Department of
Environmental Protection

Northeast District

Jeb Bush
Governor

7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

Colleen Castille
Secretary

PERMITTEE:

Florida Gas Transmission Company
Cross Country Energy
C/O Panhandle Energy
5444 Westheimer Road
Houston, TX 77056-5306

I.D. Number:	0410004
Permit/Cert Number:	0410004-011-AC
Date of Issue:	October 23, 2006
Expiration Date:	October 23, 2007
County:	Gilchrist
Latitude/Longitude:	29° 39' 51" N; 82° 50' 46" W
UTM:	E-(17) 321.3; N- 3282.8
Project:	Compressor Station 24

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 62-210, 62-212, 62-272, 62-296, 62-297 and 62-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

Project 011 is to replace Combustion Turbine No. 2401 (EU001) Solar Model Mars 90-T13000S gas turbine rated at 13,000 bhp (ISO) with a Solar Mars 100- T15000S- 15,114 bhp compressor unit. Also, this project includes emission CAPs for NO_X, CO, VOC, SO_2 and PM.

Project 013 Administrative Correction to clarify Maximum Heat Input Rate and temperature at LHV & HHV.

FACILITY DESCRIPTION

Florida Gas Transmission Company (FGTC) operates existing Compressor Station 24 in Gilchrist County for their natural gas pipeline. The station currently consists of a 15,000 bhp gas turbine (Engine 2401), a 7222 bhp gas turbine (Engine 2402), and miscellaneous support activities. The station consists of the following emissions units.

ID No.	Emission Unit Description
001	Engine 2401: Solar Model Mars 100-T15000S gas turbine rated at 15,114 bhp
002	Miscellaneous support activities: ▪ 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.
003	Engine 2402: Cooper-Rolls Model No. 501-KC7-DLE gas turbine rated at 7222 bhp (ISO)

{Permitting Note: "GEN03" is an emergency generator that is expected to operate much less than 500 hours per year. The new gas turbine, Engine 2402, EU 003, has the potential to increase fugitive VOC emissions by approximately 0.30 tons per year due to pipeline component and tank leaks.}
[Air Construction Permit 0410004-006-AC]

The project is part of FGTC's overall Phase VI project intended to increase the natural gas supply capacity and reliability to service domestic, commercial, and industrial customers in Florida. The permit consolidates the regulatory requirements for the emissions units at this facility.

For informational purposes only, the following is a summary of the net emissions at Compressor Station No. 24:

	EU 001	**EU 003**	**EU 002**	**EU 002**	**EU 002**	**EU 002**	**EU 002**	**Facility**
Pollutant	**Compressor Engine 2401**	**Compressor Engine 2402**	**Emergency Generator GEN03**	**Fugitive**	**Oily Storage Tank**	**Condensate Tank**	**Diesel Tank**	**Potential Emissions Requested CAP *(TPY)**
NO_x	52.1	25.0	2.20					79.3
CO	63.5	30.5	0.60					94.6
VOC	1.8	6.5		0.32	< 0.01	0.01	< 0.01	8.7
SO_2	15.9	8.2	0.15					24.3
PM	3.4	2.0	0.18					5.6

*****Applicant Requested on July 17, 2006.

REGULATORY CLASSIFICATION

This facility is subject to regulation under 40 CFR 60, Subpart KKKK, Standards of Performance for Stationary Combustion Turbines and 40 CFR 60, Subpart A– General Provisions:

Emissions Unit	Description
001	Engine 2401: 15,114 bhp natural gas fired turbine compressor unit

OPERATING LOCATION

This facility is located near Trenton at 5030 U.S. Highway 129 in Gilchrist County, Florida.

APPENDICES

The attached appendices are a part of this permit:

Appendix K – NSPS Subpart KKKK Requirements for Gas CombustionTurbines

RELEVANT DOCUMENTS

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

Air Construction Application received July 17, 2006.
Administrative Correction Dated March 30, 2007.

SPECIFIC CONDITIONS:

ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS

1. **Hours of Operation**: The hours of operation are not limited (24 H/D; 7 D/W; 52 W/Y; **8760 H/Y**) per calendar year.

[Rule 62-210.200(PTE), F.A.C., Definitions - Potential to Emit (PTE)]

2. **Permitted Capacity:** The maximum operating rates are listed below and shall not be exceeded without prior Department approval:

Emissions Unit	Maximum Heat Input Rate
001	115 MMBtu per hour at 45° F based on LHV (939 BTU/scf) **NOTE (1)**

NOTE (1) Maximum Heat Input Rate is 127.4 MMBtu/hr at 45° F based on the HHV (1040 BTU/scf) of the fuel.

[Air Construction Application received July 17, 2006 and Administrative Correction dated March 30, 2007]

3. Fuel Usage

EU001: This gas turbine fires pipeline natural gas at a maximum firing rate of approximately 122,500 cubic feet per hour based on a heating value (HHV) for natural gas of 1040 Btu/scf. This gas turbine produces approximately 15,114 bhp based on a turbine inlet air temperature of 45° F, 100% load and is intended to operate at or near capacity.

[Air Construction Applicant Request July 17, 2006 and Administrative Correction dated March 30, 2007]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

4. **Emission Limits**: The permitted maximum allowable emission rate for each pollutant is as follows:

Pollutant	**Standards**	**Equivalent Maximum Emissions** [6]		**Rule Basis** [7]
CO [1]	50.0 ppmvd @ 15% O_2	14.5 lb/hour	63.5 TPY	Rule 62-4.070(3), F.A.C.
NO_x [2]	25.0 ppmvd @ 15% O_2	11.9 lb/hour	52.1 TPY	Rule 62-4.070(3), F.A.C. 40 CFR 60.4320
SO_2 [3]	≤110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output, or ≤ 26 ng SO2/J (0.060 lb SO2/MMBtu) heat input.	3.6	15.9	Rule 62-4.070(3), F.A.C. 40 CFR 60.4330(a)(1) and (2)
Opacity [5]	10% opacity, 6-minute average	Not Applicable		Rule 62-4.070(3), F.A.C.
PM [4]	Lean premix combustion design	0.8	3.4	Rule 62-4.070(3), F.A.C.
VOC [4]	Lean premix combustion design	0.4	1.8	Rule 62-4.070(3), F.A.C.

[Air Construction Permit Application received July 17, 2006 and Administrative Correction dated March 30, 2007]

SPECIFIC CONDITION 4 CONTINUED:

[1] The CO standards are based on the average of three test runs as determined by EPA Method 10.
[2] The NO_x standards are based on the average of three test runs as determined by EPA Method 20.
[3] 40 CFR 60.4415
[4] For both PM and VOC, the efficient combustion of clean fuels is indicated by compliance with opacity and CO standards. Equivalent maximum PM emissions were based on data in Table 3.1-2a in AP-42. Regulated VOC emissions were conservatively assumed to be 10% of the manufacturer's estimated emissions for total hydrocarbons. No testing required.
[5] The opacity standard is based on a 6-minute block average, as determined by EPA Method 9. {Permitting Note: This standard is established as reasonable assurance of good combustion practices to minimize emissions.}
[6] Equivalent maximum emissions for each gas turbine are based on: permitted capacity, a turbine inlet air temperature of 45° F, full operation (8760 hours per year), and the permit standards (CO, NOx, and SO2) or the maximum expected emissions (PM and VOC). For comparison purposes, the permittee shall provide a reference table with the initial compliance test report of mass emission rates versus the turbine inlet temperatures. Each test report shall include measured mass emission rates for CO, NOx and SO2. Mass emission rates for SO2 shall be calculated based on actual fuel sulfur content and fuel flow rate. For tests conducted at 45° F or greater, measured mass emission rates shall be compared to the equivalent maximum emissions above. For tests conducted below 45° F, measured mass emission rates shall be compared to the tabled mass emission rates provided by the manufacturer based on turbine inlet temperatures.
[7] The emissions standards of this permit ensure that operation of the gas turbine will not trigger the major source requirements of Title V (Chapter 62-213, F.A.C.) or PSD (Chapter 62-212, F.A.C.).

5. **40 CFR 60, Subpart KKKK.** Emissions Unit 001 is subject to the requirements of 40 CFR 60, Subpart KKKK (APPENDIX-K).

[40 CFR 60, Subpart KKKK- Standards of Performance for Stationary Combustion Turbines]

6. **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 the Department 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 the permit or the regulations.
[Rule 62-4.130, F.A.C]

7. **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]

8. **Excess Emissions Prohibited**: Excess emission 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]