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1. Article Addressed to: Mr. Richard Craig V.P. of Southeastern Operations Florida Gas Transmission Company Post Office Box 1188 Houston, TX 77251	B. Received by (Printed Name) C. Date of Delivery <i>H. WYATT APR - 7 2003</i>	
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<p>1. Article Addressed to:</p> <p>Mr. Rick Craig  Vice President of Southeastern Operations  Florida Gas Transmission Company  Post Office Box 1188  Houston, TX 77251</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes  <input checked="" type="checkbox"/> No  <small>If YES, enter delivery address below:</small></p> <div style="border: 2px solid black; padding: 5px; text-align: center;"> <p><b>RECEIVED</b></p> <p>MAR 7 2003</p> </div> <p>3. Service Type  <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail  <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise  <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>

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STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT

In the Matter of an  
Application for Permit by:

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

Air Permit No. 0410004-006-AC  
Compressor Station No. 24  
New Compressor Engine No. 2402  
Gilchrist County, Florida

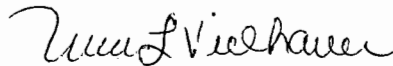
*Authorized Representative:*

Mr. Richard Craig, V.P. of Southeastern Operations

Enclosed is Final Air Permit No. 0410004-006-AC, which authorizes the construction of compressor engine No. 2402, a 7222 bhp (ISO) gas turbine. The new equipment will be installed at existing Compressor Station No. 24, which is located near Trenton at the intersection of U.S. Highway 129 and SW 50th Street in Gilchrist County, Florida. 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 Vielhauer, Chief  
Bureau of Air Regulation

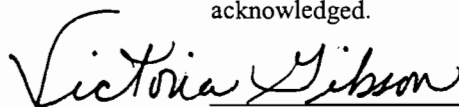
CERTIFICATE OF SERVICE

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 4/2/03 to the persons listed:

Mr. Richard Craig, FGTC\*  
Mr. Jim Thompson, FGTC  
Mr. Jim Burrow, FGTC  
Mr. Kevin McGlynn, McGlynn Consulting Co.  
Mr. V. Duane Pierce, AQMcS  
Mr. Chris Kirts, NED

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.

 / April 3, 2003  
(Clerk) / (Date)

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## FINAL DETERMINATION

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### PERMITTEE

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

### 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. 0410004-006-AC  
Gilchrist Compressor Station No. 24, New Gas Turbine Compressor Engine No. 2402

This permit authorizes the construction of compressor engine No. 2402, a 7222 bhp (ISO) gas turbine. The new equipment will be installed at existing Compressor Station No. 24, which is located near Trenton at the intersection of U.S. Highway 129 and SW 50th Street in Gilchrist County, Florida.

### NOTICE, PUBLICATION, AND ADMINISTRATIVE PROCEDURES

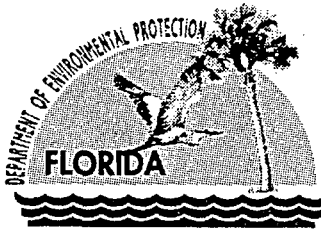
The Department distributed an "Intent to Issue Permit" package on March 3, 2003. The applicant published the "Public Notice of Intent to Issue" in The Gainesville Sun on March 7, 2003. The Department received the proof of publication on March 24, 2003. No requests for administrative hearings were filed.

### 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. Rick Craig, V.P. of Southeastern Operations

Gilchrist Compressor Station No. 24 Air Permit No. 0410004-006-AC Facility ID No. 0410004 SIC No. 4922 Permit Expires: February 28, 2004
--

## PROJECT AND LOCATION

This permit authorizes the construction of compressor engine No. 2402, a 7222 bhp (ISO) gas turbine. The new equipment will be installed at existing Compressor Station No. 24, which is located near Trenton at the intersection of U.S. Highway 129 and SW 50th Street in Gilchrist County, Florida. The UTM coordinates are Zone 17, 321.3 km East, and 3282.8 km North.

## STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.); 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

- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Units Specific Conditions
- Section 4. Appendices

Howard L. Rhodes, Director  
Division of Air Resources Management

(Date)

## SECTION 1. GENERAL INFORMATION

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### FACILITY AND PROJECT DESCRIPTION

Florida Gas Transmission Company (FGTC) operates an existing compressor station in Gilchrist County for their natural gas pipeline. The station currently consists of a single compressor engine (No. 2401) and miscellaneous support activities. The project adds a new 7222 bhp (ISO) gas turbine compressor engine (No. 2402) as part of FGTC's overall Phase VI project intended to increase the natural gas supply capacity to service domestic, commercial, and industrial customers in Florida. The project affects only the following emissions units.

ID	Emission Unit Description
002	Miscellaneous support activities
003	Compressor Engine No. 2402 consists of a Cooper-Rolls Model No. 501-KC7-DLE gas turbine rated at 7222 bhp (ISO) and fired with natural gas.

### REGULATORY CLASSIFICATION

Title III: The facility is not 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 not a Title V major source of air pollution pursuant to Chapter 62-213, F.A.C.

PSD: The facility is not a PSD major source of air pollution pursuant to Rule 62-212.400, F.A.C.

NSPS: New gas turbines are subject to the New Source Performance Standards of Subpart GG in 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 02/13/03, complete.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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1. Permitting Authority: All documents related to applications for permits to operate an emissions unit shall be submitted to the Department's Air Resource Section of the Northeast District Office at 7825 Baymeadows Way, Suite 200B, Jacksonville, Florida 32256-7590 and phone number 904/807-3300.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department's Air Resource Section of the Northeast District Office at 7825 Baymeadows Way, Suite 200B, Jacksonville, Florida 32256-7590 and phone number 904/807-3300.
3. Appendices: The following Appendices are attached as part of this permit.
  - Appendix CF describes the format used to cite applicable rules and regulations as well as previous permitting actions.
  - Appendix GC specifies the general conditions applicable to all permittees. The general conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
  - Appendix GG identifies the applicable NSPS requirements for gas turbines in 40 CFR 60, Subpart GG.
  - Appendix SC lists standard conditions applicable to air pollution sources compiled from Chapters 62-4, 62-210, 62-296, and 62-297, F.A.C.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, 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. Air Operation Permit: This permit authorizes construction of the emissions unit and initial operation to determine compliance with Department rules. An air operation permit is required for regular operation of the permitted emissions unit. At least sixty (60) days prior to the expiration of this air construction permit, the permittee shall submit an application for an air operation permit with the required compliance test report. [Rules 62-210.300, F.A.C.]



**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**A. EU-002: MISCELLANEOUS SUPPORT ACTIVITIES**

This permit recognizes the following support activities at this facility.

**Emissions Unit No. 002: Miscellaneous Support Equipment**

Miscellaneous support equipment including:

- One 443 bhp reciprocating internal combustion engine with emergency generator fired exclusively with natural gas and identified as "GEN03";
- One oily water tank;
- One diesel oil tank;
- One pipeline condensate storage tank;
- Miscellaneous pipeline equipment such as pumps, valves, flanges, connectors, etc.

*{Permitting Note: "GEN03" is an emergency generator that is expected to operate much less than 500 hours per year. The new project has the potential to increase fugitive VOC emissions by approximately 0.30 tons per year due to pipeline component and tank leaks.}*

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### B. EU-003: GAS TURBINE COMPRESSOR ENGINE NO. 2402

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

##### **Emissions Unit No. 003: Gas Turbine Compressor Engine No. 2402**

*Description:* The project adds a new 7222 bhp (ISO) gas turbine compressor engine consisting of a Cooper-Rolls Royce Model No. 501-KC7-DLE with lean premix combustor design.

*Fuel:* The gas turbine fires pipeline natural gas (SCC No 2-02-002-01) at a maximum firing rate of approximately 60,700 cubic feet per hour based on a heat content of 1040 Btu per scf of gas.

*Capacity:* At a maximum of 63 MMBtu per hour of heat input, the gas turbine produces approximately 7222 bhp (ISO). The gas turbine is intended to operate at or near capacity.

*Controls:* The lean premix combustor design minimizes NO<sub>x</sub> emissions. The efficient combustion of natural gas at high temperatures also minimizes emissions of CO, PM/PM<sub>10</sub>, SO<sub>2</sub>, and VOC.

*Stack Parameters:* When operating at capacity, exhaust gases exit a rectangular stack (7.33 feet by 5.50 feet) that is 61 feet tall at 960° F with a flow rate of approximately 98,000 acfm.

#### 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 believes that the conditions in this section are at least as stringent, or more stringent than, the NSPS requirements of Subpart GG. [Rule 62-210.800, F.A.C.; 40 CFR 60, Subpart GG]

#### EQUIPMENT

2. New Gas Turbine Compressor Engine No. 2402: The permittee is authorized to install one 7222 bhp (ISO) gas turbine compressor engine consisting of a Cooper-Rolls Royce Model No. 501-KC7-DLE. The permittee shall tune, operate and maintain the gas turbine's lean premix combustion system to reduce emissions of nitrogen oxides below the permitted limits. Ancillary equipment includes the automated gas turbine control system, an inlet air filtration system, and a rectangular stack. [Applicant Request; Design]

#### PERFORMANCE RESTRICTIONS

3. Permitted Capacities: The maximum heat input rate to the gas turbine shall not exceed 63 MMBtu per hour while producing approximately 7222 bhp (ISO) based on a compressor inlet air temperature of 59° F, 100% load, and a higher heating value of 1040 Btu per scf of natural gas. Heat input rates will vary depending upon gas turbine characteristics, load, and ambient conditions. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial testing. Performance data shall be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(PTE), F.A.C.]
4. Authorized Fuel: The gas turbine shall fire only natural gas with a maximum of 10 grains of sulfur per 100 standard cubic feet of natural gas. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]
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.]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**B. EU-003: GAS TURBINE COMPRESSOR ENGINE NO. 2402**

**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<sub>2</sub>), and volatile organic compounds (VOC).

Pollutant	Standards	Equivalent Maximum Emissions <sup>f</sup>		Rule Basis <sup>g</sup>
		lb/hour	TPY	
CO <sup>a</sup>	50.0 ppmvd @ 15% O <sub>2</sub>	7.0	30.66	Synthetic minor source
NOx <sup>b</sup>	25.0 ppmvd @ 15% O <sub>2</sub>	5.7	24.97	Synthetic minor source 40 CFR 60.332
SO <sub>2</sub> <sup>c</sup>	10 grains of sulfur per 100 scf of natural gas	1.7	7.45	Synthetic minor source 40 CFR 60.333
Opacity <sup>d</sup>	10% opacity, 6-minute average	Not Applicable		Synthetic minor source
PM <sup>e</sup>	Lean premix combustion design	0.4	1.75	Synthetic minor source
VOC <sup>e</sup>	Lean premix combustion design	1.5	6.57	Synthetic minor source

- 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<sub>2</sub> 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. The PM and VOC standards are specified as the “lean premix combustion design” of the gas turbine. The equivalent maximum emissions are provided for informational purposes only. PM emissions are based on AP-42, Table 3.1-2a (Factor: 0.0066 lb/MMBtu). VOC emissions are based on available vendor data (Factor: 10 ppmvd @ 15% O<sub>2</sub>). No testing or other compliance demonstration is required.
- f. Equivalent maximum emissions are based on the permit standards (CO, NOx, and SO<sub>2</sub>) or maximum expected emissions (PM and VOC), permitted capacity, a compressor inlet air temperature of 59° F, and 8760 hours of operation per year. For comparison purposes, the permittee shall provide a reference table with the initial compliance test report of mass emission rates versus the compressor inlet temperatures. Each test report shall include measured mass emission rates for CO, NOx and SO<sub>2</sub>. Mass emission rates for SO<sub>2</sub> shall be calculated based on actual fuel sulfur content and fuel flow rate. For tests conducted at 59° F or greater, measured mass emission rates shall be compared to the equivalent maximum emissions above. For tests conducted below 59° F, measured mass emission rates shall be compared to the tabled mass emission rates provided by the manufacturer based on compressor inlet temperatures.
- g. The emissions standards of this permit ensure that the facility remains a minor source of air pollution with respect to both the PSD preconstruction review permit program and the Title V operating permit program.

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### B. EU-003: GAS TURBINE COMPRESSOR ENGINE NO. 2402

##### EMISSIONS PERFORMANCE TESTING

7. 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

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for compliance testing without prior written approval from the Department. Tests shall also be conducted in accordance with the requirements specified in Section 4, Appendix SC of this permit. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

8. Initial Tests: The gas turbine shall be tested to demonstrate initial compliance with the emission standards for CO, NO<sub>x</sub>, and visible emissions. The initial tests shall be conducted within 60 days after achieving permitted capacity, but not later than 180 days after initial startup of the gas turbine. The initial NO<sub>x</sub> 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 NO<sub>x</sub> performance tests shall consist of three, 20-minute test runs. The peak load NO<sub>x</sub> performance test shall consist of three, 1-hour test runs. The CO performance tests shall be conducted concurrently with the NO<sub>x</sub> performance tests at peak load. SO<sub>2</sub> 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]
9. Annual Tests: During each federal fiscal year (October 1 - September 30), the gas turbine shall be tested to demonstrate compliance with the emission standards for CO, NO<sub>x</sub>, and visible emissions. CO and NO<sub>x</sub> emissions shall be tested concurrently at permitted capacity. SO<sub>2</sub> emissions shall be calculated based on fuel flow and vendor analysis of fuel sulfur content. [Rule 62-297.310(7)(a), F.A.C.]
10. Test Notification: The permittee shall notify the Compliance Authority in writing at least 30 days prior to any initial NSPS performance tests and at least 15 days prior to any other required tests. [Rule 62-297.310(7)(a)9, F.A.C.; 40 CFR 60.7 and, 60.8]

##### RECORDS AND REPORTS

11. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Section 4, Appendix SC of this permit. For each required NO<sub>x</sub> test, 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 test run, the report shall also indicate the natural gas firing rate (cubic feet per hour), heat input rate (MMBtu per hour), the power output (bhp-ISO), percent base load, and the inlet compressor temperature. [Rule 62-297.310(8), F.A.C.; 40 CFR 60.334]
12. 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 turbine affected by this project.

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### B. EU-003: GAS TURBINE COMPRESSOR ENGINE NO. 2402

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

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

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 10 days of a request by the Compliance Authority, the permittee shall be able to summarize the following information: average heat input (MMBtu per hour); average power output (bhp); and hours of gas turbine operation. This information shall also be used for submittal of the required Annual Operating Report. [Rule 62-4.070(3), F.A.C.]

## SECTION 4. APPENDICES

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**SECTION 4. APPENDIX CF**  
**CITATION FORMAT**

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*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 CFR 60.7]

*Means:* Title 40, Part 60, Section 7

**SECTION 4. APPENDIX GC**  
**GENERAL CONDITIONS**

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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



**SECTION 4. APPENDIX GC**  
**GENERAL CONDITIONS**

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

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
  - a. Determination of Best Available Control Technology (NA);
  - b. Determination of Prevention of Significant Deterioration (NA); and
  - c. Compliance with New Source Performance Standards (X).
14. The permittee shall comply with the following:
  - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
  - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
  - c. Records of monitoring information shall include:
    - 1) The date, exact place, and time of sampling or measurements;
    - 2) The person responsible for performing the sampling or measurements;
    - 3) The dates analyses were performed;
    - 4) The person responsible for performing the analyses;
    - 5) The analytical techniques or methods used; and
    - 6) The results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

**SECTION 4. APPENDIX GG**

**NSPS SUBPART GG REQUIREMENTS FOR GAS TURBINES**

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

<b>Emissions Unit 003: Gas Turbine Compressor Engine No. 2402</b>
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New compressor engine is a gas-fired Cooper-Rolls Model No. 501-KC7-DLE gas turbine rated at 7222 bhp (ISO).
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**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 NO<sub>x</sub> 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.

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

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)
$N \leq 0.015$	0
$0.015 < N \leq 0.1$	$0.04(N)$
$0.1 < N \leq 0.25$	$0.004 + 0.0067(N - 0.1)$
$N > 0.25$	0.005

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

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

{Note: The “Y” value provided by the manufacturer is approximately 11.24 for natural gas. The equivalent emission standard is 192 ppmvd at 15% oxygen. 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).

## SECTION 4. APPENDIX GG

### NSPS SUBPART GG REQUIREMENTS FOR GAS TURBINES

{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:

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

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.

**SECTION 4. APPENDIX GG**

**NSPS SUBPART GG REQUIREMENTS FOR GAS TURBINES**

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**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**

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*{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 permittee 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. [Rule 62-296.320(2), 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.]

**SECTION 4. APPENDIX SC**  
**STANDARD CONDITIONS**

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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

**SECTION 4. APPENDIX SC**  
**STANDARD CONDITIONS**

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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:

- a. The type, location, and designation of the emissions unit tested.
- b. The facility at which the emissions unit is located.
- c. The owner or operator of the emissions unit.
- d. 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.
- e. 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.
- f. 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.
- g. 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.
- h. The date, starting time and duration of each sampling run.
- i. 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.
- j. The number of points sampled and configuration and location of the sampling plane.
- k. 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.
- l. The type, manufacturer and configuration of the sampling equipment used.
- m. Data related to the required calibration of the test equipment.
- n. Data on the identification, processing and weights of all filters used.
- o. Data on the types and amounts of any chemical solutions used.
- p. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
- q. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
- r. All measured and calculated data required to be determined by each applicable test procedure for each run.
- s. The detailed calculations for one run that relate the collected data to the calculated emission rate.
- t. 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.
- u. 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.]

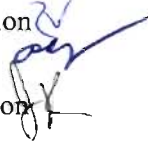


# Florida Department of Environmental Protection

## Memorandum

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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: March 28, 2003

SUBJECT: Draft Air Construction Permit No. 0410004-006-AC  
Florida Gas Transmission Company - Existing Gilchrist Station No. 24  
New 7222 bhp (ISO) Gas Turbine Compressor Engine No. 2402  
Phase VI Modifications

The Final Permit for this project is attached for your approval and signature, which authorizes the construction of a new 7222 bhp (ISO) gas turbine compressor engine (No. 2402). The new equipment will be installed at existing Station No. 24 located in Gilchrist County, Florida. The proposed project is part of Florida Gas Transmission Company's overall Phase VI project intended to increase the natural gas supply capacity and reliability to service domestic, commercial, and industrial customers in Florida. Although the project is minor with respect to PSD, Florida Gas Transmission Company requested that our Tallahassee office process the application for statewide consistency between the Phase VI projects.

The Department distributed an "Intent to Issue Permit" package on March 3, 2003. The applicant published the "Public Notice of Intent to Issue" in The Gainesville Sun on March 7, 2003. The Department received the proof of publication on March 24, 2003. No requests for administrative hearings were filed.

Day #90 is May 13, 2003. I recommend your approval of the attached Final Permit for this project.

Attachments

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TRANSMITTAL SHEET

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TO:	FROM:
JEFF KOERNER	HEATHER KENDRICK
FAX NUMBER:	DATE:
850-921-9533	MARCH 24, 2003
COMPANY:	TOTAL NO. OF PAGES INCLUDING COVER:
DEPT. OF ENVIRONMENTAL PROTECTION	4
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:
850-921-9536	
RE:	YOUR REFERENCE NUMBER:
FGT COMPRESSOR STATION 24	

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URGENT     FOR REVIEW     PLEASE COMMENT     PLEASE REPLY     PLEASE RECYCLE

---

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Public NOI Publication Verification – FGT CS-24

Date: 3-24-2003	No. of Pages: 3
To: Heather Radice	From: The Gainesville Sun
Of: Florida Gas Trans	Legal Notices Dept
Fax # 813-665-3951	Fax #: (352) 338-3131
Phone # 813-665-7441	Phone #: (352) 374-5017

BEST AVAILABLE COPY

24597

NO \_\_\_\_\_

**THE GAINESVILLE SUN**  
Published Daily and Sunday  
GAINESVILLE, FLORIDA

**STATE OF FLORIDA**  
**COUNTY OF ALACHUA**

Naomi Williams-Jordan

Before the undersigned authority appeared.....

Classified Assistant Manager

Who on oath says that he/she is.....of THE GAINESVILLE SUN, a daily

newspaper published at Gainesville in Alachua County, Florida, that the attached copy of advertisement, being a  
**PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT**

.....  
Draft Air Permit No. 0410004-006-AC, Florida Gas Transmission Company  
in the matter of.....

in the.....Court, was published in said newspaper in the issues of  
**MARCH 7<sup>TH</sup>**

....., 2003

Affidavit further says that the said THE GAINESVILLE SUN is a newspaper published at Gainesville, in said Alachua County, Florida, and that the said newspaper has heretofore been continuously published in said Alachua County, each day, and has been entered as second class mail matter at the post office in Gainesville, in said Alachua County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount for publication in the said newspaper.

Sworn to and subscribed before me this

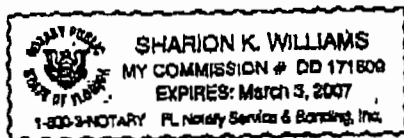
24...day of Mar...A.D., 2003

*Sharion K Williams*

(seal)

Notary Public

*Naomi Williams-Jordan*



# BEST AVAILABLE COPY

## PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

### STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Desk Air Permit No. 287000-200-AC-1 Florida Gas Transmission Company (Fleming Division) Central Gas Station No. 21 Phase VI - New Compressor Engine No. 2422

The Department of Environmental Protection hereby gives notice of its intent to issue an air construction permit to the Florida Gas Transmission Company to add new Compressor Engine No. 2422, emitting 1722 bhp (524) gas turbine, the new equipment will be installed at existing Compressor Station No. 24 which is located near Trenton at the intersection of U.S. Highway 179 and SW 50th Street in Collier County, Florida. The applicant's authorized representative is Mr. Rick Crain, Vice President of construction operations. The applicant's mailing address is Florida Gas Transmission Company, P.O. Box 2111, Hamilton, NY 12111.

The existing facility operates as a pipeline compressor station in Collier County for Florida Gas Transmission Company's natural gas pipeline. The proposed project will add a new 1722 bhp (524) gas turbine, compressor engine and 100 hp of the Florida Gas Transmission Company's overall Phase VI project, intended to increase the natural gas supply capacity to serve domestic, commercial, and industrial customers in Florida. Emissions of particulate matter (PM) and sulfur dioxide (SO2) will be maintained by the firing of natural gas as the fuel source and will comply with or better than the limits of other contaminants. The new gas turbine incorporates a dry scrubber downstream of the combustion chamber to control and maintain emissions of nitrogen oxides (NOx), carbon monoxide (CO), and volatile organic compounds (VOC). The new gas turbine will emit following pollutant emissions: 2.5 tons of NOx per year, 2 tons of SO2 per year, 3 tons of PM per year, and 1 ton VOC per year. The existing facility remains a minor source of air pollution with respect to the Prevention of Significant Deterioration (PSD) reconstruction review permit program and the Title V operating permit program.

The gas turbine is subject to the New Source Performance Standards of Subpart GG in 40 CFR (24) adopted by reference in Rule 62-004.000, F.A.C. This Federal regulation establishes emissions standards, monitoring, testing, and reporting requirements for NOx and SO2 emissions. Based on the manufacturer's estimated performance, the gas turbine will comply with the New Source Performance Standards. The applicant has also requested lower emissions standards for CO and VOC emissions to address the PSD and Title V operating permit program and the PSD reconstruction review program. The draft permit establishes emissions standards for CO, NOx, and SO2, and requires annual testing to demonstrate compliance. The Department will issue the final permit with the attached conditions unless a response is received in accordance with the following procedures: results of 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 2500 State Street, 3rd Floor, Tallahassee, Florida 32309-1402. 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 administrative hearing is filed pursuant to §§190.001 and 190.002, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Modification is not available in this proceeding. A person whose substantial interests are affected by the proposed permit decision may petition for an administrative

proceeding (hearing) under §§190.001 and 190.002, 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 3000 Compartment B, Tallahassee, Florida 32309-1402. Petitions filed by the permit applicant or any of the parties listed below will be filed within fourteen (14) days of receipt of this notice of intent. Petitions filed by any persons other than those listed below must be filed under Section 190.001, F.S., and filed within fourteen (14) days of publication of the notice of intent. The Department will issue a final decision within fourteen (14) days of receipt of the petition, whichever is later. Under Section 190.001, 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 notice, regardless of the date of publication. A petitioner who files a copy of the petition to the applicant at the address indicated above at the time of filing the notice of intent is liable for a petition within the appropriate time period shall constitute a waiver of the person's right to request a reconsideration of the permit decision under Sections 190.001 and 190.002, F.S. If the person is a party to the proceeding and participates in a hearing to the final agency action, the person's intervention will be only if the agency or the presiding officer upon the merits of a motion filed pursuant to §190.001, F.S.

A petition must discuss the material facts on which the Department's action is based (that 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's representative, if any, which shall be the address for correspondence during the course of the proceeding; and (c) an explanation of how the petitioner's substantial interests will be affected by the agency determination.) A statement of how the petitioner received notice of the agency action or proposed agency action or statement of all disputed issues of material fact, if there are none. The petition must so indicate. (d) A concise statement of the ultimate facts alleged, including the specific facts, the parties, and the relief requested or the petitioner's proposed action by a statement of the specific facts or claims the petitioner contends require reversal or modification of the agency's proposed action and (e) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based will be deemed to be a petition in dispute and otherwise shall contain the same information set forth herein as required by Rule 62-004.000, F.A.C. Because the administrative hearing process is designed to formulate and agency action, the Rules of procedure require that the Department's final action may be different from the position taken by it in the hearing process. Petitions will be filed by any such individual or entity of the Department on the application has 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, 9:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays at: Department of Environmental Protection Bureau of Air Regulation 311 S. Magnolia Drive, Suite 210 2500 State Street, 3rd Floor Tallahassee, Florida 32309-1402 Telephone: 904/488-0714 Fax: 904-488-0718 Department of Environmental Protection Northwood District Office 1622 Baymeadows Way Jacksonville, FL 32206-1838 Telephone: 904/707-3300 Fax: 904-707-3300

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 103.111, F.S. Interested persons may contact the Department's reviewing engineer for the project for additional information at the address and phone numbers listed above.

act 205351

Name: FLORIDA GAS TRANSMISSION C

AdId: 2104607

T-467 P.04/04 F-877

8136553951

From-CONTRACT LAND STAFF

Mar-24-03 11:26am

8136557441  
111 KELSEY LANE  
SUITE A  
TAMPA FL 33619

Class Rate:      Disp Rate:  
Credit Status:

Reply Request

Paytype UK      Rate LH      LEGAL RATE      Rep: 40

Source F      Class 0001      Legal Notices       TFN

Start 3/7/03      Days 1      Rate/iss 1      Stop 3/7/03

0.00	Words.....	1,334	Price	606.36
0.00	Lines.....	186	Discount	0.00
0.00	Depth.....	186.00	Commis	0.00
0.00	Columns.....	2	Net	606.36
0.00	Graphic.....	0	St Tax	0.00
0.00	St Words.....	10	Fed Tax	0.00
<input type="checkbox"/> Boxed Ad			Total	606.36
Free Day 0			Payment	606.36
Copy Line PUBLIC NOTICE OF			App Cr.	0.00
Sort String PUBLIC NOTICE			Balance	0.00
On Hold				

Product Code      Tear Sheets  
 Ad Killed      PO # 24597

Comments	Reason for Discount
697 3/7/03 (Ck #83912)	

Editions

Vertical text column containing various small print, terms, and conditions, likely related to the advertising contract or publication details.



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

February 26, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

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

Re: Draft Air Permit No. 0410004-006-AC  
Gilchrist Compressor Station No. 24  
Phase VI - New Compressor Engine No. 2402

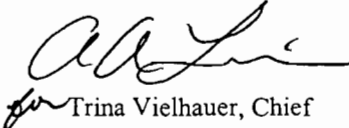
Dear Mr. Craig:

Enclosed is one copy of the Draft Permit to add new Compressor Engine No. 2402, a 7222 bhp (ISO) gas turbine and compressor. The new equipment will be installed at existing Compressor Station No. 24, which is located near Trenton at the intersection of U.S. Highway 129 and SW 50th Street in Gilchrist 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 Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to 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

"More Protection, Less Process"

Printed on recycled paper.

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>	<p>A. Signature <input checked="" type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>X <i>[Signature]</i></p> <p>B. Received by (Printed Name) C. Date of Delivery</p>
<p>1. Article Addressed to:</p> <p>Mr. Rick Craig                  Vice President of Southeastern Operations                  Florida Gas Transmission Company                  Post Office Box 1188                  Houston, TX 77251</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>YES, enter delivery address below:</p> <div style="border: 2px solid black; padding: 5px; text-align: center;"> <p><b>RECEIVED</b></p> <p>MAR 7 2002</p> </div> <p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>7001 0320 0001 3692 6860</p>	
<p>PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540</p>	

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

0999 2692 T000 0220 T001

Postage	\$	Postmark Here
Certified Fee		
Return Receipt Fee (Endorsement Required)		
Restricted Delivery Fee (Endorsement Required)		
<b>Total Postage &amp; Fees</b>	<b>\$</b>	

Sent To  
**Rick Craig**

Street, Apt. No.,  
 or P.O. Box **X 1188**

City, State, ZIP+4  
**Houston, TX 77251**

PS Form 3800, January 2001 See Reverse for Instructions

In the Matter of an  
Application for Air Permit by:

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

*Authorized Representative:*

Mr. Rick Craig, V.P. of Southeastern Operations

Existing Compressor Station No. 24  
Draft Air Permit No. 0410004-006-AC  
Phase V - New Engine No. 2402  
Gilchrist County, Florida

### INTENT TO ISSUE AIR CONSTRUCTION PERMIT

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 February 13, 2003 to the Department for a permit to construct new Compressor Engine No. 2402 consisting of a 7222 bhp (ISO) gas turbine. The new equipment will be installed at existing Compressor Station No. 24, which is located near Trenton at the intersection of U.S. Highway 129 and SW 50th Street in Gilchrist County, Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403, F.S., and Chapters 62-4, 62-210, and 62-212, 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 (Telephone: 850/488-0114, Fax: 850/ 922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in Section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) and (11), F.A.C.

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

The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of Public Notice of Intent to Issue Air Permit. 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.

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

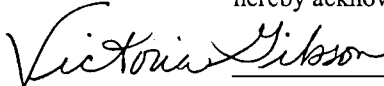
**CERTIFICATE OF SERVICE**

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 3/3/03 to the persons listed:

Mr. Rick Craig, FGTC\*  
Mr. Jim Thompson, FGTC  
Mr. Kevin McGlynn, McGlynn Consulting Co.  
Mr. V. Duane Pierce, AQMcs  
Mr. Chris Kirts, NED

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.

 / March 3, 2003  
(Clerk) (Date)

**PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT**

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Draft Air Permit No. 0410004-006-AC

Florida Gas Transmission Company  
Existing Gilchrist Compressor Station No. 24  
Phase VI - New Compressor Engine No. 2402

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to the Florida Gas Transmission Company to add new Compressor Engine No. 2402 consisting of a 7222 bhp (ISO) gas turbine. The new equipment will be installed at existing Compressor Station No. 24, which is located near Trenton at the intersection of U.S. Highway 129 and SW 50th Street in Gilchrist County, Florida. The applicant's authorized representative is Mr. Rick Craig, Vice President of Southeastern Operations. The applicant's mailing address is Florida Gas Transmission Company, P.O. Box 1188, Houston, TX 77251.

The existing facility operates as a pipeline compressor station in Gilchrist County for Florida Gas Transmission Company's natural gas pipeline. The proposed project will add a new 7222 bhp (ISO) gas turbine compressor engine and is part of Florida Gas Transmission Company's overall Phase VI project intended to increase the natural gas supply capacity to service domestic, commercial, and industrial customers in Florida. Emissions of particulate matter (PM) and sulfur dioxide (SO<sub>2</sub>) will be minimized by the firing of natural gas as the exclusive fuel, which contains little or no ash, sulfur, or other contaminants. The new gas turbine incorporates a lean, premix combustion design with automatic control to minimize emissions of nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), and volatile organic compounds (VOC). The new gas turbine will emit following potential emissions: 31 tons of CO per year; 25 tons of NO<sub>x</sub> per year; 8 tons of SO<sub>2</sub> per year; 2 tons of PM per year; and 7 tons VOC per year. The existing facility remains a minor source of air pollution with respect to the Prevention of Significant Deterioration (PSD) preconstruction review permit program and the Title V operating permit program.

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 federal regulation establishes emissions standards, monitoring, testing, and reporting requirements for NO<sub>x</sub> and SO<sub>2</sub> emissions. Based on the manufacturer's estimated performance, the gas turbine will readily comply with the NSPS requirements. The applicant has also requested lower emissions standards for CO and NO<sub>x</sub> emissions to ensure that the project and facility remain minor with respect to the Title V operating permit program and the PSD preconstruction review program. The draft permit establishes emissions standards for CO, NO<sub>x</sub>, and opacity and requires annual testing to demonstrate compliance.

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

**NOTICE TO BE PUBLISHED IN THE NEWSPAPER**

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

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

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

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

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

Department of Environmental Protection  
Northeast District Office  
Air Resources Section  
7825 Baymeadows Way  
Jacksonville, FL 32256-7590  
Telephone: 904/807-3300  
Fax: 904/448-4363

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

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

**TECHNICAL EVALUATION  
&  
PRELIMINARY DETERMINATION**

**PROJECT**

Draft Air Construction Permit No. 0041004-006-AC  
Existing Natural Gas Compressor Station No. 24  
(Emissions Unit Nos. 002 and 003)

**COUNTY**

Gilchrist County, Florida

**APPLICANT**

Florida Gas Transmission Company  
ARMS Facility ID No. 0410004  
Gilchrist Compressor Station No. 24

**PERMITTING  
AUTHORITY**

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



February 26, 2003

{Filename: FGT 24VI TEPD.doc}

## 1. GENERAL PROJECT INFORMATION

### Applicant Name and Address

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

### Authorized Representative:

Mr. Rick Craig, V.P. of Southeastern Operations

### Processing Schedule

The Department received the application on February 13, 2003. It was deemed complete as is.

### Facility Description and Location

The applicant proposes to construct a new gas turbine compressor engine at existing Station No. 24, which is located near Trenton at the intersection of U.S. Highway 129 and SW 50th Street in Gilchrist County, Florida. This area is in attainment with the ambient air quality standards for carbon monoxide, nitrogen oxides, sulfur dioxide, and ozone. It is unclassifiable with regard to particulate matter and lead.

### Standard Industrial Classification Code (SIC)

SIC No. 4922 – Natural Gas Transmission

### Regulatory Categories

Title III: The facility is not 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 not a Title V major source of air pollution pursuant to Chapter 62-213, F.A.C.

PSD: The facility is not a PSD major source of air pollution pursuant to Rule 62-212.400, F.A.C.

NSPS: New gas turbines are subject to the New Source Performance Standards of Subpart GG in 40 CFR 60.

### Project Description

The applicant proposes to construct new compressor engine No. 2402 to consist of a Cooper-Rolls Model No. 501-KC7-DLE gas turbine with a maximum output of 7222 bhp (ISO). The new equipment will be installed at existing Compressor Station No. 24, which is located near Trenton at the intersection of U.S. Highway 129 and SW 50th Street in Gilchrist County, Florida. The proposed project is part of Florida Gas Transmission Company's overall Phase VI project intended to increase the natural gas supply capacity 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.

## 2. APPLICABLE REGULATIONS

### State Regulations

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

<u>Chapter</u>	<u>Description</u>
62-4	Permitting Requirements
62-204	Federal Regulations Adopted by Reference
62-210	Required Permits, Public Notice, Reports, Circumvention, Excess Emissions, and Forms

- 62-212 Preconstruction Review
- 62-213 Operation Permits for Major Sources of Air Pollution
- 62-296 Emission Limiting Standards
- 62-297 Test Methods and 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).

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

## 3. EMISSIONS STANDARDS

### Brief Discussion of Emissions

The following sections are excerpts on gas turbines 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<sub>2</sub>) 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<sub>2</sub>, 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<sub>2</sub>, 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."*

The gas turbine proposed for the project will fire natural gas as the exclusive fuel, which contains little or no ash, sulfur, or other contaminants. This will minimize emissions of particulate matter and sulfur dioxide. The design of the proposed unit includes lean premix combustion technology with automated control to reduce emissions of nitrogen oxides. 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.

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

### NSPS Subpart GG Standards

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 SO2 as well as testing and monitoring requirements. In general, the emissions standards are:

- NOx emissions  $\leq$  192 ppmvd, and
- SO2 emissions are limited by firing only fuels containing  $\leq$  0.8 percent sulfur by weight (or 150 ppmvd).

The manufacturer's guaranteed NOx emission rate is 25 ppmvd, which readily complies with the NSPS NOx standard. 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, which also readily complies with the NSPS standard for SO2 emissions.

### Draft Emissions Standards

The draft permit establishes emissions standards for several pollutants that reflect efficient operation of the proposed equipment and ensure that the project remains minor with respect to the PSD preconstruction review permit program and the Title V operating permit program. Based on the applicant's request, the Department establishes the following emissions standards.

Table 3A. EU-003: New Gas Turbine Compressor Engine No. 2402

Pollutant	Standards	Equivalent Maximum Emissions <sup>f</sup>		Rule Basis <sup>g</sup>
		lb/hour	TPY	
CO <sup>a</sup>	50.0 ppmvd @ 15% O2	7.0	30.66	Synthetic minor source
NOx <sup>b</sup>	25.0 ppmvd @ 15% O2	5.7	24.97	Synthetic minor source 40 CFR 60.332
SO2 <sup>c</sup>	10 grains of sulfur per 100 scf of natural gas	1.7	7.45	Synthetic minor source 40 CFR 60.333
Opacity <sup>d</sup>	10% opacity, 6-minute average	Not Applicable		Synthetic minor source
PM <sup>e</sup>	Lean premix combustion design	0.4	1.75	Synthetic minor source
VOC <sup>e</sup>	Lean premix combustion design	1.5	6.57	Synthetic minor source

- 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. The PM and VOC standards are specified as the "lean premix combustion design" of the gas turbine. The equivalent maximum emissions are provided for informational purposes only. PM emissions are based on AP-42, Table 3.1-2a (Factor: 0.0066 lb/MMBtu). VOC emissions are based on available vendor data (Factor: 10 ppmvd @ 15% O2). No testing or other compliance demonstration is required.
- f. Equivalent maximum emissions are based on the permit standards (CO, NOx, and SO2) or maximum expected emissions (PM and VOC), permitted capacity, a compressor inlet air temperature of 59° F, and 8760 hours of operation per year. For comparison purposes, the permittee shall provide a reference table



## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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with the initial compliance test report of mass emission rates versus the compressor inlet temperatures. Each test report shall include measured mass emission rates for CO, NO<sub>x</sub> and SO<sub>2</sub>. Mass emission rates for SO<sub>2</sub> shall be calculated based on actual fuel sulfur content and fuel flow rate. For tests conducted at 59° F or greater, measured mass emission rates shall be compared to the equivalent maximum emissions above. For tests conducted below 59° F, measured mass emission rates shall be compared to the tabled mass emission rates provided by the manufacturer based on compressor inlet temperatures.

- g. The emissions standards of this permit ensure that the facility remains a minor source of air pollution with respect to both the PSD preconstruction review permit program and the Title V operating permit program.

### 4. COMPLIANCE DEMONSTRATIONS

#### Initial Tests

The gas turbine shall be tested to demonstrate initial compliance with the emission standards for CO, NO<sub>x</sub>, and visible emissions. The initial tests shall be conducted within 60 days after achieving permitted capacity, but not later than 180 days after initial startup of the gas turbine. The initial NO<sub>x</sub> 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 NO<sub>x</sub> performance tests shall consist of three, 20-minute test runs. The peak load NO<sub>x</sub> performance test shall consist of three, 1-hour test runs. The CO performance tests shall be conducted concurrently with the NO<sub>x</sub> performance tests at peak load. SO<sub>2</sub> 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]

#### Annual Tests

During each federal fiscal year (October 1 - September 30), the gas turbine shall be tested to demonstrate compliance with the emission standards for CO, NO<sub>x</sub>, and visible emissions. CO and NO<sub>x</sub> emissions shall be tested concurrently at permitted capacity. SO<sub>2</sub> emissions shall be calculated based on fuel flow and vendor analysis of fuel sulfur content. [Rule 62-297.310(7)(a), F.A.C.]

#### Custom Fuel Monitoring

The applicant has requested 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.

### 5. 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. Rick Craig, V.P. of Southeastern Operations

Gilchrist Compressor Station No. 24 Air Permit No. 0410004-006-AC Facility ID No. 0410004 SIC No. 4922 Permit Expires: February 28, 2004
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## PROJECT AND LOCATION

This permit authorizes the construction of compressor engine No. 2402, a 7222 bhp (ISO) gas turbine. The new equipment will be installed at existing Compressor Station No. 24, which is located near Trenton at the intersection of U.S. Highway 129 and SW 50th Street in Gilchrist County, Florida. The UTM coordinates are Zone 17, 321.3 km East, and 3282.8 km North.

## STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.); 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

- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Units Specific Conditions
- Section 4. Appendices

(DRAFT)

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Howard L. Rhodes, Director  
Division of Air Resources Management

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(Date)

## SECTION 1. GENERAL INFORMATION (DRAFT)

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### FACILITY AND PROJECT DESCRIPTION

Florida Gas Transmission Company (FGTC) operates an existing compressor station in Gilchrist County for their natural gas pipeline. The station currently consists of a single compressor engine (No. 2401) and miscellaneous support activities. The project adds a new 7222 bhp (ISO) gas turbine compressor engine (No. 2402) as part of FGTC's overall Phase VI project intended to increase the natural gas supply capacity to service domestic, commercial, and industrial customers in Florida. The project affects only the following emissions units.

ID	Emission Unit Description
002	Miscellaneous support activities
003	Compressor Engine No. 2402 consists of a Cooper-Rolls Model No. 501-KC7-DLE gas turbine rated at 7222 bhp (ISO) and fired with natural gas.

### REGULATORY CLASSIFICATION

Title III: The facility is not 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 not a Title V major source of air pollution pursuant to Chapter 62-213, F.A.C.

PSD: The facility is not a PSD major source of air pollution pursuant to Rule 62-212.400, F.A.C.

NSPS: New gas turbines are subject to the New Source Performance Standards of Subpart GG in 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 02/13/03, complete.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT)

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1. Permitting Authority: All documents related to applications for permits to operate an emissions unit shall be submitted to the Department's Air Resource Section of the Northeast District Office at 7825 Baymeadows Way, Suite 200B, Jacksonville, Florida 32256-7590 and phone number 904/807-3300.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department's Air Resource Section of the Northeast District Office at 7825 Baymeadows Way, Suite 200B, Jacksonville, Florida 32256-7590 and phone number 904/807-3300.
3. Appendices: The following Appendices are attached as part of this permit.
  - Appendix CF describes the format used to cite applicable rules and regulations as well as previous permitting actions.
  - Appendix GC specifies the general conditions applicable to all permittees. The general conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
  - Appendix GG identifies the applicable NSPS requirements for gas turbines in 40 CFR 60, Subpart GG.
  - Appendix SC lists standard conditions applicable to air pollution sources compiled from Chapters 62-4, 62-210, 62-296, and 62-297, F.A.C.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, 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. Air Operation Permit: This permit authorizes construction of the emissions unit and initial operation to determine compliance with Department rules. An air operation permit is required for regular operation of the permitted emissions unit. At least sixty (60) days prior to the expiration of this air construction permit, the permittee shall submit an application for an air operation permit with the required compliance test report. [Rules 62-210.300, F.A.C.]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)**

**A. EU-002: MISCELLANEOUS SUPPORT ACTIVITIES**

This permit recognizes the following support activities at this facility.

**Emissions Unit No. 002: Miscellaneous Support Equipment**

Miscellaneous support equipment including:

- One 443 bhp reciprocating internal combustion engine with emergency generator fired exclusively with natural gas and identified as "GEN03";
- One oily water tank;
- One diesel oil tank;
- One pipeline condensate storage tank;
- Miscellaneous pipeline equipment such as pumps, valves, flanges, connectors, etc.

*{Permitting Note: The emergency generator is expected to operate much less than 500 hours per year. The new project has the potential to increase fugitive VOC emissions by approximately 0.30 tons per year due to pipeline component and tank leaks.}*

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)**

**B. EU-003: GAS TURBINE COMPRESSOR ENGINE NO. 2402**

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

**Emissions Unit No. 003: Gas Turbine Compressor Engine No. 2402**

*Description:* The project adds a new 7222 bhp (ISO) gas turbine compressor engine consisting of a Cooper-Rolls Royce Model No. 501-KC7-DLE with lean premix combustor design.

*Fuel:* The gas turbine fires pipeline natural gas (SCC No 2-02-002-01) at a maximum firing rate of approximately 60,700 cubic feet per hour based on a heat content of 1040 Btu per scf of gas.

*Capacity:* At a maximum of 63 MMBtu per hour of heat input, the gas turbine produces approximately 7222 bhp (ISO). The gas turbine is intended to operate at or near capacity.

*Controls:* The lean premix combustor design minimizes NOx emissions. The efficient combustion of natural gas at high temperatures also minimizes emissions of CO, PM/PM<sub>10</sub>, SO<sub>2</sub>, and VOC.

*Stack Parameters:* When operating at capacity, exhaust gases exit a rectangular stack (7.33 feet by 5.50 feet) that is 61 feet tall at 960° F with a flow rate of approximately 98,000 acfm.

**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 believes that the conditions in this section are at least as stringent, or more stringent than, the NSPS requirements of Subpart GG. [Rule 62-210.800, F.A.C.; 40 CFR 60, Subpart GG]

**EQUIPMENT**

2. New Gas Turbine Compressor Engine No. 2402: The permittee is authorized to install one 7222 bhp (ISO) gas turbine compressor engine consisting of a Cooper-Rolls Royce Model No. 501-KC7-DLE. The permittee shall tune, operate and maintain the gas turbine's lean premix combustion system to reduce emissions of nitrogen oxides below the permitted limits. Ancillary equipment includes the automated gas turbine control system, an inlet air filtration system, and a rectangular stack. [Applicant Request; Design]

**PERFORMANCE RESTRICTIONS**

3. Permitted Capacities: The maximum heat input rate to the gas turbine shall not exceed 63 MMBtu per hour while producing approximately 7222 bhp (ISO) based on a compressor inlet air temperature of 59° F, 100% load, and a higher heating value of 1040 Btu per scf of natural gas. Heat input rates will vary depending upon gas turbine characteristics, load, and ambient conditions. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial testing. Performance data shall be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(PTE), F.A.C.]
4. Authorized Fuel: The gas turbine shall fire only natural gas with a maximum of 10 grains of sulfur per 100 standard cubic feet of natural gas. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]
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.]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)**

**B. EU-003: GAS TURBINE COMPRESSOR ENGINE NO. 2402**

**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<sub>2</sub>), and volatile organic compounds (VOC).

Pollutant	Standards	Equivalent Maximum Emissions <sup>f</sup>		Rule Basis <sup>g</sup>
		lb/hour	TPY	
CO <sup>a</sup>	50.0 ppmvd @ 15% O <sub>2</sub>	7.0	30.66	Synthetic minor source
NOx <sup>b</sup>	25.0 ppmvd @ 15% O <sub>2</sub>	5.7	24.97	Synthetic minor source 40 CFR 60.332
SO <sub>2</sub> <sup>c</sup>	10 grains of sulfur per 100 scf of natural gas	1.7	7.45	Synthetic minor source 40 CFR 60.333
Opacity <sup>d</sup>	10% opacity, 6-minute average	Not Applicable		Synthetic minor source
PM <sup>e</sup>	Lean premix combustion design	0.4	1.75	Synthetic minor source
VOC <sup>e</sup>	Lean premix combustion design	1.5	6.57	Synthetic minor source

- 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<sub>2</sub> 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. The PM and VOC standards are specified as the “lean premix combustion design” of the gas turbine. The equivalent maximum emissions are provided for informational purposes only. PM emissions are based on AP-42, Table 3.1-2a (Factor: 0.0066 lb/MMBtu). VOC emissions are based on available vendor data (Factor: 10 ppmvd @ 15% O<sub>2</sub>). No testing or other compliance demonstration is required.
- f. Equivalent maximum emissions are based on the permit standards (CO, NOx, and SO<sub>2</sub>) or maximum expected emissions (PM and VOC), permitted capacity, a compressor inlet air temperature of 59° F, and 8760 hours of operation per year. For comparison purposes, the permittee shall provide a reference table with the initial compliance test report of mass emission rates versus the compressor inlet temperatures. Each test report shall include measured mass emission rates for CO, NOx and SO<sub>2</sub>. Mass emission rates for SO<sub>2</sub> shall be calculated based on actual fuel sulfur content and fuel flow rate. For tests conducted at 59° F or greater, measured mass emission rates shall be compared to the equivalent maximum emissions above. For tests conducted below 59° F, measured mass emission rates shall be compared to the tabled mass emission rates provided by the manufacturer based on compressor inlet temperatures.
- g. The emissions standards of this permit ensure that the facility remains a minor source of air pollution with respect to both the PSD preconstruction review permit program and the Title V operating permit program.

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

#### B. EU-003: GAS TURBINE COMPRESSOR ENGINE NO. 2402

##### EMISSIONS PERFORMANCE TESTING

7. 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

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for compliance testing without prior written approval from the Department. Tests shall also be conducted in accordance with the requirements specified in Section 4, Appendix SC of this permit. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

8. Initial Tests: The gas turbine shall be tested to demonstrate initial compliance with the emission standards for CO, NO<sub>x</sub>, and visible emissions. The initial tests shall be conducted within 60 days after achieving permitted capacity, but not later than 180 days after initial startup of the gas turbine. The initial NO<sub>x</sub> 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 NO<sub>x</sub> performance tests shall consist of three, 20-minute test runs. The peak load NO<sub>x</sub> performance test shall consist of three, 1-hour test runs. The CO performance tests shall be conducted concurrently with the NO<sub>x</sub> performance tests at peak load. SO<sub>2</sub> 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]
9. Annual Tests: During each federal fiscal year (October 1 - September 30), the gas turbine shall be tested to demonstrate compliance with the emission standards for CO, NO<sub>x</sub>, and visible emissions. CO and NO<sub>x</sub> emissions shall be tested concurrently at permitted capacity. SO<sub>2</sub> emissions shall be calculated based on fuel flow and vendor analysis of fuel sulfur content. [Rule 62-297.310(7)(a), F.A.C.]
10. Test Notification: The permittee shall notify the Compliance Authority in writing at least 30 days prior to any initial NSPS performance tests and at least 15 days prior to any other required tests. [Rule 62-297.310(7)(a)9, F.A.C.; 40 CFR 60.7 and, 60.8]

##### RECORDS AND REPORTS

11. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Section 4, Appendix SC of this permit. For each required NO<sub>x</sub> test, 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 test run, the report shall also indicate the natural gas firing rate (cubic feet per hour), heat input rate (MMBtu per hour), the power output (bhp-ISO), percent base load, and the inlet compressor temperature. [Rule 62-297.310(8), F.A.C.; 40 CFR 60.334]
12. 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 turbine affected by this project.



**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)**

**B. EU-003: GAS TURBINE COMPRESSOR ENGINE NO. 2402**

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

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

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 10 days of a request by the Compliance Authority, the permittee shall be able to summarize the following information: average heat input (MMBtu per hour); average power output (bhp); and hours of gas turbine operation. This information shall also be used for submittal of the required Annual Operating Report. [Rule 62-4.070(3), F.A.C.]

**SECTION 4. APPENDICES**  
**CONTENTS**

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- Appendix CF. Citation Format
- Appendix GC. General Conditions
- Appendix GG. NSPS Subpart GG Requirements for Gas Turbines
- Appendix SC. Standard Conditions

**SECTION 4. APPENDIX CF**  
**CITATION FORMAT**

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*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 CFR 60.7]

*Means:* Title 40, Part 60, Section 7

**SECTION 4. APPENDIX GC**  
**GENERAL CONDITIONS**

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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

**SECTION 4. APPENDIX GC**  
**GENERAL CONDITIONS**

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

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
  - a. Determination of Best Available Control Technology (NA);
  - b. Determination of Prevention of Significant Deterioration (NA); and
  - c. Compliance with New Source Performance Standards (X).
14. The permittee shall comply with the following:
  - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
  - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
  - c. Records of monitoring information shall include:
    - 1) The date, exact place, and time of sampling or measurements;
    - 2) The person responsible for performing the sampling or measurements;
    - 3) The dates analyses were performed;
    - 4) The person responsible for performing the analyses;
    - 5) The analytical techniques or methods used; and
    - 6) The results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

**SECTION 4. APPENDIX GG**

**NSPS SUBPART GG REQUIREMENTS FOR GAS TURBINES**

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

<b>Emissions Unit 003: Gas Turbine Compressor Engine No. 2402</b>
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New compressor engine is a gas-fired Cooper-Rolls Model No. 501-KC7-DLE gas turbine rated at 7222 bhp (ISO).
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**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:

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

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.

**SECTION 4. APPENDIX GG**

**NSPS SUBPART GG REQUIREMENTS FOR GAS TURBINES**

F = NO<sub>x</sub> 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 (NO <sub>x</sub> percent by volume)
$N \leq 0.015$	0
$0.015 < N \leq 0.1$	$0.04(N)$
$0.1 < N \leq 0.25$	$0.004 + 0.0067(N - 0.1)$
$N > 0.25$	0.005

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

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

{Note: The “Y” value provided by the manufacturer is approximately 11.24 for natural gas. The equivalent emission standard is 192 ppmvd at 15% oxygen. 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).

## SECTION 4. APPENDIX GG

### NSPS SUBPART GG REQUIREMENTS FOR GAS TURBINES

{Note: The excess NO<sub>x</sub> emissions reporting requirements do not apply. The gas turbine uses lean premix combustion technology and not wet injection to control NO<sub>x</sub> emissions. Also, NO<sub>x</sub> 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 (NO<sub>x</sub>) shall be computed for each run using the following equation:

$$\text{NO}_x = (\text{NO}_{x0}) (\text{Pr}/\text{Po})^{0.5} e^{19(\text{Ho} - 0.00633)} (288^\circ\text{K}/\text{Ta})^{1.53}$$

where:

- NO<sub>x</sub> = emission rate of NO<sub>x</sub> at 15 percent O<sub>2</sub> and ISO standard ambient conditions, volume percent.
- NO<sub>x0</sub> = observed NO<sub>x</sub> 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 H<sub>2</sub>O/g air.
- e = transcendental constant, 2.718.
- Ta = ambient temperature, °K.

**Department requirement:** The permittee is required to correct NO<sub>x</sub> emissions to ISO ambient atmospheric conditions for each required emissions performance test and compare to the NO<sub>x</sub> 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 NO<sub>x</sub> 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-NO<sub>x</sub> 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 NO<sub>x</sub> emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.



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

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**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**

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*{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 permittee 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. [Rule 62-296.320(2), 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.]

**SECTION 4. APPENDIX SC**  
**STANDARD CONDITIONS**

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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

**SECTION 4. APPENDIX SC**  
**STANDARD CONDITIONS**

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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:

- a. The type, location, and designation of the emissions unit tested.
- b. The facility at which the emissions unit is located.
- c. The owner or operator of the emissions unit.
- d. 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.
- e. 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.
- f. 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.
- g. 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.
- h. The date, starting time and duration of each sampling run.
- i. 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.
- j. The number of points sampled and configuration and location of the sampling plane.
- k. 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.
- l. The type, manufacturer and configuration of the sampling equipment used.
- m. Data related to the required calibration of the test equipment.
- n. Data on the identification, processing and weights of all filters used.
- o. Data on the types and amounts of any chemical solutions used.
- p. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
- q. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
- r. All measured and calculated data required to be determined by each applicable test procedure for each run.
- s. The detailed calculations for one run that relate the collected data to the calculated emission rate.
- t. 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.
- u. 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.]

## P.E. CERTIFICATION STATEMENT

### PERMITTEE

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

Draft Air Permit No. 0410004-006-AC  
Existing Gilchrist Compressor Station 24  
New Compressor Engine No. 2402

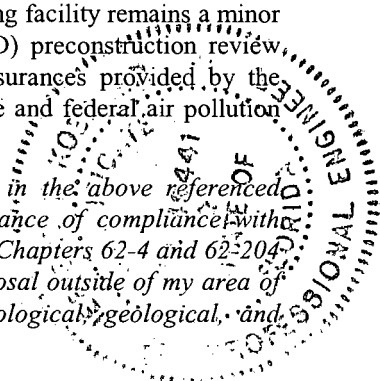
### PROJECT DESCRIPTION

The applicant proposes to construct new compressor engine No. 2402 to consist of a Cooper-Rolls Model No. 501-KC7-DLE gas turbine with a maximum output of 7222 bhp (ISO). The new equipment will be installed at existing Compressor Station No. 24 in Gilchrist County, Florida. The proposed project is part of Florida Gas Transmission Company's overall Phase VI project intended to increase the natural gas supply capacity 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.

Emissions of particulate matter and sulfur dioxide will be minimized by the firing of natural gas as the exclusive fuel, which contains little or no ash, sulfur, or other contaminants. The new gas turbine incorporates a lean, premix combustion design with automatic control to minimize NOx emissions. This technology also provides a more homogeneous flame front with fewer hot and cold spots, which allows low emissions of carbon monoxide and volatile organic compounds simultaneously with low emissions of nitrogen oxides. It is noted that recent installations of this model gas turbine have experienced safety problems related to the 14<sup>th</sup>-stage compressor bleed valve. However, Florida Gas Transmission Company maintains that Rolls Royce will have this problem corrected by the end of March 2003.

The maximum annual emissions from the gas turbine are estimated as follows: 31 tons of CO per year; 25 tons of NOx per year; 8 tons of SO<sub>2</sub> per year; 2 tons of PM per year; and 7 tons VOC per year. The project is a minor source of air pollution and is expected to result in minimal air quality impacts. The existing facility remains a minor source of air pollution with respect to the Prevention of Significant Deterioration (PSD) preconstruction review permit program and the Title V operating permit program. Based on reasonable assurances provided by the applicant, it is determined that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit.

*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 the applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-203 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 F. Koerner*

Jeffery F. Koerner, P.E.  
Registration Number: 49441

*2-26-03*

(Date)

# Memorandum

# Florida Department of Environmental Protection

---

TO: ~~Trina Vielhauer, Chief~~ *ay*  
Bureau of Air Regulation

THROUGH: Al Linero, Manager  
New Source Review Section

FROM: Jeff Koerner, New Source Review Section *JK*

DATE: February 26, 2003

SUBJECT: Draft Air Construction Permit No. 0410004-006-AC  
Florida Gas Transmission Company, Existing Gilchrist Station No. 24  
New 7222 bhp (ISO) Gas Turbine Compressor Engine No. 2402

Attached for your review are the following items:

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

The draft permit authorizes the construction of a new 7222 bhp (ISO) gas turbine compressor engine (No. 2402). The new equipment will be installed at the existing Station No. 24 in Gilchrist County, Florida. The Technical Evaluation and Preliminary Determination provides a detailed description of the project, rule applicability, and emissions standards. The P.E. certification briefly summarizes the project.

The proposed project is part of Florida Gas Transmission Company's overall Phase VI project intended to increase the natural gas supply capacity 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 April 27, 2003. I recommend your approval of the attached Draft Permit for this project.

Attachments



## Florida Gas Transmission Company

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

February 7, 2003

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

RECEIVED

FEB 13 2003

BUREAU OF AIR REGULATION

Reference: Facility Number: 0410004  
Compressor Station No. 24, Gilchrist County

Dear Mr. Fancy:

**Subject: Application for Air Construction Permit**

Florida Gas Transmission Company (FGT) is proposing to install a new Cooper-Rolls 501-KC7 compressor turbine at the above referenced facility. This existing facility is a minor source under Title V and New Source Review regulations and the proposed modification is not significant; therefore, only a state construction permit is required.

Enclosed is an Application for an Air Construction Permit for the proposed modification. A check for \$2,000.00 is attached for the application fee.

If you have any questions or need additional information, please call me at (800) 381-1477.

Sincerely,

Jim Thompson  
Environmental Project Manager  
For Florida Gas Transmission Company Phase VI Project

### ATTACHMENTS

CC: James Alexander, Phase VI w/o attachments  
Rick Craig, w/o attachments  
Frank Diemont  
Jake Krautsch, Tallahassee  
V. Duane Pierce, AQMcS

**Florida Gas Transmission Company**

**Phase VI Expansion Project**

**Compressor Station No. 24**

**Trenton, Florida**

**APPLICATION  
For  
AIR CONSTRUCTION  
PERMIT**

**February 2003**



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## 1.0 INTRODUCTION

Florida Gas Transmission Company (FGT), a Delaware Corporation and ENRON/EL PASO affiliate of Houston, Texas, is proposing to modify its existing natural gas pipeline facility near Trenton in Gilchrist County, Florida (Compressor Station No. 24). 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. The scope of work for the Phase VI Expansion Project includes expansion through the addition of state-of-the-art compressor engines at existing compressor stations and the development of pipeline within the State of Florida. The basic project components include:

- Mainline loops, additions, and replacements;
- Lateral loops and additions;
- Meter station additions, modifications, and expansions;
- Regulator additions, modifications, and expansions; and
- Compressor station modifications.

Compressor Station No. 24 is located in Gilchrist County, Florida, approximately 4 miles north of Trenton on U. S. Highway 129. Figure 1-1 shows the location of the compressor station.

The proposed expansion at this location consists of the addition of one 7,222 ISO brake horsepower (bhp), natural-gas-fired, turbine compressor engine. The proposed compressor engine will be used solely for transporting natural gas by pipeline for distribution to markets in Florida. The proposed new engine is a Cooper-Rolls 501-KC7 DLE equipped with dry low NO<sub>x</sub> (oxides of nitrogen) combustion. Under current federal and state air quality regulations, the proposed modification will constitute a minor modification of an existing minor source. Based on the projected annual emission rates, there will be no PSD (Prevention of Significant Deterioration) significant increase in any emissions.

Engineering designs for the proposed expansion project include selection of an engine incorporating dry low NO<sub>x</sub> combustion technology. Dry low NO<sub>x</sub> technology for control of NO<sub>x</sub> emissions would represent Best Available Control Technology (BACT) for the proposed turbine engine under PSD requirements.

This application contains two additional sections. Descriptions of the existing operation at FGT's Compressor Station No. 24 and the proposed upgraded turbine are presented in Section 2.0. The air quality review requirements and applicability of state and federal regulations are discussed in Section 3.0.

FDEP permit application forms are provided in Attachment A. Attachment B contains a plot plan, Attachment C contains vendor information and Attachment D contains emission calculations.

# AQMcs

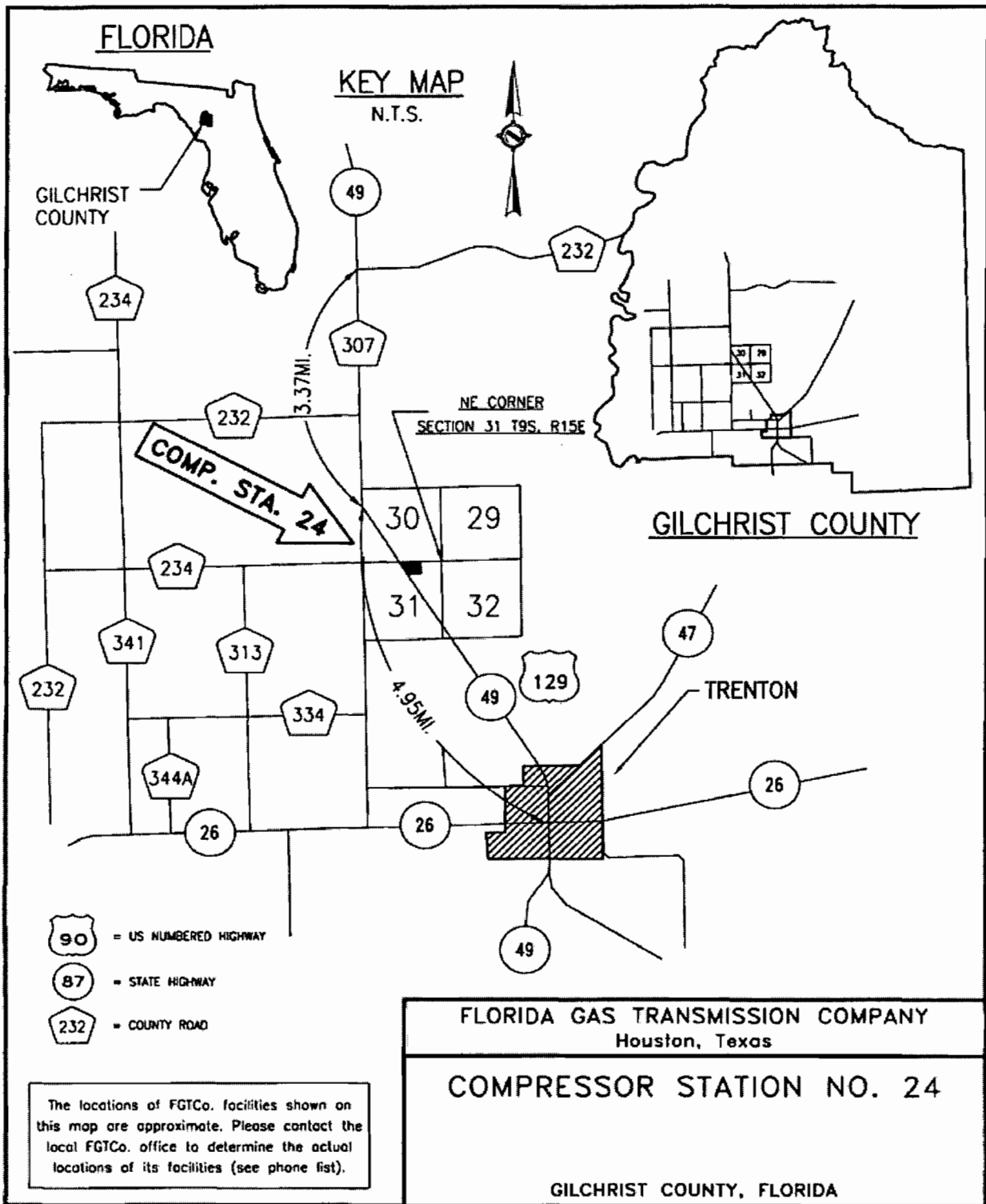


Figure 1-1

## 2.0 PROJECT DESCRIPTION

A plot plan of FGT's Compressor Station No. 24, showing the location of the plant boundaries and the location of the proposed modified engine is presented in Attachment B. The following sections provide a description of the operations at this location.

### 2.1 Existing Operations

FGT's existing Compressor Station No. 24 consists of one 15,000 bhp (ISO) gas-fired turbine engine. Compressor Station No. 24 was built as a part of the Phase IV Expansion Project and was constructed in 2000-2001. The existing turbine (Compressor Engine 2401) was up rated in 2002 as part of the Phase V Expansion Project.

The existing facility also has supporting equipment including pipeline condensate and oily water storage tanks and an emergency generator.

### 2.2 Proposed Compressor Station Modification

FGT proposes to increase the horsepower capacity of Compressor Station No. 24, as part of the Phase VI Expansion Project. This will involve adding one new gas-fired turbine (Compressor Engine 2402). The proposed new 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.

#### 2.2.1 New Compressor Engine Addition

FGT proposes to install one natural gas-fired turbine engine compressor unit and associated support equipment at Compressor Station No. 24. The turbine engine will be a Cooper-Rolls 501-KC7 DLE engine compressor unit rated at 7,222 bhp ISO. Fuel will be exclusively natural gas from the FGT's natural gas pipeline. Engine specifications and stack parameters for the proposed engine are presented in Table 2-1.

# AQMcs

**Table 2-1 Proposed Upgraded Turbine (2402) Specifications and Stack Parameters**

Parameter	Design
Compressor Engine	2402
Type	Gas Turbine
Manufacturer	Cooper-Rolls
Model	501-KC7 DLE
Unit Size (shaft)	7,222 bhp (ISO)
Specific Heat Input <sup>a</sup>	8,736 Btu/hp-hr
Heat Rate <sup>b</sup>	63.09 MM Btu/hr
Maximum Fuel Consumption <sup>a</sup>	0.0607 MMscf/hr
Speed (shaft)	13,600 rpm
Stack Parameters	
Stack Height	61.17 ft
Stack Diameter	88" x 66"
Exhaust Gas Flow	98,427 acfm
Exhaust Temperature	958 °F
Exhaust Gas Velocity	40.69 ft/sec
<p><b>NOTE:</b></p> <p>acfm = actual cubic feet per minute.  bhp = brake horsepower.  Btu/bhp-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.</p> <p><sup>a</sup> Based on vendor provided lower heating value heat rate of 7942 Btu/hp-hr plus 10% and a higher heating value for natural gas of 1040 British thermal units per standard cubic foot (Btu/scf).  <sup>b</sup> While producing 7,222 bhp at ISO conditions and with gas with HHV of 1040</p>	

Hourly and annual emissions of regulated pollutants from the proposed engine under normal operating conditions are presented in Table 2-2. Emissions of NOX, CO and VOCs are based on the engine manufacturer's supplied data (See Attachment C).

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

**Table 2-2 Proposed Upgraded Turbine (2402) Compressor Engine Emissions**

<b>Pollutant</b>	<b>Emission Factor</b>	<b>Reference</b>	<b>lb/hr</b>	<b>TPY</b>
Nitrogen Oxides	5.7 lb/hr	Manufacturer Data	5.7	25.0
Carbon Monoxide	6.96 lb/hr	Manufacturer Data	6.96	30.5
Volatile Organic Compounds	1.49 lb/hr	Manufacturer Data	1.49	6.5
Particulate Matter*	0.0066 lb/MMBtu	AP-42, Table 3.1-2a	0.42	1.8
Sulfur Dioxide*	10 grains/100 scf	FERC Limit	1.73	7.6
HAPs	Various see Attachment C	AP-42, Table 3.1-3	0.065	0.28

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

## 2.2.2 Fugitive Emissions

Potential new emissions from Compressor Station No. 24 also include fugitive emissions from the new valves and flanges that will be in gas service. These fugitive emissions have been estimated using USEPA factors for components in gas service at oil and gas facilities (EPA publication EPA-453/R-95-017, November 1995, "Protocol for Equipment Leak Emission Estimates"). Table 2-3 lists the quantities of existing and new components to be added as part of the Phase VI Expansion Project and an estimate of the fugitive emissions from these sources.

**Table 2-3 VOC Fugitive Emission Calculations and Summary**

Component	Service	Component Count	Emissions * Factor (ton/yr)	NM/NE Fraction	Emissions (ton/yr)
Valves	Gas	55	0.0434606	0.05	0.12
Connector	Gas	0	0.0019316	0.05	0.00
Flanges	Gas	98	0.0037666	0.05	0.02
Open-Ended Line	Gas	9	0.0193158	0.05	0.01
Pumps/Compressors	Gas	1	0.023179	0.05	0.00
Other	Gas	0	0.0849895	0.05	0.00
Valves	Light Oil	0	0.0241448	1.00	0.00
Connector	Light Oil	0	0.0020282	1.00	0.00
Flanges	Light Oil	0	0.0010624	1.00	0.00
Open-Ended Line	Light Oil	0	0.0135211	1.00	0.00
Pumps	Light Oil	1	0.1255527	1.00	0.13
Other	Light Oil	0	0.0724343	1.00	0.00
Valves	Heavy Oil	6	0.0000811	1.00	0.00
Connector	Heavy Oil	0	0.0000724	1.00	0.00
Flanges	Heavy Oil	33	0.0000038	1.00	0.00
Open-Ended Line	Heavy Oil	0	0.0013521	1.00	0.00
Other	Heavy Oil	0	0.0002994	1.00	0.00
				<b>TOTAL:</b>	<b>0.2740</b>

\* 'EPA publication EPA-453/R-95-017, November 1995, "Protocol for Equipment Leak Emission Estimates"

### 2.2.3 Emissions Summary

The total new emissions resulting from the project are listed on Table 2-4. As can be seen from the table, the emission increases are not significant under PSD. The calculations used to estimate these emissions are presented in Attachment D.



# AQMcs

**Table 2-4 Potential Annual Emissions (tpy) Summary**

SOURCE ID	DESCRIPTION	NO <sub>x</sub>	CO	VOC <sup>a</sup>	SO <sub>2</sub>	PM
<b>EXISTING EMISSIONS</b>						
2401	15,000 bhp Turbine Engine	49.5	60.0	1.8	14.9	3.5
GEN03	443 bhp Recip. Engine	2.2	0.6	0.01	0.2	0.2
FUGITIVE	Fugitive			0.32		
TANK 01	Oily Water Tank			<0.001		
TANK 02	Diesel Tank			<0.001		
TANK 03	Condensate Tank					
<b>CURRENT TOTALS:</b>		<b>51.7</b>	<b>60.6</b>	<b>2.132</b>	<b>15.1</b>	<b>3.7</b>
<b>ADDITIONAL NEW EMISSIONS</b>						
2402	7,222 bhp Turbine Engine – new	25.0	30.5	6.5	7.6	1.8
FUGITIVE	Fugitive – new			0.27		
<b>PROPOSED NEW TOTALS:</b>		<b>76.7</b>	<b>91.1</b>	<b>8.902</b>	<b>22.7</b>	<b>5.5</b>
(a) VOC = NM/NE HC						

## 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. 24.

### 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 proposed operations at Compressor Station No. 24.

#### 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).

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. The current classification of Gilchrist County is listed on Table 3-1 for each criteria pollutant. Gilchrist County is designated as either 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 Classification Of Gilchrist County For Each Criteria Pollutant**

Carbon Monoxide	Attainment
Oxides of Nitrogen	Attainment
Sulfur Dioxide	Attainment
Particulate Matter (PM <sub>10</sub> )	Unclassifiable
Lead	Unclassifiable
Ozone	Attainment
Source 40 CFR 81.310 1998; 62-204.340 F.A.C.	

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.

### 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 proposed location must be in a PSD area, i.e., an area that has been classified as attainment or as unclassifiable for a particular pollutant. Gilchrist County is designated as attainment area for all criteria pollutants. A project's potential to emit is then reviewed to determine whether it constitutes a major stationary source or major modification to an existing major stationary source.

A major stationary source is defined as either one 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),"

# AQMCs

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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.

By these definitions, and based on the emissions presented in Section 2.0, the action proposed for Compressor Station No. 24 is modification of a minor stationary source, since Compressor Station No. 24 is not one of the 28 named source categories and emits <250 TPY of each regulated pollutant. Therefore, the compressor station is not subject to PSD pre-construction review.

**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 <sub>10</sub> )	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.	

# AQMcs

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## 3.1.3 Non-Attainment New Source Review (NSR) 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. 24 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)

The regulation of new sources through the development of standards applicable to a specific category of sources was a significant step taken by the 1970 CAA Amendments. The Administrator was directed to publish a proposed regulation establishing a Standard of Performance for any category of new sources that cause or contribute significantly to air pollution and which may reasonably be anticipated to endanger public health. All Standards apply to all sources within a given category, regardless of geographic location or ambient air quality at the location.

Performance standards are published in 40 CFR 60. The new turbine installed at Compressor Station No. 24 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<sub>x</sub> and SO<sub>2</sub> and requires performance testing and daily monitoring of fuel nitrogen and sulfur. The applicable emission standards are provided in Table 3-4.

The NO<sub>x</sub> emission limit for Subpart GG is calculated as follows:

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

$$STD = \text{Allowable NO}_x \text{ emissions}$$

$$Y = \text{Heat rate at peak load not to exceed 14.4 KJwatt-hour}$$

$$F = \text{NO}_x \text{ emission allowance}$$

# AQMcs

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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.

$$\begin{aligned} Y &= \text{Btu/bhp-hr} \times 1.055 \text{ Kj/Btu} \times \text{hp-hr/745.7 watt-hour} \\ &= 7,942 \text{ Btu/bhp-hr} \times 1.055 \text{ Kj/Btu} \times \text{hp-hr/745.7 watt-hour} \\ &= 11.24 \text{ Kj/watt-hr} \end{aligned}$$

$$\text{STD} = 0.0150 (14.4/11.24) + 0$$

$$= 0.0192 \%$$

$$= 192 \text{ ppm}_v$$

Table 3-3 summarizes the NSPS applicability for the proposed gas engine.

The turbine at this facility will meet the NSPS for NO<sub>x</sub> of 192 ppmv (i.e., manufacturer's estimation of 25 ppmv), and for SO<sub>2</sub> of 150 ppmv (estimated for this turbine to be about 10 ppmv).

# AQMcs

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**Table 3-3 Applicability of New Source Performance Standards**

<b>NSPS Subpart</b>	<b>NSPS Regulations</b>	<b>Equipment</b>	<b>Fuel</b>	<b>Pollutant</b>	<b>Heat Input Applicability</b>	<b>Equipment Design Maximum*</b>	<b>NSPS Emission Limits</b>	<b>Equipment Emissions</b>
GG	60.332(a)(2)	Engine No. 2402 Gas Turbine	Gas	NO <sub>2</sub>	>10 MM Btu/hr	7,942 Btu/hp-hr	192 ppm <sub>v</sub>	25 ppm <sub>v</sub>
GG	60.333(a)	Engine No. 2402 Gas Turbine	Gas	SO <sub>2</sub>	>10 MM Btu/hr	7,942 Btu/hp-hr	150 ppm <sub>v</sub>	~10 ppm <sub>v</sub>

\* Design maximum based on vendor data for LHV.

## 3.2 Florida State Air Quality Regulations

Compressor Station No. 24 is currently operating under Permit No. 0390029-001-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. 24 have been incorporated into or are referenced by these rules. The significant state regulations that are applicable to the new emission units are briefly listed below.

### 3.2.1 Rule 62-210.300 Permits Required

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

### 3.2.2 Rule 62-204.240 Ambient Air Quality Standards

FGT must not violate any of the ambient air quality standards listed under this rule.

### 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.

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

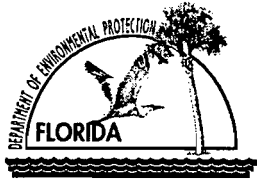
FGT is prohibited from allowing the new compressor engine to discharge into the atmosphere the emissions of air pollutants, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity).

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

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



**Attachment A**  
**DEP Forms**



# Department of Environmental Protection

## Division of Air Resources Management

### APPLICATION FOR AIR PERMIT - NON-TITLE V SOURCE

See Instructions for Form No. 62-210.900(3)

#### I. APPLICATION INFORMATION

##### Identification of Facility

1. Facility Owner/Company Name: Florida Gas Transmission Company	
2. Site Name: Compressor Station No. 24	
3. Facility Identification Number: <span style="float: right;"><input checked="" type="checkbox"/> Unknown</span>	
4. Facility Location: Street Address or Other Locator: Intersection of U.S. Highway 129 and SW 50 <sup>th</sup> Street City: Trenton County: Gilchrist Zip Code: 32693	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

##### Application Contact

1. Name and Title of Application Contact: Jim Thompson, Environmental Project Manager for Florida Gas Transmission Co. – Phase VI Expansion Project	
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:	2-13-03
2. Permit Number:	0410004-006-AC

**Purpose of Application**

**Air Operation Permit Application**

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

- Initial non-Title V air operation permit for one or more existing, but previously unpermitted, emissions units.
- Initial non-Title V air operation permit for one or more newly constructed or modified emissions units.

Current construction permit number: \_\_\_\_\_

- Non-Title V air operation permit revision to address one or more newly constructed or modified emissions units.

Current construction permit number: \_\_\_\_\_

Operation permit number to be revised: \_\_\_\_\_

- Initial non-Title V air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s):

\_\_\_\_\_

- Non-Title V air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g., to address one or more newly constructed or modified emissions units.

Operation permit number to be revised: \_\_\_\_\_

Reason for revision: \_\_\_\_\_

**Air Construction Permit Application**

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

- Air construction permit to construct or modify one or more emissions units.
- Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
- Air construction permit for one or more existing, but unpermitted, emissions units.

**Owner/Authorized Representative**

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 Statement:  <i>I, the undersigned, am the owner or authorized representative* of the facility addressed in this application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i>  Signature  Date <u>02/07/03</u>

\* 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: 1967 Commonwealth Lane City: Tallahassee State: FL Zip Code: 32303
3. Professional Engineer Telephone Numbers: Telephone: (850)350-5035 Fax: (850) 350-5002

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 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.*

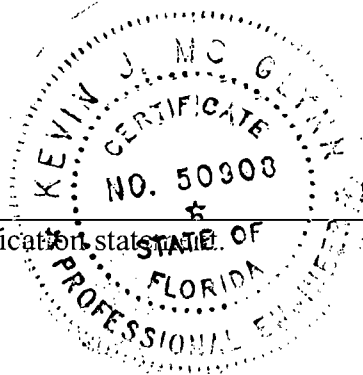
*If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such 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.*

*Kevin J. Mc Gowan, P.E.*  
Signature

#50908

*Feb. 11, 2003*  
Date

(seal)



\* Attach any exception to certification statement.



**Construction/Modification Information**

1. Description of Proposed Project or Alterations:

Cooper-Rolls 501-KC7 DLE Turbine rated at 7,222 bhp (ISO), Engine 2402

2. Projected or Actual Date of Commencement of Construction: 05/01/03

3. Projected Date of Completion of Construction: 09/14/03

**Application Comment**

This facility 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.





**Facility Regulatory Classifications**

**Check all that apply:**

1. <input type="checkbox"/> Small Business Stationary Source?	<input type="checkbox"/> Unknown
2. <input type="checkbox"/> Synthetic Non-Title V Source?	
3. <input type="checkbox"/> Synthetic Minor Source of Pollutants Other than HAPs?	
4. <input type="checkbox"/> Synthetic Minor Source of HAPs?	
5. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS?	
6. <input type="checkbox"/> One or More Emission Units Subject to NESHAP Recordkeeping or Reporting?	
7. Facility Regulatory Classifications Comment (limit to 200 characters):  Facility is a minor source for PSD and Title V purposes. New turbine is subject to NSPS Subpart GG.	

**Rule Applicability Analysis**

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
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## B. FACILITY POLLUTANTS

### List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. <u>Requested Emissions Cap</u>		4. Basis for Emissions Cap	5. Pollutant Comment
		lb/hour	tons/year		
NO <sub>x</sub>	B				
CO	B				
VOC	B				
SO <sub>2</sub>	B				
PM	B				
HAP	B				

### C. FACILITY SUPPLEMENTAL INFORMATION

#### Supplemental Requirements

1. Area Map Showing Facility Location: <input checked="" type="checkbox"/> Attached, Document ID: Narrative Fig. 1-1 [ <input type="checkbox"/> Not Applicable [ <input type="checkbox"/> Waiver Requested
2. Facility Plot Plan: <input checked="" type="checkbox"/> Attached, Document ID: _Att. B_ [ <input type="checkbox"/> Not Applicable [ <input type="checkbox"/> Waiver Requested
3. Process Flow Diagram(s): [ <input type="checkbox"/> Attached, Document ID: _____ [ <input type="checkbox"/> Not Applicable [ <input checked="" type="checkbox"/> Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [ <input type="checkbox"/> Attached, Document ID: _____ [ <input checked="" type="checkbox"/> Not Applicable [ <input type="checkbox"/> Waiver Requested
5. Supplemental Information for Construction Permit Application: [ <input type="checkbox"/> Attached, Document ID:: _____ [ <input checked="" type="checkbox"/> Not Applicable
6. Supplemental Requirements Comment:  Area map is provided as Figure 1-1 in the narrative.

**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through G 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**

**Emissions Unit Description and Status**

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>		
<p>2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>7,222 bhp (ISO) natural gas fired turbine compressor unit</p>		
<p>3. Emissions Unit Identification Number: ID:</p>		<p><input checked="" type="checkbox"/> No ID <input type="checkbox"/> ID Unknown</p>
<p>4. Emissions Unit Status Code:  C</p>	<p>5. Initial Startup Date:  09/14/03</p>	<p>6. Emissions Unit Major Group SIC Code:  49</p>
<p>7. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>The proposed turbine engine will be a Cooper-Rolls 501-KC7 DLE engine compressor unit ISO rated at 7,222 bhp. Fuel will be exclusively natural gas from the FGT's gas pipeline. The proposed engine will incorporate dry, low NO<sub>x</sub> combustion technology</p>		

**Emissions Unit Control Equipment**

1. Control Equipment/Method Description (limit to 200 characters per device or method):  The proposed engine will incorporate dry, low NOX combustion technology.	
2. Control Device or Method Code(s):	NA

**Emissions Unit Details**

1. Package Unit: Manufacturer: Cooper-Rolls Model Number: 501-KC7 DLE	
2. Generator Nameplate Rating:	MW
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

**Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate:	63.09	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
24	hours/day	7 days/week
52	weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):  Heat input is 63.09 MM Btu/hr at ISO conditions based on a vendor specified 7,222 bhp and a LHV heat rate of 7,942 Btu/bhp-hr plus 10% to adjust to HHV.		

**B. EMISSION POINT (STACK/VENT) INFORMATION**

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? 2402		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:  NA			
5. Discharge Type Code: V	6. Stack Height: 61.17 feet	7. Exit Diameter: 88" x 66"	
8. Exit Temperature: 958 °F	9. Actual Volumetric Flow Rate: 98,427 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: 17 East (km): 321.323 North (km): 3282.787			
14. Emission Point Comment (limit to 200 characters):  40 CFR 60 Appendix A Method 1:  Equivalent diameter ( $D_e$ ) = $2WL / W + L$ = $(2 \times 7.333' \times 5.5') / (7.333' + 5.5')$ = $80.663 / 12.833 = 6.28'$			

**C. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate:** Segment \_\_\_\_\_ of \_\_\_\_\_

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: 0.0607	5. Maximum Annual Rate: 531.41	6. Estimated Annual Activity Factor: NA
7. Maximum % Sulfur: 0.03	8. Maximum % Ash: NA	9. Million Btu per SCC Unit: 1040
10. Segment Comment (limit to 200 characters):  Based on fuel rate of 63.09 MMBtu/hr.  Percent sulfur is base on maximum Federal Energy Regulatory Commission (FERC) limit of 10 gr S/100 scf 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):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):  		

**D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION****Potential Emissions**

1. Pollutant Emitted: NOX		2. Pollutant Regulatory Code: EL	
3. Primary Control Device Code: 099	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:	
6. Potential Emissions: 5.7 lb/hour      25.0 tons/year		7. Synthetically Limited? [   ]	
8. Emission Factor: 5.7 lb/hr Reference: Vendor's data		9. Emissions Method Code:  5	
10. Calculation of Emissions (limit to 600 characters):  (5.7 lb/hr)(1 ton/2000 lb)(8760 hr/1 yr) = 24.97 tons/year			
11. Pollutant Potential Emissions Comment (limit to 200 characters):  Based on vendor's data. See Attachment C.			

**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: 5.7 lb/hour      25.0 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) NOX emissions to 196 ppmv.	



**D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**

**Potential Emissions**

1. Pollutant Emitted: CO		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: NA	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:	
6. Potential Emissions: 6.96 lb/hour      30.5 tons/year		7. Synthetically Limited? [   ]	
8. Emission Factor: 6.93 lb/hr Reference: Vendor's data		9. Emissions Method Code:  5	
10. Calculation of Emissions (limit to 600 characters):  (6.96 lb/hr )(1 ton/2000 lb)(8760 hr/1 yr) = 30.48 tons/year			
11. Pollutant Potential Emissions Comment (limit to 200 characters):  Based on vendor's data. See Attachment C.			

**Allowable Emissions** Allowable Emissions  NA  of    

1. Basis for Allowable Emissions Code: NA	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):	

**D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**

**Potential Emissions**

1. Pollutant Emitted: VOC		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: NA	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:	
6. Potential Emissions: 1.49 lb/hour                      6.5 tons/year		7. Synthetically Limited? [   ]	
8. Emission Factor: 1.49 lb/hr Reference: Vendor's data		9. Emissions Method Code:  5	
10. Calculation of Emissions (limit to 600 characters):  (1.49 lb/hr)(1 ton/2000 lb)(8760 hr/1 yr) = 6.53 tons/year			
11. Pollutant Potential Emissions Comment (limit to 200 characters):  Based on vendor's data. See Attachment C.			

**Allowable Emissions** Allowable Emissions  NA  of    

1. Basis for Allowable Emissions Code: NA	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):	

**D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION****Potential Emissions**

1. Pollutant Emitted: SO <sub>2</sub>		2. Pollutant Regulatory Code: EL	
3. Primary Control Device Code: NA		4. Secondary Control Device Code: NA	
5. Total Percent Efficiency of Control:		6. Potential Emissions: 1.73 lb/hour      7.6 tons/year	
7. Synthetically Limited? [   ]		8. Emission Factor: 10 gr/100scf Reference: Vendor's fuel use data	
9. Emissions Method Code: 2		10. Calculation of Emissions (limit to 600 characters):  (10 gr S/100 scf)(0.0607 MMscf/hr)(1 lb/7000 gr) = 0.87 lb S/hr (0.87 lb S/hr)(2 lb SO <sub>2</sub> /lb S) = 1.73 lb SO <sub>2</sub> /hr (1.73 lb SO <sub>2</sub> /hr)(8760 hr/yr)(1 ton/2000 lb) = 7.60 ton/yr	
11. Pollutant Potential Emissions Comment (limit to 200 characters):  Based on vendor's heat rate value plus 10% and 1040 Btu/scf.			

**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: 10 grains/100 scf		4. Equivalent Allowable Emissions: 1.73 lb/hour      7.6 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 60.333(a) limits SO <sub>2</sub> emissions to 150 ppmv.			

**D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**

**Potential Emissions**

1. Pollutant Emitted: PM		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: NA	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:	
6. Potential Emissions: 0.42 lb/hour      1.8 tons/year		7. Synthetically Limited? [   ]	
8. Emission Factor: 0.0066 lb/MM Btu Reference: Table 3.1-2a, AP-42 4/00, Supplement E		9. Emissions Method Code: 4	
10. Calculation of Emissions (limit to 600 characters):  $(0.0066 \text{ lb/MM Btu})(63.09 \text{ MM Btu/hr}) = 0.42 \text{ lb/hr}$ $(0.42 \text{ lb/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 1.84 \text{ ton/yr}$			
11. Pollutant Potential Emissions Comment (limit to 200 characters):  Based on vendor's heat rate value plus 10% and 1040 Btu/scf.			

**Allowable Emissions** Allowable Emissions  NA  of    

1. Basis for Allowable Emissions Code: NA	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):	

**D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**

**Potential Emissions**

1. Pollutant Emitted: HAPS		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: NA	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:	
6. Potential Emissions: 0.065 lb/hour      0.28 tons/year		7. Synthetically Limited? [   ]	
6. Emission Factor: 0.001027 lb/MM Btu Reference: Table 3.1-3, AP-42, 04/00		7. Emissions Method Code: 5	
10. Calculation of Emissions (limit to 600 characters):  $(0.001027 \text{ lb/MM Btu})(63.09 \text{ Btu/hr}) = 0.0648\text{b/hr}$ $(0.0648\text{lb/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 0.28 \text{ ton/yr}$			
11. Pollutant Potential Emissions Comment (limit to 200 characters):  Detailed calculations provided in Attachment C. Included in VOC emissions.			

**Allowable Emissions** Allowable Emissions  NA  of    

1. Basis for Allowable Emissions Code: NA	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 2**

**E. VISIBLE EMISSIONS INFORMATION  
(Only Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other <input type="checkbox"/>
3. Requested Allowable Opacity: Normal Conditions: 20% Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: 40 CFR 60 Appendix A Method 9	
5. Visible Emissions Comment (limit to 200 characters):  Subject to 62-296-320(4)(b)1 General Visible Emissions Standards.	

**F. CONTINUOUS MONITOR INFORMATION  
(Only Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor NA of       

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  	

**G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION**

**Supplemental Requirements**

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

**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through G 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**

**Emissions Unit Description and Status**

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>		
<p>2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>Fugitive emissions from component leaks</p>		
<p>3. Emissions Unit Identification Number: ID:</p>		<p><input checked="" type="checkbox"/> No ID <input type="checkbox"/> ID Unknown</p>
<p>4. Emissions Unit Status Code:  C</p>	<p>5. Initial Startup Date:  09/14/03</p>	<p>6. Emissions Unit Major Group SIC Code:  49</p>
<p>7. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>These are new fugitive leak emissions from new components (valves, flanges, etc.).</p>		



**Emissions Unit Control Equipment**

1. Control Equipment/Method Description (limit to 200 characters per device or method):	
NA	
2. Control Device or Method Code(s):	NA

**Emissions Unit Details**

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

**Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate:	mmBtu/hr	
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
24	hours/day	7 days/week
52	weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

**B. EMISSION POINT (STACK/VENT) INFORMATION**

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? FUGITIVE		2. Emission Point Type Code: 4	
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:  NA			
5. Discharge Type Code: F	6. Stack Height: NA	feet	7. Exit Diameter: NA
		feet	
8. Exit Temperature: 77 °F	9. Actual Volumetric Flow Rate: NA	acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: NA		dscfm	12. Nonstack Emission Point Height: 0
			feet
13. Emission Point UTM Coordinates: Zone: 17 East (km): 321.323 North (km): 3282.787			
14. Emission Point Comment (limit to 200 characters):			

**C. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate:** Segment  1  of  1

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  Fugitive emissions from component leaks.		
2. Source Classification Code (SCC): 3-10-888-11		3. SCC Units: MM cubic feet produced
4. Maximum Hourly Rate: 0	5. Maximum Annual Rate: 0	6. Estimated Annual Activity Factor: component count
7. Maximum % Sulfur: NA	8. Maximum % Ash: NA	9. Million Btu per SCC Unit: NA
10. Segment Comment (limit to 200 characters):  Based on count of new components and USEPA emission factors provided in EPA publication EPA-453/R-95-017, November 1995, "Protocol for Equipment Leak Emission Estimates"		

**Segment Description and Rate:** Segment  NA  of

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

**D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**

**Potential Emissions**

1. Pollutant Emitted: VOC		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: NA	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:	
6. Potential Emissions: 0.0626 lb/hour      0.274 tons/year		7. Synthetically Limited? [ ]	
8. Emission Factor: lb/hr/component Reference: EPA-453/R-95-017, Protocol for Equipment Leak EmissionEstimates"		9. Emissions Method Code: 5	
10. Calculation of Emissions (limit to 600 characters):  (EPA factor for specific component type) (number of components of specific type) = tpy. Assume non-methane/non-ethane fraction is 5%. (tons/year)(2000 lb/ton)(1 yr/8760 hr) = lb/hr			
11. Pollutant Potential Emissions Comment (limit to 200 characters):  Factors vary by component type. See Attachment D for specific factors and calculations.			

**Allowable Emissions** Allowable Emissions  NA  of      

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

**E. VISIBLE EMISSIONS INFORMATION**  
**(Only Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation  NA  of

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions:                      Exceptional Conditions:                      % Maximum Period of Excess Opacity Allowed:                      min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**F. CONTINUOUS MONITOR INFORMATION**  
**(Only 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):	

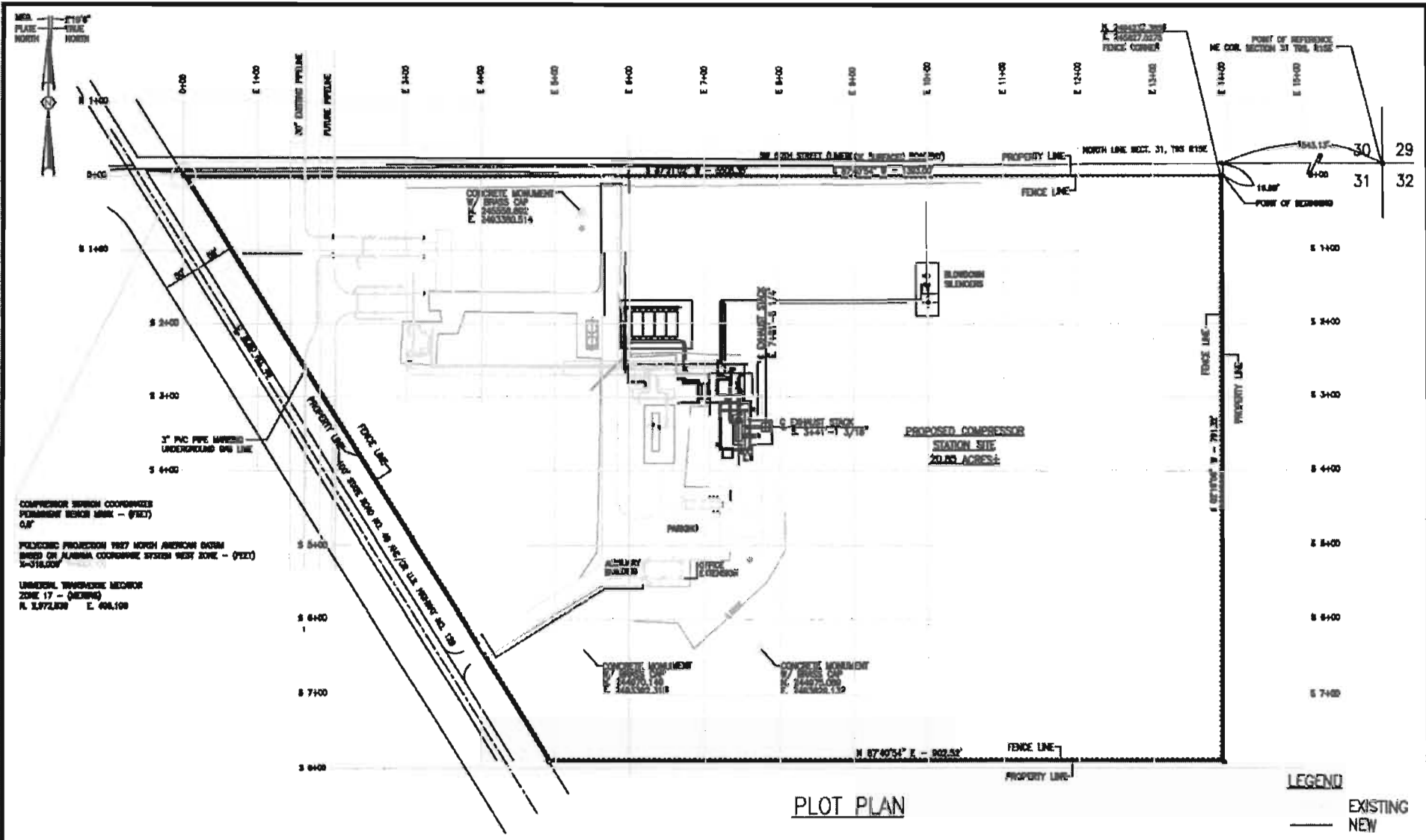
**G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION**

**Supplemental Requirements**

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


**Attachment B**

**Plot Plan**



**PLOT PLAN**

**LEGEND**  
 ——— EXISTING  
 ——— NEW

PIPELINE, STATION, OR ACCOUNT NUMBER		SCALE N.T.S.		CONST. YR. 2003		PROJECT NO. C.012612	
FILENUMBER	CADD FILENAME	DRAWN MM	DATE 10/16/02			PREVIOUS DWG. NO.	
REV. NO. - DESCRIPTION	BY	DATE	APP.	<b>Florida Gas Transmission Company</b> An Enbridge Pipe Asset		SHT. OF	
						DWG. NO.	
						S3-1AP	
						SHT. 1 OF 1	
							
						GILCHRIST COUNTY, FLORIDA	



**Attachment C**  
**Vendor Information**

**Allison Industrial Engine Performance & Emissions Estimate (EDR 18656)**

**Date:** June 4, 2001  
**Project:** Florida Gas Site Analyses  
**Engine Configuration:** 501-KC7, DLE W/Diffuser Bleed

Parameter\	Data Pt. No.	C/S 15 #1
Altitude (feet)		50
Ambient Press. (psia)		14.669
Relative Humidity		60
Specific Humidity		0.006366
Inlet Loss ("H2O)		0
Exhaust Loss ("H2O)		0
Inlet Pressure (CIP, psia)		14.669
Inlet Temperature (CIT, °F)		59
Inlet Flow (lb/sec)		45.24
MGT t/c (°F)		1375
Control Temp. (°F)		1935
Fuel Flow (MMBTU/hr)		57.3545
Fuel Flow (lb/hr)		2808.74
Output Shaft Speed (rpm)		13600
Gas Generator Speed (rpm)		14677
Shaft Power (hp)		7222.1
% of Full Load		100
SFC [lb/(hp*hr)]		0.3889
HeatRate[Shaft] BTU/(shp*hr)		7942
Exhaust Flow (lb/sec)		45.708
Exhaust Temp. (f/a, °F)		958
Exhaust P-static (psia)		14.67
Fuel	Ref Gas	
Fuel LHV (BTU/lb)		20420
H/C (wt ratio)		0.3261
Fuel Molecular Weight		16.6303
Fuel Specific Gravity		0.5902
Expected Emissions @ 15% O2		
NOx ppm		25
CO ppm		50
UHC ppm		20
VOC ppm		10
Expected Emissions (lb/eng-hr)		
NOx		5.7
CO		6.96
UHC		1.59
VOC		1.49
Exhaust Gas (vol %)		
CO2		2.94
H2O		6.63
O2		14.43
N2		75.1
Ar		0.9

NOTE: This data was originally prepared for Engine No. 1508 at FGT CS 15. Engine 2402 is an identical unit and the elevation is the same.

**Attachment D**  
**Emissions Calculations**

**Engine No. 2402 EPN: 002**

**NOx Emissions: (Based on Vendor Data)**

lb NOx/hr = 5.70

tons NOx/yr = (lb NOx/hr)(hr/yr)(1 ton/2000 lb)  
 = (5.7 lb NOx/hr)(8760 hr/yr)(1 ton/2000 lb)  
 = 24.97

**CO Emissions: (Based on Vendor Data)**

lb CO/hr = 6.96

tons CO/yr = (lb CO/hr)(hr/yr)(1 ton/2000 lb)  
 = (7.0 lb CO/hr)(8760 hr/yr)(1 ton/2000 lb)  
 = 30.48

**VOC Emissions: (Based on Vendor Data)**

lb VOC/hr = 1.49

tons VOC/yr = (lb VOC/hr)(hr/yr)(1 ton/2000 lb)  
 (1.490 lb VOC/hr)(8760 hr/yr)(1 ton/2000  
 = lb)  
 = 6.53

**SO2 Emissions: (Based on FERC Limits)**

lb S/hr = (gr S/100 scf)(MMscf/hr)(1 lb/7000 gr)  
 (10 gr S/100 scf)(0.0607 MMscf/hr)(1  
 = lb/7000 gr)  
 = 0.87

lb SO2/hr = (lb S/hr)(2 lb SO2/lb S)  
 = (0.87 lb S/hr)(2 lb SO2/lb S)  
 = 1.73

tons SO2/yr = (lb SO2/hr)(hr/yr)(1 ton/2000 lb)  
 (1.73 lb SO2/hr)(8760 hr/yr)(1 ton/2000  
 = lb)  
 = 7.60

**PM 10/2.5 Emissions: (Based on AP-42 Table 3.1-2a, 4/00)**

lb PM/hr = (lb PM/MMscf)(MMBtu/hr)  
 = (0.0066 lb/MMBtu)(63.09 MMBtu/hr)  
 = 0.42

tons PM/yr = (lb PM/hr)(hr/yr)(1 ton/2000 lb)  
 (0.42 lb PM/hr)(8760 hr/yr)(1 ton/2000  
 = lb)  
 = 1.82

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

lb HAP/hr = (lb HAP/MMBtu)(MMBtu/hr)  
 (0.00102733 lb/MMBtu)(63.0900  
 = MMBtu/hr)  
 = 0.0648

tons HAP/yr = (lb HAP/hr)(hr/yr)(1 ton/2000 lb)  
 (0.065 lb PM/hr)(8760 hr/yr)(1 ton/2000  
 = lb)  
 = 0.28

**BEST AVAILABLE COPY**

HAP	4 cycle lean (a)	4 cycle rich (b)	2 cycle lean (c)	Turbine (d)
	Factor lb/MMBtu	Factor lb/MMBtu	Factor lb/MMBtu	Factor lb/MMBtu
1,1,2,2-Tetrachloroethane	4.00E-05	2.53E-05	6.63E-05	
1,1,2-Trichloroethane	3.18E-05	1.53E-05	5.27E-05	
1,3-Butadiene	2.67E-04	6.63E-04	8.20E-04	4.30E-07
1,3-Dichloropropene	2.64E-05	1.27E-05	4.38E-05	
2,2,4-Trimethylpentane	2.50E-04		8.46E-04	
2-Methylnaphthalene	3.32E-05		2.14E-05	
Acenaphthene	1.25E-06		1.33E-06	
Acenaphthylene	5.53E-06		3.17E-06	
Acetaldehyde	8.36E-03	2.79E-03	7.76E-03	4.00E-05
Acrolein	5.14E-03	2.63E-03	7.78E-03	6.40E-06
Anthracene			7.18E-07	
Benz(a)anthracene			3.36E-07	
Benzene	4.40E-04	1.58E-03	1.94E-03	1.20E-05
Benzo(a)pyrene			5.68E-09	
Benzo(b)fluoranthene	1.66E-07		8.51E-09	
Benzo(e)pyrene	4.15E-07		2.34E-08	
Benzo(g,h,i)perylene	4.14E-07		2.48E-08	
Benzo(k)fluoranthene			4.26E-09	
Biphenyl	2.12E-04		3.95E-06	
Carbon Tetrachloride	3.67E-05	1.77E-05	6.07E-05	
Chlorobenzene	3.04E-05	1.29E-05	4.44E-05	
Chloroform	2.85E-05	1.37E-05	4.71E-05	
Chrysene	6.93E-07		6.72E-07	
Ethylbenzene	3.97E-05	2.48E-05	1.08E-04	3.20E-05
Ethylene Dibromide	4.43E-05	2.13E-05	7.34E-05	
Fluoranthene	1.11E-06		3.61E-07	
Fluorene	5.67E-06		1.69E-06	
Formaldehyde	5.28E-02	2.05E-02	5.52E-02	7.10E-04
Indeno(1,2,3-c,d)pyrene			9.93E-09	
Methanol	2.50E-03	3.06E-03	2.48E-03	
Methylene Chloride	2.00E-05	4.12E-05	1.47E-04	
n-Hexane	1.11E-03		4.45E-04	
Naphthalene	7.44E-05	9.71E-05	9.63E-05	1.30E-06
PAH	2.69E-05	1.41E-04	1.34E-04	2.20E-06
Perylene			4.97E-09	
Phenanthrene	1.04E-05		3.53E-06	
Phenol	2.40E-05		4.21E-05	
Propylene Oxide				2.90E-05
Pyrene	1.36E-06		5.84E-07	
Styrene	2.36E-05	1.19E-05	5.48E-05	
Tetrchloroethane	2.48E-06			
Toluene	4.08E-04	5.58E-04	9.63E-04	1.30E-04
Vinyl Chloride	1.49E-05	7.18E-06	2.47E-05	
Xylenes	1.84E-04	1.95E-04	2.68E-04	6.40E-05
<b>Total Hazardous Cmpds</b>	<b>7.22E-02</b>	<b>3.24E-02</b>	<b>7.95E-02</b>	<b>1.03E-03</b>

References:

- a - AP-42, 5th Edition, Supplement F, 07/00, Table 3.2-2
- b - AP-42, 5th Edition, Supplement F, 07/00, Table 3.2-3
- c - AP-42, 5th Edition, Supplement F, 07/00, Table 3.2-1
- d - AP-42, 5th Edition, Supplement F, 04/00, Table 3.1-3

<b>Fugitive Emissions Factors</b>					
<b>Component</b>		<b>Service</b>	<b>Emissions *</b>		
			<b>Factor tpy</b>	<b>Factor lb/hr</b>	<b>Factor kg/hr</b>
Valves		Gas	0.0434606	0.00992251	0.00450085
Connector		Gas	0.0019316	0.00044100	0.00020004
Flanges		Gas	0.0037666	0.00085995	0.00039008
Open-Ended Line		Gas	0.0193158	0.00441000	0.00200038
Pumps		Gas	0.023179	0.00529201	0.00240046
Other		Gas	0.0849895	0.01940400	0.00880165
Valves		Light Oil	0.0241448	0.00551251	0.00250048
Connector		Light Oil	0.0020282	0.00046306	0.00021004
Flanges		Light Oil	0.0010624	0.00024256	0.00011002
Open-Ended Line		Light Oil	0.0135211	0.00308701	0.00140027
Pumps		Light Oil	0.1255527	0.02866500	0.01300244
Other		Light Oil	0.0724343	0.01653751	0.00750142
Valves		Heavy Oil	0.0000811	0.00001852	0.00000840
Connector		Heavy Oil	0.0000724	0.00001653	0.00000750
Flanges		Heavy Oil	0.0000038	0.00000087	0.00000039
Open-Ended Line		Heavy Oil	0.0013521	0.00030870	0.00014003
Pumps		Heavy Oil	NA	0.00529	NA
Other		Heavy Oil	0.0002994	0.00006836	0.00003101

\*EPA publication EPA-453/R-95-017, November 1995, "Protocol for Equipment Leak Emission Estimates"

**New Components**

<b>Component</b>	<b>Service</b>	<b>Component Count</b>	<b>Emissions * Factor (ton/yr)</b>	<b>NM/NE Fraction</b>	<b>Emissions (ton/yr)</b>
Valves	Gas	55	0.0434606	0.05	0.12
Connector	Gas	0	0.0019316	0.05	0.00
Flanges	Gas	98	0.0037666	0.05	0.02
Open-Ended Line	Gas	9	0.0193158	0.05	0.01
Pumps/Compressors	Gas	1	0.023179	0.05	0.00
Other	Gas	0	0.0849895	0.05	0.00
Valves	Light Oil	0	0.0241448	1.00	0.00
Connector	Light Oil	0	0.0020282	1.00	0.00
Flanges	Light Oil	0	0.0010624	1.00	0.00
Open-Ended Line	Light Oil	0	0.0135211	1.00	0.00
Pumps	Light Oil	1	0.1255527	1.00	0.13
Other	Light Oil	0	0.0724343	1.00	0.00
Valves	Heavy Oil	6	0.0000811	1.00	0.00
Connector	Heavy Oil	0	0.0000724	1.00	0.00
Flanges	Heavy Oil	33	0.0000038	1.00	0.00
Open-Ended Line	Heavy Oil	0	0.0013521	1.00	0.00
Other	Heavy Oil	0	0.0002994	1.00	0.00
				<b>TOTAL:</b>	<b>0.2740</b>