.6
1207	13,000 bhp Turbine Engine	44.7	54.5	1.6	13.6	3.3
1208	15,700 bhp Turbine engine	61.8	30.8	2.0	16.2	3.9
GEN03	637 bhp Recip. Engine	0.7	0.6	0.2	0.0	0.0
	Other Sources: [c]	0.0	0.0	3.5	0.0	0.0
	EXISTING ANNUAL POTENTIALTOTALS:	**1030.5**	**294.5**	**75.2**	**42.7**	**11**
	PROPOSED MODIFIED FACILITY					
1201	2000 bhp Recip. Engine	212.5	27.0	8.5	1.8	0.6
1202	2000 bhp Recip. Engine	212.5	27.0	8.5	1.8	0.6
1203	2000 bhp Recip. Engine	212.5	27.0	8.5	1.8	0.6
1204	2,000 bhp recip Engine	104.3	15.5	1.9	2.0	0.7
1205	2,000 bhp recip Engine	104.3	15.5	1.9	2.0	0.7
1206	4100 bhp Recip. Engine	77.2	96.6	38.6	3.5	0.6
1207	15,000 bhp Turbine Engine –upgraded	49.3	60.1	1.7	15.0	3.6
1208	15,700 bhp Turbine engine	61.8	30.8	2.0	16.2	3.9
GEN03	637 bhp Recip. Engine	0.7	0.6	0.2	0.0	0.0
	Other Sources: [b]	0.0	0.0	3.9	0.0	0.0
	PROPOSED ANNUAL POTENTIAL TOTALS:	**1035.1**	**300.1**	**75.7**	**44.1**	**11.3**
	NET CHANGES IN POTENTIAL EMISSIONS:	**4.6**	**5.6**	**0.5**	**1.4**	**0.3**

(a) VOC = Non-methane/non-ethane hydrocarbons
(b) Other Sources Includes ancillary equipment, storage tanks and equipment leaks

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 modifications at Compressor Station No. 12.

3.1.1 Classification of Ambient Air Quality

The 1970 Amendments to the CAA gave the USEPA specific authority to establish the minimum level of air quality that all states would be required to achieve. These minimum values or standards were developed in order to protect the public health (primary) and welfare (secondary). The federally promulgated standards and additional state standards are presented on Table 3-1.

Areas of the country that have air quality equal to or better than these standards (i.e., ambient concentrations less than a standard) are designated as "Attainment Areas", while those where monitoring indicates air quality is worse than the standards are known as "Non-attainment Areas." The designation of an area has particular importance for a proposed project as it determines the type of permit review to which the application will be subject.

Major new sources or major modifications to existing major sources located in attainment areas are required to obtain a PSD permit before initiation of construction. Similar sources located in areas designated as non-attainment or that adversely impact such areas undergo more stringent Non-attainment New Source Review (NNSR). In either case, it is necessary, as a first step, to determine the air quality classification of a project site.

All areas of all states are classified as either attainment, non-attainment or unclassifiable for each criteria pollutant. Santa Rosa County in designated as unclassifiable or attainment for all criteria pollutants. These designations were obtained from 40 CFR 81.310, as updated in the June 5, 1998 Federal Register (FR31036) and 62-204.340 F.A.C.

Table 3-1 National and State Ambient Air Quality Standards (μg/m³)

POLLUTANT	AVERAGING PERIOD	EPA STANDARDS		FLORIDA STANDARDS
		PRIMARY	SECONDARY	
PM_{10}	24-hour[1]	150	150	150
	Annual[2]	50	50	50
SO_2	3-hour[1]	---	1,300	1,300
	24-hour[1]	365	---	260
	Annual[2]	80	---	60
CO	1-hour[1]	---	40,000	40,000
	8-hour[1]	10,000	---	10,000
NO_2	Annual[2]	100	100	100
O_3	1-hour[3]	235	235	235

1) Not to be exceeded more than once per year.
2) Never to be exceeded.
3) Not to be exceeded on more than 3 days over 3 years.

Sources: 40 CFR 50; 36FR22384; Chap. 17-2.300.

The designation of Unclassifiable indicates that there is insufficient monitoring data to prove that the area has attained the federal standards; however, the limited data available indicate that the standard has been achieved. Areas with this classification are treated as attainment areas for permitting purposes. Since Santa Rosa County is considered in attainment for all pollutants, the proposed new emissions are potentially subject to PSD review and not non-attainment review.

3.1.2 PSD Applicability

The 1977 CAA Amendments added Part C: Prevention of Significant Deterioration to the Act. This part required proposed new major stationary sources or existing sources planning a major modification in an area that has attained the National AAQS, to conduct a preconstruction review that includes a detailed analysis of the impacts from the source's emissions.

Federal air quality permitting regulations for attainment areas are codified in the Code of Federal Regulations (CFR), Title 40- Protection of the Environment, Part 52.21 - Prevention of Significant Deterioration (40 CFR 52.21).

For the PSD regulations to apply to a given project, the project's potential to emit must constitute a major stationary source or major modification to an existing major stationary source.

A major stationary source is defined as any of the 28 sources identified in 40 CFR 52.21 that has a potential to emit 100 tons or more per year of any regulated pollutant, or any other stationary source that has the potential to emit 250 tons or more per year of a regulated pollutant. "Potential to emit" is determined on an annual basis after the application of air pollution control equipment, or any other federally enforceable restriction.

According to the "Draft New Source Review Workshop (NSR) Manual (USEPA, October 1990)," for a modification to be classified as major and therefore, subject to PSD review:

(1) The modification must occur at an existing major stationary source, and

(2) The net emissions increase of any pollutant emitted by the source, as a result of modification, is "significant", or

(3) The modification results in emissions increases, which if considered alone would constitute a major stationary source.

"Significant" emission rates are defined as amounts equal to or greater than the emission rates given in Table 3-2.

Table 3-2 Applicability of PSD Significant Emission Rates

Pollutant	Emission Rate Tons/Year
Carbon Monoxide	100
Nitrogen Oxides	40
Sulfur Dioxide	40
Particulate Matter (PM/PM_{10})	25/15
Ozone (VOC)	40
Lead	0.6
Fluorides	3
Reduced Sulfur including Hydrogen Sulfide	10
Total Reduced Sulfur including Hydrogen Sulfide	10
Sulfuric Acid Mist	7
Lead	0.6
Mercury	0.1
VOC = Volatile Organic Compounds Sources:40 CFR 52.21(b)(23); Table 212.400-2 62-212 F.A.C.	

Proposed project increases are determined for each pollutant and are equal to the actual emissions (average of the actual emissions over the two years immediately prior to the proposed project) subtracted from the proposed new allowable emissions. Fugitive emissions are only included in the potential to emit if the source is one of the 28 named source categories in 40 CFR 52.21(b)(1) or belongs to a stationary source category that is subject to an NSPS proposed prior to August 7, 1980 or that is subject to an NESHAPS promulgated prior to August 7, 1980.

Netting is required for each regulated pollutant for which the proposed project increases (decreases are not considered yet) result in a significant increase in emissions. Netting is performed by identifying both the creditable and contemporaneous increases and the reductions in emissions. The contemporaneous period is defined as the period of time from five years prior to estimated start of construction through estimated start of operation.

a. 10 /15/ 03 Date of estimated start of construction.

b. 10 / 15/ 98 Five years prior to estimated start of construction date.

c. 11 / 01/ 03 Date of estimated start of operation.

d. 10 / 15/ 98 to 11/ 01/ 03 Contemporaneous period (b. to c.).

The requirements for creditable increases and reductions are listed below.

- The increases/reductions occurred within the contemporaneous period.
- For each unit at the source at which the change occurred, the increases/reductions were calculated as the allowable emissions after the change minus the actual emissions averaged over the two-year period immediately preceding the change.
- The increases/reductions occurred at the applicant's contiguous or adjacent plant site and came from units under the same common ownership or control.
- The reductions have not been relied upon in issuing a previous PSD permit (including use in netting for a PSD permit).
- The reductions have not been relied upon in issuing a non-attainment permit and the reductions have not been used as an offset1 in a non-attainment permit or reserved in

an application for use as an offset.

- The reductions will be federally enforceable by the start of construction of the proposed project and actually accomplished by the start of operation.

- The reductions have the same qualitative significance for public health as the increase from the proposed project.

A summary of contemporaneous emission increases and decreases for Compressor Station No. 12 are listed in Table 3.3.

Table 3-3 Contemporaneous Emission Changes

Project Date	Emission Unit At Which Change Occurred	Project Name Or Activity	A. Allowable Emissions After The Activity (Tons/Year)	B. Actual Emissions Prior To The Activity (Tons/Year)	Difference (A-B) (Tons/Year)	Creditable Decrease Or Increase
NOx						
01/01/01	1207 (Ph IV)	New turbine	38.6	0.0	38.6	38.6
01/01/01	GEN03	New Generator	0.7	0.0	0.7	0.7
12/01/01	1204 (Ph V)	Engine modified	104.3	130.9	-26.6	-26.6
12/01/01	1205 (Ph V)	Engine modified	104.3	152.2	-47.9	-47.9
12/01/01	1207 (Ph V)*	Uprated turbine	6.1	0.0	6.1	6.1
12/01/01	1208	New turbine	61.8	0.0	61.8	61.8
10/15/03	1207 (Ph VI)**	Uprated turbine	4.7	0.0	4.7	4.6
						37.3

* Phase V portion only
** Phase VI portion only

To summarize, since Compressor Station No. 12 is not one of the 28 named source categories, but does emit >250 TPY of at least one regulated pollutant, it is considered a major source. However, the net increase in emissions resulting from the proposed actions will not exceed the PSD significant rates; therefore, the compressor station is not subject to PSD pre-construction review as shown in Table 3.4.

Table 3-4 PSD Applicability

Regulated Pollutant:	**NOx**
Significance level as defined in 40 CFR 52.21(b)(23)	40
Net contemporaneous change from Table3-4 (tpy)	37.3
Is PSD review applicable?	No

3.1.3 Non-Attainment New Source Review (NNSR) Applicability

Based on the current non-attainment provisions, all new major stationary sources, or major modifications to such sources, located in a non-attainment area must undergo non-attainment New Source Review, if they have the potential to emit above an NSR significant threshold. For major new sources or major modifications in an attainment or unclassifiable area, the non-attainment provisions apply if the source or modification is located within the area of influence of a non-attainment area. The area of influence is defined as an area, which is outside the boundary of a non-attainment area, but within the locus of all points that are 50 kilometers outside the non-attainment area.

Compressor Station No. 12 is located in an area that is designated as either attainment or not classifiable for all criteria pollutants and is not located in an area of influence outside a non-attainment area. Therefore, this compressor station is not subject to federal non-attainment New Source Review.

3.1.4 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 new turbine to be installed 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 uprated Engine No. 1207

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

= 7,595 Btu/bhp-hr x 1.055 *Kj/Btu x hp-hr/745.7 watt-hour*

= 10.7 Kj/watt-hr

STD = 0.0150 (14.4/10.7) + 0

= 0.0202 %

= 202 ppm_v

Table 3-5 summarizes the NSPS applicability for the proposed gas engines.

The turbine will meet the NSPS for NO_X of 202 ppmv (i.e., manufacturer's estimation of 25 ppmv), and for SO_2 of 150 ppmv (estimated for this turbine to be 4 ppmv).

Table 3-5 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. 1207 Gas Turbine	Gas	NO_2	>10 MM Btu/hr	102 MM Btu/hr	202 ppm_v	25 ppm_v
GG	60.333(a)	Engine No. 1207 Gas Turbine	Gas	SO_2	>10 MM Btu/hr	102 MM Btu/hr	150 ppm_v	~4 ppm_v
Design maximum based on vendor data of 14,903 hp and heat input of 7,595 Btu/hp-hr (LHV).								

3.1.5 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.

This is a Major Source for Hazardous Air Pollutants and this turbine will potentially be subject to the proposed turbine MACT regulations (40 CFR 63 Subpart YYYY). As a result, a Part One MACT Hammer application has been submitted. However, the final MACT regulations have not been promulgated at the time of this application

3.2 Florida State Air Quality Regulations

Compressor Station No. 12 is currently operating under Permit No.1130037-001-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 modification of an emission unit. 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 new 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.

4.0 REFERENCES

U.S. Environmental Protection Agency (USEPA). 1980. PSD Workshop Manual. Research Triangle Park, NC.

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: Jim Thompson, Environmental Project Manager
2. Application Contact Mailing Address: Organization/Firm: Florida Gas Transmission Company Street Address: 111 Kelsey Lane, Ste. A City: Tampa State: FL Zip Code: 33619
3. Application Contact Telephone Numbers: Telephone: (800) 381-1477 Fax: (813) 655-3951

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	4-23-03
2. Permit Number:	1130037-007-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: _____

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

Operation permit number to be revised/corrected: _____

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

Operation permit number to be revised: _____

Reason for revision: _____

Air Construction Permit Application

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

[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.*

   Richard L. Craig — Signature

   04-22-03 — Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: Kevin McGlynn
   Registration Number: 50908

2. Professional Engineer Mailing Address:
   Organization/Firm: McGlynn Consulting Company
   Street Address: 2906 Abbotsford Way
   City: Tallahassee State: FL Zip Code: 32312

3. Professional Engineer Telephone Numbers:
   Telephone: (850)297-0099 Fax: (850) 297-0561

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 [X], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions 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: Kevin J. McGlynn, P.E. #50908 — Date: April 18, 2003

(seal)

KEVIN J. MCGLYNN CERTIFICATE NO. 50908 STATE OF FLORIDA PROFESSIONAL ENGINEER

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
008	Turbine Compressor Engine No. 1207, 15,000 bhp ISO 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 upgrade an existing Solar Mars 90 T-13000S to a Mars 100 T15000S 15,000 bhp (ISO).

2. Projected or Actual Date of Commencement of Construction: 10/01/03

3. Projected Date of Completion of Construction: 10/15/03

Application Comment

This proposed modification is part of FGT's Phase VI Expansion project, aimed at increasing the supply capacity of FGT's network servicing domestic, commercial, and industrial customers in Florida.

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 [ ] 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: [X] Attached, Document ID:__*Att. C*_ [ ] Not Applicable
7. Supplemental Requirements Comment: Attachment B contains a plot plan. Attachment C has vendor supplied information. 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):

15,000 bhp (ISO) natural gas fired turbine compressor unit, Engine No. 1207

4. Emissions Unit Identification Number: ID: 008 — [ ] No ID [ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	1/19/01	49	[ ]

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

The existing 13,000 bhp (ISO) Solar Mars 90 turbine engine will be replaced by a 15,000 bhp (ISO) Solar Mars 100. Fuel will be exclusively natural gas from the FGT's gas pipeline. The proposed engine will incorporate 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 will incorporate dry, low NO_X combustion technology.

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

Emissions Unit Details

1. Package Unit:		
Manufacturer:	Solar	Model Number: Mars 100 T-15000S
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:	124.51 mmBtu/hr
2. Maximum Incineration Rate: NA	lb/hr tons/day
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 124.51 MM Btu/hr based on vendor lower heating value (LHV) specifications of 7,595 Btu/Bhp-hr plus 10% to convert to higher heating value (HHV) and 14,903 bhp (ISO with elevation of 90 ft). .	

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

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? 1207	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: 58 feet	7. Exit Diameter: 7.5 x 8 feet
8. Exit Temperature: 903 °F	9. Actual Volumetric Flow Rate: 193,357 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 turbine 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: 0.1197	5. Maximum Annual Rate: 1048.57	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			NS

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: 11.26 lb/hour 49.3 tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 11.26 lb/hr Reference: Vendor's data	7. Emissions Method Code: 5
8. Calculation of Emissions (limit to 600 characters): (11.26 lb/hr)(1 ton/2000 lb)(8760hr/1 yr) = 49.32 tons/year	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Vendor's data based on ISO conditions with 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: 11.26 lb/hour 49.3 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(a)(2) limits NOX emissions to 202 ppmv.	

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: 13.71 lb/hour 60.05 tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 13.71 lb/hr Reference: Vendor's data	7. Emissions Method Code: 5
8. Calculation of Emissions (limit to 600 characters): (13.71 lb/hr)(1 ton/2000 lb)(8760 hr/1 yr) = 60.05 tons/year	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Vendor emission factor is based on a guaranteed value of 50 ppmv.	

Allowable Emissions Allowable Emissions __NA__ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions: NA
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):	

Emissions Unit Information Section ___1___ of ___1___

Pollutant Detail Information Page ___3_ 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: 0.393 lb/hour 1.72 tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 3.93 lb/hr UHC Reference: Vendor's data	7. Emissions Method Code: 5
8. Calculation of Emissions (limit to 600 characters): Vendor factor for unburned hydrocarbons (UHC) = 3.93 lb/hr. Assume 10% is VOC. (0.393 lb/hr)(1 ton/2000 lb)(8760 hr/1 yr) = 1.72 tons/year	
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):	

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: SO2	2. Total Percent Efficiency of Control:
3. Potential Emissions: 3.42 lb/hour 14.98 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)(0.10847 MMscf/hr)(1 lb/7000 gr) = 1.71 lb S/hr (1.71 lb S/hr)(2 lb SO2/lb S) = 3.42 lb SO2/hr (3.42 lb SO2/hr)(8760 hr/yr)(1 ton/2000 lb) = 14.98 ton/yr	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Based on vendor's fuel use data plus 10%. 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: 3.42 lb/hour 15.0 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 60.333(a) 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/PM10	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.82 lb/hour 3.6 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)(124.5 MM Btu/hr) = 0.82 lb/hr (0.82 lb/hr)(8760 hr/yr)(1 ton/2000 lb) = 3.60 ton/y	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Based on vendor's heat input data plus 10% and fuel heat value of 1040 Btu/scf.	

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: 0.08 lb/hour 0.35 tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 0.000644 lb/MM Btu Reference: Draft 40 CFR 63 Subpart YYYY	7. Emissions Method Code: 5
8. Calculation of Emissions (limit to 600 characters): (0.000644 lb/MM Btu)(124.5 MM Btu/hr) = 0.080 lb/hr (0.080 lb/hr)(8760 hr/yr)(1 ton/2000 lb) = 0.35 ton/yr	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): HAP emissions are 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:	
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:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

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

Supplemental Requirements

1. Process Flow Diagram [ ] 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 C accompanying these forms.

Emissions Unit Information Section __1__ of __1__

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:_____

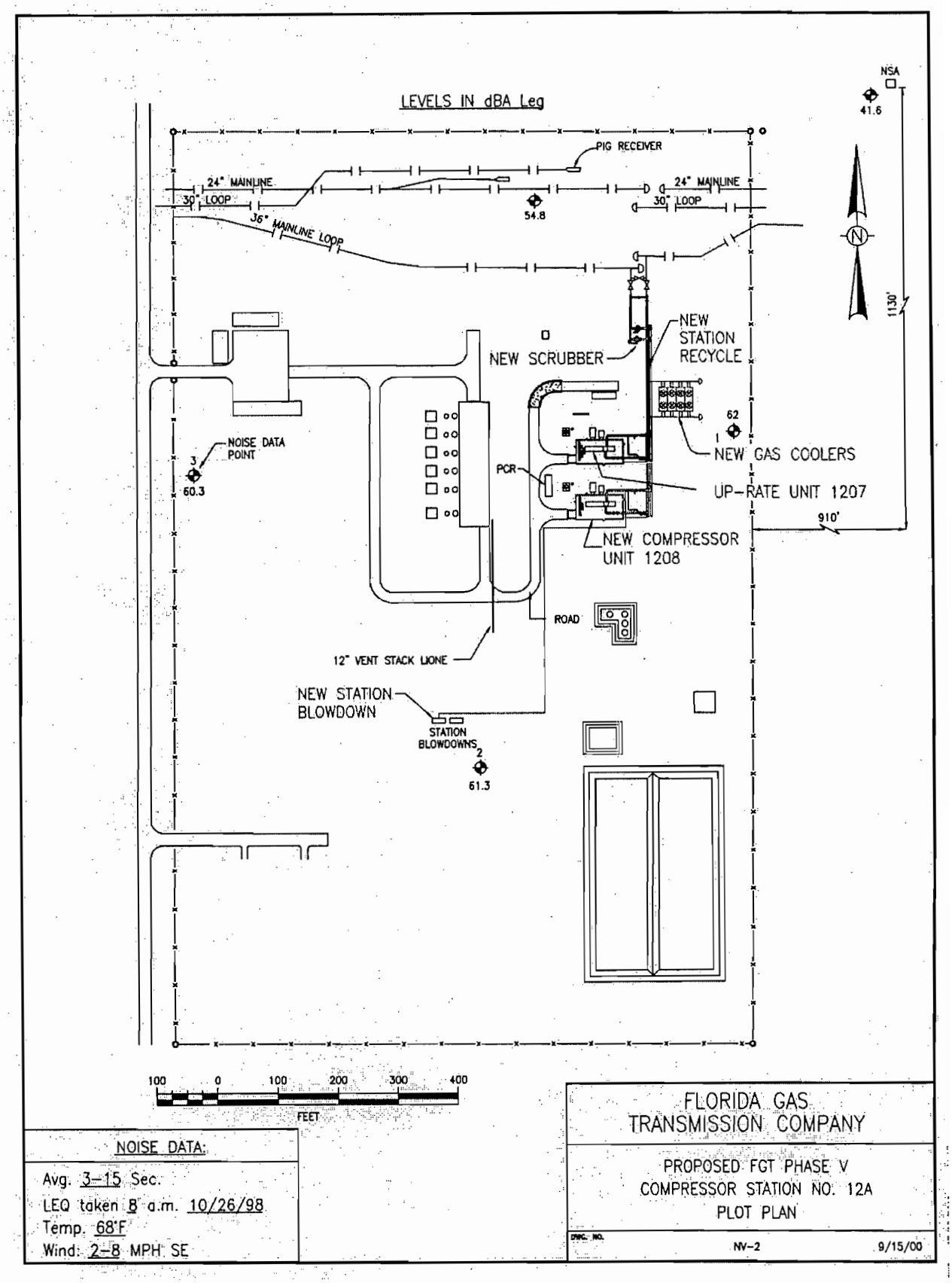
[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

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

[ ] Not Applicable

Attachment B

Plot Plan
(From Phase V)


LEVELS IN dBA Leq
NSA
41.6
PIG RECEIVER
24" MAINLINE
30" LOOP
54.8
24" MAINLINE
30" LOOP
36" MAINLINE LOOP
N
1130'
NEW STATION RECYCLE
NEW SCRUBBER
62
1
NEW GAS COOLERS
NOISE DATA POINT
3
60.3
PCR
UP-RATE UNIT 1207
910'
NEW COMPRESSOR UNIT 1208
ROAD
12" VENT STACK LIONE
NEW STATION BLOWDOWN
STATION BLOWDOWNS
2
61.3
100 0 100 200 300 400
FEET
NOISE DATA:
Avg. 3-15 Sec.
LEQ taken 8 a.m. 10/26/98
Temp. 68°F
Wind: 2-8 MPH SE
FLORIDA GAS TRANSMISSION COMPANY
PROPOSED FGT PHASE V
COMPRESSOR STATION NO. 12A
PLOT PLAN
DWG. NO.
NV-2
9/15/00

Attachment C

Vendor Information

Solar Model Mars 100 T-15000S Turbine

Cooper Energy Services Jet Cells

Solar Model Mars 100 T-15000S Turbine

Solar Turbines
A Caterpillar Company

PREDICTED EMISSION PERFORMANCE

Customer: **Florida Gas**	Engine Model: **MARS 100-15000S CS/MD 122F MATCH SHIPMENTS AFTER 1/95**
Job ID:	Fuel Type: **SD NATURAL GAS** / Water Injection: **NO**
Inquiry Number:	Engine Emissions Data: **REV. 0.0** / Engines Tested: **0**
Run By: **Anthony M Jones** / Date Run: **19-Mar-03**	

1	14903 Hp	100.0% Load	Elev. 90 ft	Rel. Humidity 60.0%	Temperature 59.0 Deg. F

	NOx EMISSIONS Nominal	NOx EMISSIONS Maximum	CO EMISSIONS Nominal	CO EMISSIONS Maximum	UHC EMISSIONS Nominal	UHC EMISSIONS Maximum
PPMvd at 15% O2	*	25.00	*	50.00	*	25.00
ton/yr	*	49.33	*	60.06	*	17.20
lbm/MMBtu (Fuel LHV)	*	0.100	*	0.121	*	0.035
lbm/(MW-hr)	*	1.01	*	1.23	*	0.35
(gas turbine shaft pwr) lbm/hr	*	11.26	*	13.71	*	3.93

Important Notes

1. For short-term emission limits such as lbs/hr., Solar recommends using "worst case" anticipated operating conditions specific to the application and the site conditions. Worst case for one pollutant is not necessarily the same for another. The emission values on this form are only predicted emissions at the specific operating conditions listed.
2. Solar's typical SoLoNOx warranty is for greater than 0 deg F, and between 50% and 100% load for gas fuel, and between 80% and 100% load for liquid fuel. An emission warranty for non-SoLoNOx equipment is for greater than 0 deg F and between 80% and 100% load.
3. Fuel must meet Solar standard fuel specification ES 9-98. Predicted emissions are based on the attached fuel composition, or, San Diego natural gas or equivalent.
4. If needed, Solar can provide generic documents to address turbine operation outside typical warranty ranges, as well as non-warranted emissions of SO2, PM10/2.5, VOC, and formaldehyde.
5. Solar can optionally provide factory testing in San Diego to ensure the actual unit(s) meet the above values within the tolerances quoted. Pricing and schedule impact will be provided upon request.

Solar Turbines
A Caterpillar Company

PREDICTED ENGINE PERFORMANCE

Customer: *Florida Gas*	Model: MARS 100-15000S
Job ID:	Package Type: CS/MD
Run By: Anthony M Jones / Date Run: 19-Mar-03	Match: 122F MATCH
Engine Performance Code: REV. 3.13 / Engine Performance Data: REV. 3.1	Fuel System: GAS
	Fuel Type: SD NATURAL GAS

DATA FOR NOMINAL PERFORMANCE

Elevation	feet	90
Inlet Loss	in H20	0
Exhaust Loss	in H20	0
Engine Inlet Temperature	deg F	59.0
Relative Humidity	%	60.0
Driven Equipment Speed	RPM	8956
Specified Load	HP	FULL
Net Output Power	HP	14903
Fuel Flow	mmBtu/hr	113.18
Heat Rate	Btu/HP-hr	7595
Therm Eff	%	33.51
Engine Exhaust Flow	lbm/hr	336294
Exhaust Temperature	deg F	903

Fuel Gas Composition (Volume Percent)	CH4	92.79	C2H6	4.16	C3H8	0.84	C4	0.18	C5	0.04	C6	0.04
	CO2	0.44	H2S	0.0001	N2	1.51						
Fuel Gas Properties	LHV (Btu/Scf)	939.2			Specific Gravity	0.5970			Wobbe Index at 60F	1215.6		

Cooper Energy Services Jet Cells

COOPER ENERGY SERVICES

Cooper Energy Services Jet Cells

Cooper Energy Services offers Jet Cell conversion packages for a variety of natural gas fueled spark ignited engines. The Jet Cell is actually a small pre-combustion chamber that is installed in the power cylinder head. The Jet Cell receives a small amount of fuel gas that is admitted through a poppet style check valve operating on differential pressure. In the fuel line at the check valve is an orifice to control the amount of gas admitted to the pre-chamber. Also in the pre-chamber is a standard spark plug that is fired by a standard type ignition system, which consistently ignites the rich air/fuel mixture in the pre-chamber. Once ignition in the pre-chamber is established the high intensity flame front is introduced into the larger main chamber of the power cylinder via a carefully positioned exit hole in the tip of the Jet Cell. This high intensity flame front acts like a torch ignition source and is capable of consistently igniting various degrees of air/fuel mixture in the main combustion chamber. In regards to natural gas spark ignited engines this concept was pioneered to ignite extremely lean air/fuel mixtures necessary to significantly reduce NOx formation. These mixtures for low emissions engines are typically too lean for a standard ignition system alone to consistently ignite. A secondary benefit was that this torch ignition source also consistently ignites the non-homogeneous or extremely lean air/fuel mixtures commonly found when the engines operate at off peak conditions. The result is more complete combustion and reduced fuel consumption.

Generally, by itself the Jet Cell does not significantly lower exhaust emissions. However, by providing more complete combustion at off peak conditions hydrocarbon emissions are reduced and by extending the lean combustion limit NOx emissions can be reduced, especially when the air source (turbocharger) can be adjusted to make the combustion leaner. Depending on the degree of re-calibration possible on the turbocharger the NOx reduction can be significant.

Chuck Melcher
Manager, Sales Support Engineering

Attachment D

Emission Calculations

Compressor Station No. 12
Engine No. 1207 EPN: 008

NOx Emissions: (Based on Vendor Data)

lb NOx/hr = 11.26

tons NOx/yr = (lb NOx/hr)(hr/yr)(1 ton/2000 lb)
= (11.26 lb NOx/hr)(8760 hr/yr)(1 ton/2000 lb)
= 49.32

CO Emissions: (Based on Vendor Data)

lb CO/hr = 13.71

tons CO/yr = (lb CO/hr)(hr/yr)(1 ton/2000 lb)
= (13.71 lb CO/hr)(8760 hr/yr)(1 ton/2000 lb)
= 60.05

VOC Emissions: (Based on Vendor Data)

lb UHC/hr = 3.93
Portion VOC = 0.1
lb VOC/hr = (lb UHC/hr)(Portion VOC)
(3.93 lb UHC/hr)(0.10)
0.393

tons VOC/yr = (lb VOC/hr)(hr/yr)(1 ton/2000 lb)
= (0.393 lb VOC/hr)(8760 hr/yr)(1 ton/2000 lb)
= 1.72

SO2 Emissions: (Based on FERC Limits)

lb S/hr = (gr S/100 scf)(MMscf/hr)(1 lb/7000 gr)
= (10 gr S/100 scf)(0.1197 MMscf/hr)(1 lb/7000 gr)
= 1.71

lb SO2/hr = (lb S/hr)(2 lb SO2/lb S)
= (1.71 lb S/hr)(2 lb SO2/lb S)
= 3.42

tons SO2/yr = (lb SO2/hr)(hr/yr)(1 ton/2000 lb)
= (3.42 lb SO2/hr)(8760 hr/yr)(1 ton/2000 lb)
= 14.98

PM Emissions: (Based on AP-42 Table 3.1-2a, 4/00)

lb PM/hr = (lb PM/MMBtu)(MMBtu/hr)
= (0.0066 lb/MMscf)(124.50 MMscf/hr)
= 0.82

tons PM/yr = (lb PM/hr)(hr/yr)(1 ton/2000 lb)
= (0.82 lb PM/hr)(8760 hr/yr)(1 ton/2000 lb)
= 3.60

HAPs Emissions: (Based on Draft 40 CFR 63 Subpart YYYY)

lb HAP/hr = (lb HAP/MMBtu)(MMBtu/hr)
= (0.000644 lb/MMBtu)(124.50 MMBtu/hr)
= 0.080

tons HAP/yr = (lb HAP/hr)(hr/yr)(1 ton/2000 lb)
= (0.080 lb HAP/hr)(8760 hr/yr)(1 ton/2000 lb)
= 0.35

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 **Glenda Nall** 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 to Issue Air Construction Permit** was published in said newspaper in the issues **of May 30, 2003.** Affiant 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 Affiant 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 **30th day of May A.D., 2003.**

Bereth Ferguson — Notary Public

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

RECEIVED
JUN 09 2003
BUREAU OF AIR REGULATION

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Draft Air Permit No. 1130037-007-AC

Florida Gas Transmission Company
Existing Santa Rosa Compressor Station 12
Phase VI Project

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Florida Gas Transmission Company that authorizes modifications for Engines 1204, 1205, and 1207. The equipment is installed at existing Compressor Station 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. Richard Craig, Vice President of Southeastern Operations. The applicant's mailing address is Florida Gas Transmission Company, P.O. Box 1188, Houston, Texas 77251.

The proposed project is part of Florida Gas Transmission Company's overall Phase VI projects intended to increase the availability and reliability of natural gas supplied by the existing natural gas pipeline. Engine 1207 currently consists of a Solar Model No. Mars 90-T-13000S gas turbine compressor engine rated at 13,000 bhp. The applicant proposes to upgrade this engine to a Solar Mars 100 T-15000S gas turbine rated at 15,000 bhp. The project also includes adding jet cell pre-combustor technology to existing compressor Engines 1204 and 1205. The new jets cells are expected to reduce fuel consumption, lower emissions, and decrease engine maintenance. All engines exclusively fire natural gas.

The proposed increase in gas turbine output from 13,000 to 15,000 bhp will result in a slight increase in the maximum heat input rate and emissions. The upgraded gas turbine remains subject to the federal standards in NSPS Subpart GG. The applicant requested standards more stringent than the federal standards and within the capabilities of the engine to avoid preconstruction review in accordance with the Prevention of Significant Deterioration (PSD) of Air Quality pursuant to Rule 62-212.400, F.A.C. The addition of jet cell pre-combustors to Engines 1204 and 1205 is expected to lower fuel consumption, which should reduce emissions. However, the applicant has not requested any changes to the current emissions standards for these engines.

Upon completion, upgraded Engine 1207 will have the potential to emit the following pollutants: 60 tons of carbon monoxide per year; 49 tons of nitrogen oxides per year; 4 tons of particulate matter per year; 15 tons of sulfur dioxide per year; and 2 ton of volatile organic compounds per year. However, recent contemporaneous projects alsd include the following: emissions increases due to the addition of a new 15,700 bhp gas turbine compressor engine (Unit 1208); decreases of carbon monoxide emissions from the installation of catalytic converters on Engines 1204 and 1205; decreases in nitrogen oxide emissions from modifications to the turbochargers and control systems on Engines 1204 and 1205; and potential emissions decreases from the addition of jet cell pre-combustor technology on Engines 1204 and 1205. A review of the recent actions shows that the net emissions increases from the combined projects are below the PSD significant emission rates. Therefore, the project remains minor with respect to the PSD preconstruction review program.

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, 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:

Florida 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

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

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 Bureau of Air Regulation's review engineer for this project for additional information at the address and phone numbers listed above.

Legal No. 65074 1T May 30, 2003

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

1. Article Addressed to:

Mr. Richard Craig
V.P. of Southeast Operations
Florida Gas Transmission Company
Post Office Box 1188
Houston, TX 77251

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* B. Date of Delivery

C. Signature

X

☐ Agent
☐ Addressee

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

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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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PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-0952

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CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

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

Postmark Here

Sent To
Richard Craig
Street, Apt. No.; or PO Box No. 1188
City, State, ZIP+4
Houston, TX 77251

7001 0320 0001 3692 5894

PS Form 3800, January 2001 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:

Mr. Richard Craig
Vice President of Southeastern Operations
Florida Gas Transmission Company
1400 Smith Street
Houston, TX 77002

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* T Broadway
B. Date of Delivery 6/27/5

C. Signature
X
☐ 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. 7001 0320 0001 3692 5733

PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-0952

7001 0320 0001 3692 5733

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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OFFICIAL USE

Postage	$
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Postmark Here

Sent To
Richard Craig
Street, Apt. No.; or PO Box No.
1400 Smith St.
City, State, ZIP+4
Houston, TX 77002

PS Form 3800, January 2001 See Reverse for Instructions