

**PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT**  
**STATE OF FLORIDA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
Draft Air Permit No. 1230034-009-AC  
Florida Gas Transmission Company  
Taylor Compressor Station No. 15  
Phase V Modifications, Replacement of Compressor Engine No. 1507

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification to the Florida Gas Transmission Company for equipment at Compressor Station No. 15, which is located on Pisgah Road approximately 1 mile east of U.S. Highway 19 near Perry in Taylor County, Florida. The applicant's authorized representative is Mr. Richard Craig, Vice President of Operations. The applicant's mailing address is Florida Gas Transmission Company, 1400 Smith Street, Houston, TX 77002.

The existing facility operates as a compressor station in Taylor County for Florida Gas Transmission Company's natural gas pipeline. It is considered a Title V and a PSD major source of air pollution. In October of 2001, the Department issued Permit No. 1230034-007-AC, which authorized the construction of a new 7222 bhp gas turbine compressor engine No. 1508, the up-rating of existing gas turbine compressor engine No. 1507 to 13,180 bhp, and the replacement of the two existing emergency generators with a single emergency generator. In conjunction with the up-rated compressor engine No. 1507, the applicant requested a lower NOx emissions standard, which allowed the project to net out of PSD preconstruction review.

For this project, the applicant requests modification of the previous permit to allow the replacement of existing compressor engine No. 1507 (Solar Mars 90 T-13000S) with a Solar Mars 100 T-13000S de-rated to 13,000 bhp. Although the heat input rate is slightly higher, the emissions standards remain unchanged. The overall project results in emissions increases from the new compressor engines and emergency generator as well as emissions decreases from the permanent shutdown of the existing Solar Mars 90 T-13000S gas turbine. The net emissions increases are: 74 tons of carbon monoxide per year; 33 tons of nitrogen oxides per year; 2 tons of particulate matter per year; 21 tons of sulfur dioxide per year; and 8 tons of volatile organic compounds per year. The project is not subject to PSD preconstruction review because the net emissions increases are less than the PSD significant emissions rates. In addition, total emissions of hazardous air pollutants (HAP) from the project are predicted to be less than 2 tons per year, which is much less than the HAP thresholds that would trigger a case-by-case MACT determination. Based on the manufacturer's estimated performance and the emissions standards established in the permit, the gas turbines will readily comply with the federal New Source Performance Standards of Subpart GG in 40 CFR 60, adopted by reference in Rule 62-204.800, 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 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 mediation is not available in this

proceeding.

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

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

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

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

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

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, Suite 200B  
Jacksonville, FL 32256-7590  
Telephone: 904/807-3300  
Fax: 904/448-4319

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.

JUNE 17, 2002

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. 1230034-009-AC  
Taylor Compressor Station No. 15  
Replacement of Unit No. 1507

*Authorized Representative:*

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

Enclosed is Final Air Permit No. 1230034-009-AC, which authorizes the replacement of Unit No. 1507 at the existing Station No. 15, which is located on Pisgah Road approximately 1 mile east of U.S. Highway 19 near Perry in Taylor County, Florida. As noted in the Final Determination (attached), only minor changes to correct typographical errors were made. This permit is issued pursuant to Chapter 403, Florida Statutes.

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

Executed in Tallahassee, Florida.



C. H. Fancy, P.E., Chief  
Bureau of Air Regulation

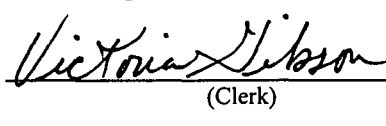
CERTIFICATE OF SERVICE

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 7/3/02 to the persons listed:

Mr. Richard Craig, FGTC\*  
Mr. Jim Thompson, FGTC  
Mr. Jay Krautsch, 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.

 July 3, 2002  
(Clerk) (Date)

## FINAL DETERMINATION

### 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

Taylor Compressor Station No. 15  
Air Permit No. 1230034-009-AC

This specific permitting action is a modification of the original Permit No. 1230034-007-AC issued on October 29, 2001. The original permit authorized the construction of a new 7222 bhp gas turbine compressor engine (FGT No. 1508), the replacement of an existing 13,000 bhp gas turbine compressor engine (FGT No. 1507), and the replacement of two existing emergency generators (GEN01 and GEN02) with a new emergency generator (FGT No. GEN03). The new equipment will be installed at existing Compressor Station No. 15, which is located on Pisgah Road approximately 1 mile east of U.S. Highway 19 near Perry in Taylor County, Florida. The modification allows complete replacement of compressor engine No. 1507 (Solar Mars 90T-13000) with a Solar Mars 100T-15000S de-rated to 13,000 bhp (Solar Mars 100 T-13000S).

### NOTICE AND PUBLICATION

The Department distributed an "Intent to Issue Permit" package on June 11, 2002. The applicant published the "Public Notice of Intent to Issue" in Tallahassee Democrat on June 17, 2002. The Department received the proof of publication on June 21, 2002. No requests for administrative hearings were filed.

### COMMENTS

No comments on the Draft Permit were received from the public or the Department's Northeast District Office. The applicant submitted a revised form requesting that the authorized representative be changed to Mr. Richard Craig, the Vice President of Southeast Operations for Florida Gas Transmission. This change was approved in the Final Permit. The Department also made the following minor changes:

- Final Permit, Page 1: The last paragraph was revised to clarify the purpose of the modification.
- Appendix GG, Page GG-1: The emissions unit descriptions were revised to be consistent with those in the permit.

### CONCLUSION

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



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

## PERMITTEE:

Florida Gas Transmission Company  
1400 Smith Street  
Houston, TX 77002

### Authorized Representative:

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

Taylor Compressor Station No. 15  
Air Permit No. 1230034-009-AC  
Facility ID No. 1230034  
SIC No. 4922  
Permit Expires: April 1, 2003

## PROJECT AND LOCATION

This permit authorizes the construction of a new 7222 bhp gas turbine compressor engine (FGT No. 1508), the replacement of an existing 13,000 bhp gas turbine compressor engine (FGT No. 1507), and the replacement of two existing emergency generators (GEN01 and GEN02) with a new emergency generator (FGT No. GEN03). The new equipment will be installed at existing Compressor Station No. 15, which is located on Pisgah Road approximately 1 mile east of U.S. Highway 19 near Perry in Taylor County, Florida. The UTM coordinates are Zone 17, 249.02 km East, and 3339.60 km North.

{Note: This action is a modification of original Permit No. 1230034-007-AC issued on October 29, 2001. The modification allows complete replacement of compressor engine No. 1507 (Solar Mars 90T-13000) with a Solar Mars 100T-15000S de-rated to 13,000 bhp (Solar Mars 100 T-13000S).}

## STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and Title 40, Part 60 of the Code of Federal Regulations. The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

## CONTENTS

- 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)

"More Protection, Less Process"

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## SECTION 1. GENERAL INFORMATION

### FACILITY AND PROJECT DESCRIPTION

The existing facility operates as a compressor station in Taylor County for Florida Gas Transmission Company's natural gas pipeline. This project affects only emissions units 003, 004, 005, and 006. After the project is complete, the facility will consist of the following emissions units.

ID	Emission Unit Description
001	<b>FGT Unit Nos. 1501 to 1505:</b> Five 2000 bhp gas-fired reciprocating internal combustion engines (Worthington Model No. SEHG-8) were installed as compressor engines in 1962 (three), 1966 (one) and 1968 (one). <i>No changes from this project.</i>
002	<b>FGT Unit No. 1506:</b> One 4000 bhp gas-fired reciprocating internal combustion engine (Cooper Bessemer Model No. 8W-330-C2) was installed as a compressor engine in 1991, subject to PSD review. <i>No changes from this project.</i>
004	<b>FGT Unit No. 1508:</b> A new 7222 bhp natural gas-fired gas turbine will be installed as a compressor engine (Cooper-Rolls Model 501-KC7-DLE) subject to the conditions of this permit.
005	<b>Unregulated Emissions Units:</b> A new 670 bhp natural gas-fired emergency generator (Waukesha Model No. L36GL) identified as "GEN03". Also includes miscellaneous fugitive emission leaks from pumps, valves, flanges, etc.
006	<b>FGT Unit No. 1507:</b> A new 13,000 bhp natural gas-fired gas turbine will be installed as a compressor engine (Solar Model No. Mars 100 T-13000S) subject to the conditions of this permit.

*{Permitting Note: Emissions Unit 003 (Solar Model No. Mars 90 T-13000S) was formerly identified as FGT No. 1507 and shall be permanently shutdown and removed as part of this project.}*

### REGULATORY CLASSIFICATION

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

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

**Title V:** Because potential emissions of at least one regulated pollutant exceed 100 tons per year, the existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), and volatile organic compounds (VOC).

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

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

### 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 06/07/02; complete.
- Permit No. 1230034-007-AC previously issued on 10/26/01.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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1. Permitting Authority: All documents related to PSD preconstruction review shall be submitted to the Department's Bureau of Air Regulation at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All other applications for permits to construct, modify, or operate emissions units shall be submitted to the Department's 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 Northeast District Office at the above address.
3. Appendices: The following Appendices are attached as part of this permit: Appendix CF (Citation Format); Appendix FM (Custom Fuel Monitoring Plan for NSPS Gas Turbines); Appendix GC (General Conditions); Appendix GG (NSPS Subpart GG Requirements for Gas Turbines); and Appendix SC (Standard Conditions).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and Title 40, Part 60 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Source Obligation: This project is subject to Rule 62-212.400(2)(g), F.A.C., which states, "If a previously permitted facility or modification becomes a facility or modification which would be subject to the preconstruction review requirements of this rule if it were a proposed new facility or modification solely by virtue of a relaxation in any federally enforceable limitation on the capacity of the facility or modification to emit a pollutant (such as a restriction on hours of operation), which limitation was established after August 7, 1980, then at the time of such relaxation the preconstruction review requirements of this rule shall apply to the facility or modification as though construction had not yet commenced on it." This includes, but is not limited to, increases in the heat input rates or pollutant emission rates for Emissions Units 004 and 006. [Rule 62-212.400(2)(g), F.A.C.]
8. Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to each Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### A. GAS TURBINE COMPRESSOR ENGINE NO. 1507 (EU-006)

This section of the permit addresses the following emissions unit.

##### **Emissions Unit No. 006: New Gas Turbine Compressor Engine No. 1507**

*Description:* The new gas turbine is a Solar Mars 100 T-13000S that will be used as a compressor engine for the natural gas pipeline.

*Fuel:* The gas turbine fires only natural gas (SCC No 2-02-002-01). The maximum natural gas firing rate is approximately 109,900 cubic feet per hour based on a heating value of 1040 BTU per SCF of gas.

*Capacity:* At 114 MMBtu per hour of heat input, the gas turbine produces approximately 13,000 bhp. The gas turbine is intended to operate at or near capacity.

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

*Stack Parameters:* When operating at capacity, exhaust gases exit a rectangular stack (7.55 feet by 7.55 feet) that is 60 feet tall with a flow rate of approximately 184,818 acfm at 896° F.

#### APPLICABLE STANDARDS AND REGULATIONS

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

#### EQUIPMENT

2. Emissions Unit 003: The existing Solar Mars 90 T-13000S gas turbine shall be permanently shutdown and removed from the site. The shutdown unit will be replaced by Emissions Unit 006, which will be identified as FGT No. 1507. [Applicant Request; Rule 62-212.400(PSD), F.A.C.]
3. Gas Turbine Compressor Engine No. 1507: The permittee is authorized to install a new Solar Mars 100 T-15000S gas turbine that is de-rated to 13,000 bhp. The de-rated unit is identified as a Solar Mars 100 T-13000S gas turbine. 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 (7.55 feet by 7.55 feet) that is 60 feet tall. [Applicant Request]

#### PERFORMANCE RESTRICTIONS

4. Permitted Capacities: The maximum heat input rate to the gas turbine shall not exceed 114 MMBtu per hour while producing approximately 13,000 bhp based on a compressor inlet air temperature of 59° F, 100% load, and a higher heating value (HHV) of 1040 BTU per SCF for natural gas. Heat input rates will vary depending upon gas turbine characteristics, load, and ambient conditions. For the gas turbine, the permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial testing. Performance data shall be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(PTE), F.A.C.]
5. 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.]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**A. GAS TURBINE COMPRESSOR ENGINE NO. 1507 (EU-006)**

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

**EMISSIONS STANDARDS**

7. Emissions Standards: Emissions from the gas turbine shall not exceed the following limits for carbon monoxide (CO), nitrogen oxides (NOx), opacity, particulate matter (PM), sulfur dioxide (SO<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>	12.2	53.44	Avoid Rule 62-212.400, F.A.C.
NOx <sup>b</sup>	25.0 ppmvd @ 15% O <sub>2</sub>	10.0	43.80	Rule 62-212.400, F.A.C. 40 CFR 60.332
SO <sub>2</sub> <sup>c</sup>	10.0 grains of sulfur per 100 SCF of gas	3.1	13.58	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.333
Opacity <sup>d</sup>	10% opacity, 6-minute average	Not Applicable		Avoid Rule 62-212.400, F.A.C.
PM <sup>e</sup>	Good combustion practices (Factor: 0.0066 lb/MMBtu)	0.7	3.07	Avoid Rule 62-212.400, F.A.C.
VOC <sup>e</sup>	Good combustion practices (Factor: 2.5 ppmvd @ 15% O <sub>2</sub> )	0.4	1.75	Avoid Rule 62-212.400, F.A.C.

- a. The CO standards are based on the average of three test runs as determined by EPA Method 10.
- b. The NOx standards are based on the average of three test runs as determined EPA Method 20.
- c. The fuel sulfur specification is based on the maximum limit specified by Federal Energy Regulatory Commission (FERC) and effectively limits the potential SO<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. For both PM and VOC, the efficient combustion of clean fuels is indicated by compliance with opacity and CO standards. Equivalent maximum PM emissions are based on AP-42, Table 3.1-2a. Equivalent maximum VOC emissions were conservatively assumed to be 10% of the vendor's data for total unburned hydrocarbon. No testing required.
- f. Equivalent maximum emissions are based on the maximum expected emissions, permitted capacity, a compressor inlet air temperature of 59° F, and 8760 hours of operation per year. For comparison purposes, the permittee shall provide a reference table with the initial compliance test report of mass emission rates versus the compressor inlet temperatures. Each test report shall include measured mass emission rates for CO, NOx and SO<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.



### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### A. GAS TURBINE COMPRESSOR ENGINE NO. 1507 (EU-006)

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

#### EMISSIONS PERFORMANCE TESTING

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

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

Tests shall also be conducted in accordance with the requirements specified in Section 4, Appendix SC of this permit. The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for compliance testing unless prior written approval is received from the administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

9. Initial Compliance 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 at least 90% of the maximum permitted capacity, but not later than 180 days after initial operation 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]
10. Annual Compliance Tests: During each federal fiscal year (October 1<sup>st</sup> to September 30<sup>th</sup>), 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 and 62-297.310(7)(a)4, F.A.C. and to avoid Rule 62-212.400, F.A.C.]
11. 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

12. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Section 4, Appendix SC of this permit. In addition, NO<sub>x</sub> emissions shall be corrected to ISO ambient atmospheric conditions and compared to the NSPS Subpart GG standard identified in Appendix GG of this permit for each required test. For each run, the test report shall also

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

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#### A. GAS TURBINE COMPRESSOR ENGINE NO. 1507 (EU-006)

indicate the natural gas firing rate (cubic feet per hour), heat input rate (MMBtu per hour), the power output (bhp), percent base load, and the inlet compressor temperature. [Rule 62-297.310(8), F.A.C.; 40 CFR 60.334]

13. Custom Fuel Monitoring Schedule: In lieu of the NSPS fuel monitoring requirements of 40 CFR 60.334 of Subpart GG, the Department approves the custom fuel-monitoring schedule specified in Appendix FM of this permit. [Rule 62-4.070(3), F.A.C.; 40 CFR 60.334]
14. 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. Within the 10 days of a request by the Department or the Compliance Authority, the permittee shall 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 3. EMISSIONS UNIT SPECIFIC CONDITIONS

### B. GAS TURBINE COMPRESSOR ENGINE NO. 1508 (EU-004)

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

#### Emissions Unit No. 004: New Gas Turbine Compressor Engine No. 1508

*Description:* The new gas turbine is a Cooper-Rolls Model 501-KC7 DLE that will be used as a compressor engine for the natural gas pipeline.

*Fuel:* The gas turbine fires only natural gas (SCC No 2-02-002-01). The maximum natural gas firing rate is approximately 60,700 cubic feet per hour based on a heating value of 1040 BTU per SCF of gas.

*Capacity:* At a compressor inlet air temperature of 59° F, the gas turbine produces 7222 bhp when firing approximately 63 MMBtu (HHV) per hour of natural gas.

*Controls:* The efficient combustion of natural gas at high temperatures minimizes emissions of carbon monoxide (CO), particulate matter (PM/PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), and volatile organic compounds (VOC). Lean premix combustion technology reduces nitrogen oxide (NO<sub>x</sub>) emissions.

*Stack Parameters:* When operating at 100% capacity, exhaust gases exit a rectangular stack (88" x 66") that is 61.17 feet tall with a flow rate of approximately 98,400 acfm at 960° F.

#### APPLICABLE STANDARDS AND REGULATIONS

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

#### EQUIPMENT

2. Gas Turbine Compressor Engine No. 1508: The permittee is authorized to install, tune, maintain and operate a new Cooper-Rolls Model 501-KC7 DLE gas turbine as a pipeline compressor engine. The gas turbine design shall incorporate lean premix combustion technology to reduce emissions of nitrogen oxides below the permitted limits. Ancillary equipment includes an automated gas turbine control system, an inlet air filtration system, and a rectangular stack (88" x 66") that is 61.17 feet tall. The permittee identifies the gas turbine compressor engine as FGT No. 1508. [Applicant Request; Design]

#### PERFORMANCE RESTRICTIONS

3. Permitted Capacity: The maximum heat input rate to the gas turbine shall not exceed 63 MMBtu per hour while producing approximately 7222 bhp based on a compressor inlet air temperature of 59° F, 100% load, and a higher heating value (HHV) of 1040 BTU per SCF for natural gas. Heat input rates will vary depending upon gas turbine characteristics, load, and ambient conditions. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Performance data shall be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(PTE), F.A.C.]
4. Authorized Fuel: The gas turbine shall fire only 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. GAS TURBINE COMPRESSOR ENGINE NO. 1508 (EU-004)**

**EMISSIONS STANDARDS**

6. Emissions Standards: Emissions from the gas turbine shall not exceed the following limits for carbon monoxide (CO), nitrogen oxides (NOx), opacity, particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), and volatile organic compounds (VOC).

Pollutant	Standards		Equivalent Maximum Emissions		Rule Basis <sup>h</sup>
	Limit	Units	lb/hour <sup>f</sup>	TPY <sup>g</sup>	
CO <sup>a</sup>	50.0	ppmvd @ 15% O <sub>2</sub>	7.0	30.66	Avoid Rule 62-212.400, F.A.C.
NOx <sup>b</sup>	25.0	ppmvd @ 15% O <sub>2</sub>	5.7	24.97	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
SO <sub>2</sub> <sup>c</sup>	10.0 grains of sulfur per 100 SCF of natural gas		1.7	7.45	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.333
Opacity <sup>d</sup>	10% opacity, 6-minute average		Not Applicable		Avoid Rule 62-212.400, F.A.C.
PM <sup>e</sup>	Good combustion practices (Factor: 0.0066 lb/MMBtu)		0.4	1.75	Avoid Rule 62-212.400, F.A.C.
VOC <sup>e</sup>	Good combustion practices (Factor: 10 ppmvd @ 15% O <sub>2</sub> )		1.5	6.57	Avoid Rule 62-212.400, F.A.C.

- a. The CO standards are based on the average of three test runs as determined by EPA Method 10.
- b. The NOx standards are based on the average of three test runs as determined EPA Method 20.
- c. The fuel sulfur specification is based on the maximum limit specified by Federal Energy Regulatory Commission (FERC) and effectively limits the potential SO<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. 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. Equivalent maximum VOC emissions were based on vendor data. No testing required.
- f. Equivalent maximum hourly emission rates are the maximum expected emissions based on permitted capacity and a compressor inlet air temperature of 59° F. For comparison purposes, the permittee shall provide a reference table with the initial compliance test report of mass emission rates versus the compressor inlet temperatures. Each test report shall include measured mass emission rates for CO, NOx and SO<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. Equivalent maximum annual emissions are based on 8760 hours of operation per year.
- h. The emissions standards of this permit ensure that the project does not trigger the PSD preconstruction review requirements of Rule 62-212.400, F.A.C.

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**  
**B. GAS TURBINE COMPRESSOR ENGINE NO. 1508 (EU-004)**

**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 {Notes: The method shall be based on a continuous sampling train. The ascarite trap may be omitted or the interference trap of section 10.1 may be used in lieu of the silica gel and ascarite traps.}
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Gas Turbines

Tests shall also be conducted in accordance with the requirements specified in Section 4, Appendix SC of this permit. The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for compliance testing unless prior written approval is received from the administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

8. Initial Compliance 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 at least 90% of the maximum permitted capacity, but not later than 180 days after initial operation 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 an analysis of the natural gas fuel sulfur content. [Rule 62-297.310(7)(a)1, F.A.C.; 40 CFR 60.8 and 60.335]
9. Annual Compliance Tests: During each federal fiscal year (October 1<sup>st</sup> to September 30<sup>th</sup>), 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 the vendor analysis of fuel sulfur content. [Rule and 62-297.310(7)(a)4, F.A.C. and to avoid Rule 62-212.400, F.A.C.]
10. Test Notification: The permittee shall notify the Compliance Authority in writing at least 30 days prior to any initial NSPS performance tests and at least 15 days prior to any other required tests. [Rule 62-297.310(7)(a)9, F.A.C.; 40 CFR 60.7 and, 60.8]

**RECORDS AND REPORTS**

11. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Section 4, Appendix SC of this permit. In addition, NO<sub>x</sub> emissions shall be corrected to ISO ambient atmospheric conditions and compared to the NSPS Subpart GG standard

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### B. GAS TURBINE COMPRESSOR ENGINE NO. 1508 (EU-004)

identified in Appendix GG of this permit for each required test. For each run, the test report shall indicate the natural gas firing rate (cubic feet per hour), heat input rate (MMBtu per hour), the power output (bhp), percent base load, and the inlet compressor temperature. [Rule 62-297.310(8), F.A.C.; 40 CFR 60.335]

12. Custom Fuel Monitoring Schedule: In lieu of the NSPS fuel monitoring requirements of 40 CFR 60.334 of Subpart GG, the Department approves the custom fuel-monitoring schedule specified in Appendix FM of this permit. [Rule 62-4.070(3), F.A.C.; 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. Within the 10 days of a request by the Department or the Compliance Authority, the permittee shall 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 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**C. MISCELLANEOUS ACTIVITIES**

This permit recognizes the following miscellaneous support activities.

<b>Emissions Unit No. 005: Miscellaneous Activities</b>	
004	Support equipment includes: <ul style="list-style-type: none"><li>• One Waukesha Model No. L36GL emergency generator (670 bhp) fired exclusively with natural gas and identified as FGT No. GEN03;</li><li>• Miscellaneous fugitive emission leaks from valves, flanges, etc.</li></ul>

*{Permitting Note: The new 670 bhp emergency generator (GEN 03) replaces a 150 bhp gas-fired emergency generator (GEN-01) and a 220 bhp gas-fired emergency generator (GEN-02).}*

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

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- Appendix CF. Citation Format
- Appendix FM. Custom Fuel Monitoring Plan for NSPS Gas Turbines
- Appendix GC. General Conditions
- Appendix GG. NSPS Subpart GG Requirements for Gas Turbines
- 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 FM

### CUSTOM FUEL MONITORING PLAN FOR NSPS GAS TURBINES

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

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

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

**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.

004	<b>FGT Unit Nos. 1508:</b> One 7222 bhp natural gas-fired gas turbine will be installed as a compressor engine (Cooper-Rolls Model 501-KC7-DLE) subject to the conditions of this permit.
006	<b>FGT Unit No. 1507:</b> One 13,000 bhp natural gas-fired gas turbine will be installed as a compressor engine (Solar Model No. Mars 100 T-13000S) subject to the conditions of this permit.

NSPS GENERAL PROVISIONS

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

40 CFR 60, SUBPART GG

STANDARDS OF PERFORMANCE FOR STATIONARY GAS TURBINES

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

Section 60.330 Applicability and designation of affected facility.

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

Section 60.331 Definitions.

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

- (g) ISO standard day conditions means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.
- (i) Peak load means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.
- (j) Base load means the load level at which a gas turbine is normally operated.

Section 60.332 Standard for nitrogen oxides.

- (a) On and after the date of the performance test required by Section 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (c) of this section shall comply with:
  - (2) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

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

where:

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

**SECTION 4. APPENDIX GG**

**NSPS SUBPART GG REQUIREMENTS FOR GAS TURBINES**

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

F = 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" values when firing natural gas as provided by the manufacturer are approximately 12.7 and 11.23 for FGT Nos. 1507 and 1508, respectively. The equivalent emission standards are 170 and 192 ppmvd at 15% oxygen, respectively. The emissions standards in Section III of this permit are more stringent than this requirement.}

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

Section 60.333 Standard for sulfur dioxide.

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

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

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

## SECTION 4. APPENDIX GG

### NSPS SUBPART GG REQUIREMENTS FOR GAS TURBINES

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

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

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

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

#### 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.}

**SECTION 4. APPENDIX GG**

**NSPS SUBPART GG REQUIREMENTS FOR GAS TURBINES**

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

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

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

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

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

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



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

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

**EMISSIONS AND CONTROLS**

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]
4. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the 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. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(203), F.A.C.]
8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. [Rule 62-296.320(4)(b)1, F.A.C.]
9. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

**TESTING REQUIREMENTS**

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

**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:

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

**RECORDS AND REPORTS**

19. **Records Retention:** All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]
20. **Annual Operating Report:** The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

**SENDER: COMPLETE THIS SECTION**

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

1. Article Addressed to:

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

**COMPLETE THIS SECTION ON DELIVERY**

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

*D. WYATT* JUL 06 2002

C. Signature  Agent  
 Addressee

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

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

4. Restricted Delivery? (Extra Fee)  Yes

7001 0320 0001 3692 8383

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

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

**OFFICIAL USE**

7001 0320 0001 3692 8383

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

Postmark  
 Here

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

PS Form 3800, January 2001

See Reverse for Instructions

Florida Department of  
Environmental Protection

Memorandum

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TO: Howard Rhodes  
THRU: Clair Fancy  
Al Linero *CLF*  
FROM: Jeff Koerner *JK*  
DATE: July 1, 2002  
SUBJECT: Final Air Construction Permit No. 1230034-009-AC  
Florida Gas Transmission Company  
Taylor County Compressor Station No. 15  
Phase V Modifications, Replacement of Unit No. 1507

The Final Permit for this project is attached for your approval and signature. The original permit authorized the construction of a new 7222 bhp gas turbine compressor engine, the up-rating of an existing 13,000 bhp gas turbine compressor engine (Unit No. 1507), and the replacement of two existing emergency generators with a new emergency generator. The new equipment is being installed at existing Compressor Station No. 15 located in Taylor County. This permitting action is a modification of the original permit to allow the complete replacement of Unit No. 1507. Although the project is minor with respect to PSD, Florida Gas Transmission Company requested that the Tallahassee office process all Phase V modifications for purposes of consistency.

The Department distributed an "Intent to Issue Permit" package on June 11, 2002. The applicant published the "Public Notice of Intent to Issue" in Tallahassee Democrat on June 17, 2002. The Department received the proof of publication on June 21, 2002. No requests for administrative hearings were filed.

Day #90 is September 27, 2002. I recommend your approval of the attached Final Permit for this project.

Attachments

HLR/CHF/AAL/jfk



## Florida Gas Transmission Company

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

June 20, 2001

UPS - Overnight

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

JUN 21 2002

BUREAU OF AIR REGULATION

Reference: Facility: 1230034  
Permit No. 1230034-007-AC  
Compressor Station No. 15, Perry, Taylor County

Dear Mr. Fancy:

**Subject: Owner/Authorized Representative or Responsible Official Page**

Florida Gas Transmission is submitting the Owner/Authorized Representative or Responsible Page signed by Richard Craig for the above mentioned facility Per Jeff Koerner's email dated 6/14/2002.

Additionally the public notice from the Tallahassee Democrat is included.

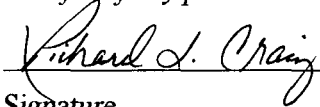
Sincerely,

Jacob Krautsch  
Division Environmental Specialist

Attachments

CC: Tallahassee Files  
V. Duane Pierce, Ph.D., AQMcS, LLC  
Larry Parrish, Compressor Station No. 15

**Owner/Authorized Representative or Responsible Official**

1. Name and Title of Owner/Authorized Representative or Responsible Official: <b>Richard Craig, Vice President of Southeast Operations</b>
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Street Address: P.O. Box 1188 City: Houston State: Texas Zip Code: 77251-1188
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (713)646-7227 Fax: (713) 646-6128
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [ ], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i>   _____ Signature Date 06-14-02

\* 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: Florida Zip Code: 32303
3. Professional Engineer Telephone Numbers: Telephone: (850)380-5035 Fax: (850) 350-5001

RECEIVED

JUN 21 2002

BUREAU OF AIR REGULATION



## Florida Gas Transmission Company

1967 Commonwealth Lane, Tallahassee, FL 32303, (850) 350-5000, Fax Downstairs (850) 350-5001, Fax Upstairs (850) 350-5002

June 25, 2002

UPS - Overnight

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

JUN 26 2002

BUREAU OF AIR REGULATION

Reference: Facility: 1230034  
Permit No. 1230034-007-AC  
Compressor Station No. 15, Perry, Taylor County

Dear Mr. Fancy:

**Subject: Public Notice Proof of Publication**

Florida Gas Transmission is submitting the proof of publication for the above mentioned construction permit.

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

Sincerely,

Jacob Krautsch  
Environmental Specialist

Attachments

CC: Tallahassee Files  
V. Duane Pierce, Ph.D., AQMcs, LLC  
Larry Parrish, Compressor Station No. 15





**PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT**  
**STATE OF FLORIDA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
 Draft Air Permit No. 1230034-009-AC  
 Florida Gas Transmission Company  
 Taylor Compressor Station No. 15  
 Phase V Modifications, Replacement of Compressor Engine No. 1507

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification to the Florida Gas Transmission Company for equipment at Compressor Station No. 15, which is located on Pisgah Road approximately 1 mile east of U.S. Highway 19 near Perry in Taylor County, Florida. The applicant's authorized representative is Mr. Richard Craig, Vice President of Operations. The applicant's mailing address is Florida Gas Transmission Company, 1400 Smith Street, Houston, TX 77002.

The existing facility operates as a compressor station in Taylor County for Florida Gas Transmission Company's natural gas pipeline. It is considered a Title V and a PSD major source of air pollution. In October of 2001, the Department issued Permit No. 1230034-007-AC, which authorized the construction of a new 7222 bhp gas turbine compressor engine No. 1508, the up-rating of existing gas turbine compressor engine No. 1507 to 13,180 bhp, and the replacement of the two existing emergency generators with a single emergency generator. In conjunction with the up-rated compressor engine No. 1507, the applicant requested a lower NOx emissions standard, which allowed the project to net out of PSD preconstruction review.

For this project, the applicant requests modification of the previous permit to allow the replacement of existing compressor engine No. 1507 (Solar Mars 90 T-13000S) with a Solar Mars 100 T-13000S de-rated to 13,000 bhp. Although the heat input rate is slightly higher, the emissions standards remain unchanged. The overall project results in emissions increases from the new compressor engines and emergency generator as well as emissions decreases from the permanent shutdown of the existing Solar Mars 90 T-13000S gas turbine. The net emissions increases are: 74 tons of carbon monoxide per year; 33 tons of nitrogen oxides per year; 2 tons of particulate matter per year; 21 tons of sulfur dioxide per year; and 8 tons of volatile organic compounds per year. The project is not subject to PSD preconstruction review because the net emissions increases are less than the PSD significant emissions rates. In addition, total emissions of hazardous air pollutants (HAP) from the project are predicted to be less than 2 tons per year, which is much less than the HAP thresholds that would trigger a case-by-case MACT determination. Based on the manufacturer's estimated performance and the emissions standards established in the permit, the gas turbines will readily comply with the federal New Source Performance Standards of Subpart GG in 40 CFR 60, adopted by reference in Rule 62-204.800, 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 this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

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

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a

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

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

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

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

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

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

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

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, Suite 200B  
Jacksonville, FL 32256-7590  
Telephone: 904/807-3300  
Fax: 904/448-4319

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.

JUNE 17, 2002

TALLAHASSEE DEMOCRAT  
 PUBLISHED DAILY  
 TALLAHASSEE-LEON-FLORIDA

STATE OF FLORIDA COUNTY OF LEON:

Before the undersigned authority personally appeared Don Morgan who on oath says that he is Legal Advertising Representative of the Tallahassee Democrat, a daily newspaper published at Tallahassee in Leon County, Florida; that the attached copy of advertising being a Legal Ad in the matter of

PUBLIC NOTICE OF INTENT

in the Second Judicial Circuit Court was published in said newspaper in the issues of:

JUNE 17, 2002

Affiant further says that the said Tallahassee Democrat is a newspaper published at Tallahassee, in the said Leon County, Florida, and that the said newspaper has heretofore been continuously published in said Leon County, Florida each day and has been entered as second class mail matter at the post office in Tallahassee, in said Leon 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 never paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this publication in the said newspaper.

DON MORGAN *Don Morgan*

LEGAL ADVERTISING REPRESENTATIVE

Sworn To or Affirmed and Subscribed Before Me.

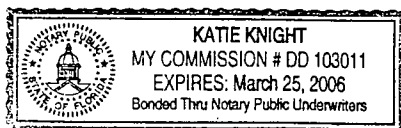
This 18<sup>th</sup> Day of June 2002, by Katie Knight  
 Personally Known *K*

OR Produced Identification \_\_\_\_\_

Type of Identification Produced \_\_\_\_\_

(SEAL)

Notary Public  
 State of Florida



*Katie Knight*

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT  
 STATE OF FLORIDA  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 Draft Air Permit No. 1230034-009-AC  
 Florida Gas Transmission Company  
 Taylor Compressor Station No. 15  
 Phase V Modifications, Replacement of Compressor Engine No. 1507

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification to the Florida Gas Transmission Company for equipment at Compressor Station No. 15, which is located on Pisgah Road approximately 1 mile east of U.S. Highway 19 near Perry in Taylor County, Florida. The applicant's authorized representative is Mr. Richard Craig, Vice President of Operations. The applicant's mailing address is Florida Gas Transmission Company, 1400 Smith Street, Houston, TX 77002.

The existing facility operates as a compressor station in Taylor County for Florida Gas Transmission Company's natural gas pipeline. It is considered a Title V and a PSD major source of air pollution. In October of 2001, the Department issued Permit No. 1230034-007-AC, which authorized the construction of a new 7222 bhp gas turbine compressor engine No. 1508, the up-rating of existing gas turbine compressor engine No. 1507 to 13,180 bhp, and the replacement of the two existing emergency generators with a single emergency generator. In conjunction with the up-rated compressor engine No. 1507, the applicant requested a lower NOx emissions standard, which allowed the project to net out of PSD preconstruction review.

For this project, the applicant requests modification of the previous permit to allow the replacement of existing compressor engine No. 1507 (Solar Mars 90 T-13000S) with a Solar Mars 100 T-13000S de-rated to 13,000 bhp. Although the heat input rate is slightly higher, the emissions standards remain unchanged. The overall project results in emissions increases from the new compressor engines and emergency generator as well as emissions decreases from the permanent shutdown of the existing Solar Mars 90 T-13000S gas turbine. The net emissions increases are: 74 tons of carbon monoxide per year; 33 tons of nitrogen oxides per year; 2 tons of particulate matter per year; 21 tons of sulfur dioxide per year; and 8 tons of volatile organic compounds per year. The project is not subject to PSD preconstruction review because the net emissions increases are less than the PSD significant emissions rates. In addition, total emissions of hazardous air pollutants (HAP) from the project are predicted to be less than 2 tons per year, which is much less than the HAP thresholds that would trigger a case-by-case MACT determination. Based on the manufacturer's estimated performance and the emissions standards established in the permit, the gas turbines will readily comply with the federal New Source Performance Standards of Subpart GG in 40 CFR 60, adopted by reference in Rule 62-204.800, 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 this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

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

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

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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, Suite 200B  
Jacksonville, FL 32256-7590  
Telephone: 904/807-3300  
Fax: 904/448-4319

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.

JUNE 17, 2002

# Memorandum

# Florida Department of Environmental Protection

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TO: Clair Fancy, Chief - Bureau of Air Regulation *by aaf*  
THROUGH: Al Linero, Administrator - New Source Review Section *aaf*  
FROM: Jeff Koerner, New Source Review Section *JK*  
DATE: June 11, 2002  
SUBJECT: Draft Air Construction Permit No. 1230034-009-AC  
Florida Gas Transmission Company  
Taylor Compressor Station No. 15  
Phase V Modifications, Replacement of Compressor Engine No. 1507

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

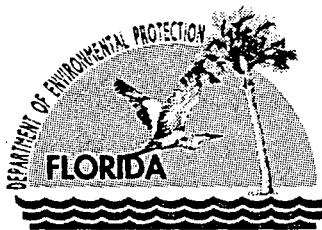
Existing Compressor Station No. 15 is located on Pisgah Road approximately 1 mile east of U.S. Highway 19 near Perry in Taylor County, Florida. In October of 2001, the Department issued Permit No. 1230034-007-AC, which authorized construction of a new 7222 bhp gas turbine compressor engine (No. 1508), the up-rating of an existing gas turbine compressor engine (No. 1507) to 13,180 bhp, and the replacement of two existing emergency generators (GEN01 and GEN02) with a new emergency generator (GEN03). The project was determined to be minor with respect to PSD based on a netting analysis that included reduced NOx emissions for existing gas turbine No. 1507.

This project modifies previous Permit No. 1230034-007-AC to allow the replacement of the existing gas turbine (Solar Mars 90 T-13000S) with a de-rated Solar Mars 100 T-13000S. The netting analysis remains virtually unchanged; however, the draft permit now requires the permanent shutdown of the Solar Mars 90 T-13000S (EU-003). The new Solar Mars 100 T-13000S will be added as EU-006, but will continue to be identified as compressor engine No. 1507.

Day #90 is September 4, 2002. I recommend your approval of the attached Draft Permit for this project.

CHF/AAL/jfk

Attachments



# Department of Environmental Protection

Jeb Bush  
Governor

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

David B. Struhs  
Secretary

June 11, 2002

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Danny Pribble, V.P. of Operations  
Florida Gas Transmission Company  
1400 Smith Street  
Houston, TX 77002

Re: Draft Air Permit No. 1230034-009-AC  
Taylor Compressor Station No. 15  
Phase V Modifications, Replacement of Compressor Engine No. 1507


Dear Mr. Pribble:

Enclosed is one copy of the draft permit modification that authorizes the replacement of the existing Solar Mars 90 T-13000S gas turbine with a Solar Mars 100 T-13000S at Compressor Station No. 15, which is located on Pisgah Road approximately 1 mile east of U.S. Highway 19 near Perry in Taylor 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 C. H. Fancy, P.E., Chief  
Bureau of Air Regulation

CHF/AAL/jfk

Enclosures

"More Protection, Less Process"

Printed on recycled paper.

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

**P.E. CERTIFICATION STATEMENT**

**PERMITTEE**

Florida Gas Transmission Company  
1400 Smith Street  
Houston, TX 77002

Draft Air Permit No. 1230034-009-AC  
Taylor Compressor Station No. 15  
Phase V Modifications  
Replacement of Compressor Engine No. 1507

**PROJECT DESCRIPTION**

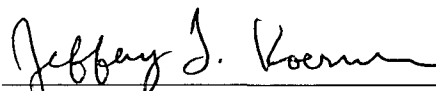
The existing facility operates as a compressor station in Taylor County for Florida Gas Transmission Company's natural gas pipeline. It consists of three 2000 bhp engines installed in 1962 (Nos. 1501, 1502, and 1503), a 2000 bhp engine installed in 1966 (No. 1504), a 2000 bhp engine installed in 1968 (No. 1505), a 4000 bhp engine installed in 1991 (No. 1506), a 12,600 bhp gas turbine installed in 1994 (No. 1507) and two small emergency generators. All units fire natural gas. The facility is classified as both a Title V and PSD major source of air pollution.

In October of 2001, Permit No. 1230034-007-AC authorized the construction of a new 7222 bhp gas turbine compressor engine (No. 1508), the up-rating of existing gas turbine compressor engine No. 1507 to 13,180 bhp, and the replacement of the two existing emergency generators with a single emergency generator. In conjunction with the up-rated compressor engine No. 1507, the applicant requested a lower NOx emissions standard, which allowed the project to net out of PSD preconstruction review.

The current project requests a modification of Permit No. 1230034-007-AC to authorize the replacement of compressor engine No. 1507 (Solar Mars 90 T-13000S) with a Solar Mars 100 T-13000S de-rated to 13000 bhp. Although the heat input is slightly higher, the emissions standards remain unchanged. The project results in emissions increases from the new compressor engines and emergency generator as well as emissions decreases from the permanent shutdown of the existing Solar Mars 90 T-13000S gas turbine. The net emissions increases are: 74 tons of carbon monoxide per year; 33 tons of nitrogen oxides per year; 2 tons of particulate matter per year; 21 tons of sulfur dioxide per year; and 8 tons of volatile organic compounds per year. The project is not subject to PSD preconstruction review because the emissions increases are less than the PSD significant emissions rates. In addition, total emissions of hazardous air pollutants (HAP) from the project are predicted to be less than 2 tons per year, which is much less than the HAP thresholds that would trigger a case-by case- MACT determination.

The gas turbines are 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. Based on the manufacturer's estimated performance and the emissions standards established in the permit, the gas turbine will readily comply with the NSPS requirements. The emergency generator is categorically exempt from air permitting requirements in accordance with Rule 62-210.300(3)(c)20, F.A.C.

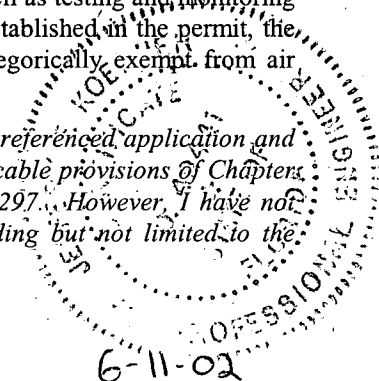
*I HEREBY CERTIFY that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapters 403, Florida Statutes, and Florida Administrative Code Chapters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



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

6-11-02

(Date)



**SENDER: COMPLETE THIS SECTION**

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

1. Article Addressed to:

Mr. Danny Pribble  
 Vice President of Operations  
 Florida Gas Transmission Company  
 P.O. Box 1188  
 Houston, TX 77251

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) *H. WYATT* Date of Delivery **JUN 14 2000**

C. Signature *H. WYATT*  Agent  Addressee

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

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

4. Restricted Delivery? (Extra Fee)  Yes

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Postmark Here

Total Mr. Danny Pribble  
 Vice President of Operations  
 Florida Gas Transmission Company  
 P.O. Box 1188  
 Houston, TX 77251



In the Matter of an  
Application for Air Permit by:

Florida Gas Transmission Company  
1400 Smith Street  
Houston, TX 77002

*Authorized Representative:*  
Mr. Danny Pribble, V.P. of Operations

Compressor Station No. 15  
Draft Air Permit No. 1230034-009-AC  
Phase V Modifications  
Replacement of Compressor Engine No. 1507  
Taylor County

### 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 June 7, 2002 to the Department for a permit to modify Permit No. 1230034-007-AC to authorize the replacement of the existing Solar Mars 90 T-13000S gas turbine (Compressor Engine No. 1507), with a Solar Mars 100 T-13000S de-rated to 13,000 bhp. The new equipment will be installed at existing Compressor Station No. 15, which is located on Pisgah Road approximately 1 mile east of U.S. Highway 19 near Perry in Taylor County, Florida.

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

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Construction Permit. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (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.

  
E. H. Fancy, P.E., Chief  
Bureau of Air Regulation

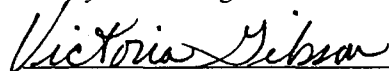
**CERTIFICATE OF SERVICE**

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 6/11/02 to the persons listed:

Mr. Danny Pribble, FGT\*  
Mr. Jim Thompson, FGT  
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.

  
(Clerk)

June 11, 2002  
(Date)

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

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Draft Air Permit No. 1230034-009-AC

Florida Gas Transmission Company  
Taylor Compressor Station No. 15

Phase V Modifications, Replacement of Compressor Engine No. 1507

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification to the Florida Gas Transmission Company for equipment at Compressor Station No. 15, which is located on Pisgah Road approximately 1 mile east of U.S. Highway 19 near Perry in Taylor County, Florida. The applicant's authorized representative is Mr. Danny Pribble, Vice President of Operations. The applicant's mailing address is Florida Gas Transmission Company, 1400 Smith Street, Houston, TX 77002.

The existing facility operates as a compressor station in Taylor County for Florida Gas Transmission Company's natural gas pipeline. It is considered a Title V and a PSD major source of air pollution. In October of 2001, the Department issued Permit No. 1230034-007-AC, which authorized the construction of a new 7222 bhp gas turbine compressor engine No. 1508, the up-rating of existing gas turbine compressor engine No. 1507 to 13,180 bhp, and the replacement of the two existing emergency generators with a single emergency generator. In conjunction with the up-rated compressor engine No. 1507, the applicant requested a lower NOx emissions standard, which allowed the project to net out of PSD preconstruction review.

For this project, the applicant requests modification of the previous permit to allow the replacement of existing compressor engine No. 1507 (Solar Mars 90 T-13000S) with a Solar Mars 100 T-13000S de-rated to 13,000 bhp. Although the heat input rate is slightly higher, the emissions standards remain unchanged. The overall project results in emissions increases from the new compressor engines and emergency generator as well as emissions decreases from the permanent shutdown of the existing Solar Mars 90 T-13000S gas turbine. The net emissions increases are: 74 tons of carbon monoxide per year; 33 tons of nitrogen oxides per year; 2 tons of particulate matter per year; 21 tons of sulfur dioxide per year; and 8 tons of volatile organic compounds per year. The project is not subject to PSD preconstruction review because the net emissions increases are less than the PSD significant emissions rates. In addition, total emissions of hazardous air pollutants (HAP) from the project are predicted to be less than 2 tons per year, which is much less than the HAP thresholds that would trigger a case-by-case MACT determination. Based on the manufacturer's estimated performance and the emissions standards established in the permit, the gas turbines will readily comply with the federal New Source Performance Standards of Subpart GG in 40 CFR 60, adopted by reference in Rule 62-204.800, 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 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, Suite 200B  
Jacksonville, FL 32256-7590  
Telephone: 904/807-3300  
Fax: 904/448-4319

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. 1230034-009-AC  
Modification of Permit No. 1230034-007-AC  
(Emissions Unit Nos. 003, 004, 005, and 006)

**COUNTY**

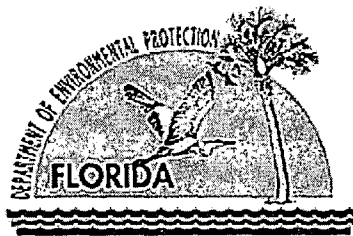
Taylor County

**APPLICANT**

Florida Gas Transmission Company  
ARMS Facility ID No. 1230034  
Existing Taylor Compressor Station No. 15

**PERMITTING  
AUTHORITY**

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



June 11, 2002

*{Filename: FGT 15Va TEPD.doc}*

# TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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## 1. GENERAL PROJECT INFORMATION

### 1.1 Applicant Name and Address

Florida Gas Transmission Company  
1400 Smith Street  
Houston, TX 77002

*Authorized Representative:*

Danny Pribble, V.P. of Operations

### 1.2 Processing Schedule

06/07/02 Received application to modify existing air pollution construction permit; complete.

### 1.3 Facility Description and Location

The applicant owns and operates existing Compressor Station No. 15, which is located on Pisgah Road approximately 1 mile east of U.S. Highway 19 near Perry in Taylor County, Florida. The UTM coordinates are Zone 17, 249.02 km East, and 3339.60 km North. This is an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to the Florida and National Ambient Air Quality Standards (NAAQS).

### 1.4 Standard Industrial Classification Code (SIC)

SIC No. 4922 – Natural Gas Transmission

### 1.5 Regulatory Categories

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

**Title IV:** The existing facility is not subject to the acid rain provisions of the Clean Air Act.

**Title V:** The existing facility is a Title V major source of air pollution because potential emissions of at least one regulated pollutant exceed 100 tons per year. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM/PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), and volatile organic compounds (VOC).

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

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

### 1.6 Project Description

The existing facility operates as a compressor station in Taylor County for Florida Gas Transmission Company's natural gas pipeline. It consists of six reciprocating internal combustion engines, a gas turbine compressor engine, and two small emergency generators. Three 2000 bhp engines were installed in 1962, a 2000 bhp engine was installed in 1966, a 2000 bhp engine was installed in 1968, a 4000 bhp engine was installed in 1991, and a 12,600 bhp gas turbine was installed in 1994, subject to PSD. All units fire natural gas.

In October of 2001, the Department issued air construction Permit No. 1230034-007-AC to:

- Add a 7222 bhp Cooper Rolls Model 501-KC7 DLE gas turbine as a new compressor engine;
- Up-rate existing gas turbine compressor engine No. 1507 (EU-003) from 12,600 bhp to 13,180 bhp;

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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- Replace two existing emergency generators with a single Waukesha Model No. L36GL emergency generator with a capacity of 670 bhp.

The project included a netting analysis showing that the project would remain below the PSD significant emission rates and avoid PSD preconstruction review.

The applicant now requests a complete replacement of compressor engine No. 1507 (Solar Mars 90T-13000) with a Solar Mars 100T-15000S de-rated to 13,000 bhp (Solar Mars 100 T-13000S). Although the new unit has a slightly higher heat input, the applicant requested that the emissions standards in the original permit remain unchanged. No changes were requested for any of the other previously permitted emissions units.

## 2. APPLICABLE REGULATIONS

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

### 2.2 Federal Regulations

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

<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

### 2.3 General PSD Applicability

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

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



## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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

### 2.4 PSD Applicability for Project

The proposed project is located in Taylor County, Florida, an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to a National Ambient Air Quality Standard (NAAQS). As previously discussed, the facility is an existing PSD-major source and is subject to the new source preconstruction review requirements. The following table summarizes PSD applicability for this project based on information in the application and the Department’s review.

**Table 1A. Potential Emissions and PSD Applicability**

Pollutant	Potential Emissions (Tons Per Year) <sup>a</sup>	Significant Emissions Rate (Tons Per Year)	Significant? Table 62-212.400-2, F.A.C.	PSD Review Required?
CO	74	100	No	No
NO <sub>x</sub>	33	40	No	No
PM/PM <sub>10</sub>	2	25/15	No	No
SO <sub>2</sub>	21	40	No	No
VOC	8	40	No	No

<sup>a</sup> Potential emissions from the project include emissions increases from the new compressor engines (Cooper Rolls Model 501-KC7 DLE and Solar Mars 100T-13000S) and fugitives as well as emissions decreases from the shutdown of the existing Solar Mars 90T-13000S gas turbine.

The draft permit requires the permanent shutdown of Emissions Unit 003 and establishes the new Solar Mars 100 T-13000S as Emissions Unit 006. As shown in the above table, the net emissions increases from the proposed project will not exceed the PSD significant emissions rates. Therefore, the project is not subject to PSD preconstruction review. See Attachment A for a summary of the Department’s emissions analysis. In addition, the applicant estimates that total emissions of hazardous air pollutants (HAP) will be less than 2 tons per year. This is much less than the HAP thresholds that would trigger a case-by-case MACT determination.

### 3. EMISSIONS STANDARDS

#### 3.1 Brief Discussion of Emissions

The following text is an excerpt on stationary gas turbines from Section 3.1 EPA’s AP-42 emission factor document:

*“The primary pollutants from gas turbine engines are nitrogen oxides (NO<sub>x</sub>), 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 (SO<sub>x</sub>) 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.”*

**TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION**

*Available emissions data indicate that the turbine's operating load has a considerable effect on the resulting emission levels. Gas turbines are typically operated at high loads (greater than or equal to 80 percent of rated capacity) to achieve maximum thermal efficiency and peak combustor zone flame temperatures. With reduced loads (lower than 80 percent), or during periods of frequent load changes, the combustor zone flame temperatures are expected to be lower than the high load temperatures, yielding lower thermal efficiencies and more incomplete combustion ... "*

**3.2 NSPS Subpart GG Requirements**

The gas turbine is subject to the New Source Performance Standards of Subpart GG in 40 CFR 60, adopted by reference in Rule 62-204.800, F.A.C. This regulation establishes standards for emissions of NOx and SO2 as well as testing and monitoring requirements. In general, the emissions standards are:

- NOx emissions ≤ 170 ppmvd (FGT NO. 1507) and 192 ppmvd (FGT No. 1508)
- SO2 emissions are limited by firing only fuels containing 0.8 percent sulfur by weight or less.

Based on the manufacturer's estimated performance, the gas turbine will readily comply with the NSPS requirements. The applicant has requested lower emissions standards for several pollutants that will ensure that the project remains minor with respect to PSD applicability.

**3.3 Draft Emissions Standards**

The draft permit requires the permanent shutdown of Emissions Unit 003 and establishes the new Solar Mars 100 T-13000S as Emissions Unit 006. Based on the applicant's request, the Department specifies the following emissions standards.

**EU-006: Gas Turbine Compressor Engine 1507**

Pollutant	Standards	Equivalent Maximum Emissions		Rule Basis <sup>h</sup>
		lb/hour <sup>f</sup>	TPY <sup>g</sup>	
CO <sup>a</sup>	50.0 ppmvd @ 15% O2	12.2	53.44	Avoid Rule 62-212.400, F.A.C.
NOx <sup>b</sup>	25.0 ppmvd @ 15% O2	10.0	43.80	Rule 62-212.400, F.A.C. 40 CFR 60.332
SO2 <sup>c</sup>	10.0 grains of sulfur per 100 SCF of gas	3.1	13.58	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.333
Opacity <sup>d</sup>	10% opacity, 6-minute average	Not Applicable		Avoid Rule 62-212.400, F.A.C.
PM <sup>e</sup>	Good combustion practices (Factor: 0.0066 lb/mmBTU)	0.7	3.07	Avoid Rule 62-212.400, F.A.C.
VOC <sup>e</sup>	Good combustion practices (Factor: 2.5 ppmvd @ 15% O2)	0.4	1.75	Avoid Rule 62-212.400, F.A.C.

**TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION**

**EU-004: Gas Turbine Compressor Engine No. 1508**

Pollutant	Standards		Equivalent Maximum Emissions		Rule Basis <sup>h</sup>
	Limit	Units	lb/hour <sup>f</sup>	TPY <sup>g</sup>	
CO <sup>a</sup>	50.0	ppmvd @ 15% O <sub>2</sub>	7.0	30.66	Avoid Rule 62-212.400, F.A.C.
NOx <sup>b</sup>	25.0	ppmvd @ 15% O <sub>2</sub>	5.7	24.97	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
SO <sub>2</sub> <sup>c</sup>	10.0 grains of sulfur per 100 SCF of natural gas		1.7	7.45	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.333
Opacity <sup>d</sup>	10% opacity, 6-minute average		Not Applicable		Avoid Rule 62-212.400, F.A.C.
PM <sup>e</sup>	Good combustion practices (Factor: 0.0066 lb/mmBTU)		0.4	1.75	Avoid Rule 62-212.400, F.A.C.
VOC <sup>e</sup>	Good combustion practices (Factor: 10 ppmvd @ 15% O <sub>2</sub> )		1.5	6.57	Avoid Rule 62-212.400, F.A.C.

- a. The CO standards are based on 3-hour test averages as determined by EPA Method 10.
- b. The NOx standards are based 3-hour test averages as determined EPA Method 20.
- c. The fuel sulfur specification is based on the maximum limit specified by Federal Energy Regulatory Commission (FERC) and effectively limits the potential SO<sub>2</sub> emissions. Expected fuel sulfur levels are less than 1 grain per 100 SCF of natural gas.
- d. The opacity standard is based on a 6-minute average, as determined by EPA Method 9. The Department notes that the applicant requested a visible emissions limit of 20% based on the “General Visible Emissions Standard” in Rule 62-296.320(4)(b), F.A.C. However, a continuous visible plume from a gas turbine firing natural gas would indicate severe operational or equipment problems. The lower 10% opacity standard is established as an indicator of good combustion practices in accordance with Rule 62-212.400 (BACT), F.A.C., which this project seeks to avoid.
- e. For both PM and VOC, the efficient combustion of clean fuels is indicated by compliance with opacity and CO standards. Equivalent maximum PM emissions 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.
- f. Equivalent maximum hourly emission rates are the maximum expected emissions based on permitted capacity and a compressor inlet air temperature of 59° F. For comparison purposes, the permittee shall provide a reference table with the initial compliance test report of mass emission rates versus the compressor inlet temperatures. Each test report shall include measured mass emission rates for CO, NOx and SO<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. Annual emissions are based on 8760 hours of operation per year.
- h. The emissions standards of this permit ensure that the project does not trigger the PSD preconstruction review requirements of Rule 62-212.400, F.A.C.

**3.4 Compliance Methods**

- a. Initial performance tests shall be required for emissions of CO, NO<sub>x</sub>, and visible emissions. Testing for CO and NO<sub>x</sub> shall be conducted concurrently. To satisfy the NSPS requirements, 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. 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 an analysis of the natural gas fuel sulfur content.
- b. Annual performance tests shall be required for emissions of 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 the vendor analysis for fuel sulfur content.
- c. 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.

**4. PRELIMINARY DETERMINATION**

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

**ATTACHMENT A**  
**FGT Compressor Station No. 15**  
**Phase V Modifications**  
**Replacement of FGT No. 1507**

**NETTING ANALYSIS**

**Future Potential Emissions, Tons Per Year**

Pollutant	1507	1508	Misc.	Total
CO	53.57	30.48	0.60	84.65
NOx	43.98	24.97	0.70	69.65
PM	3.20	1.84	0.00	5.04
SO2	13.36	7.58	0.00	20.94
VOC	1.53	6.53	1.15	9.21

**Past Actual Emissions, Tons Per Year**

Pollutant	1507	1508	Misc.	Total
CO	10.65	0.00	0.00	10.65
NOx	37.00	0.00	0.00	37.00
PM	2.56	0.00	0.00	2.56
SO2	0.28	0.00	0.00	0.28
VOC	1.16	0.00	0.00	1.16

**Net Emissions Change for Project, Tons Per Year**

Pollutant	Project	SER	PSD?
CO	74	100	No
NOx	33	40	No
PM	2	15	No
SO2	21	40	No
VOC	8	40	No

**ATTACHMENT A**  
**FGT Compressor Station No. 15**  
**Phase V Modifications**  
**Replacement of FGT No. 1507**

**Potential Emissions for Up-rated Existing Gas Turbine - FGT No. 1507 (13,000 bhp)**

Pollutant	Emission Factor	lb/hr	hr/yr	tons/yr
CO	50 ppmvd @ 15% O <sub>2</sub>	12.23	8760	53.57
NOx	25 ppmvd @ 15% O <sub>2</sub>	10.04	8760	43.98
PM	0.0066 lb/MMBtu	0.73	8760	3.20
SO <sub>2</sub>	10 grains/100 scf	3.05	8760	13.36
VOC	2.5 ppmvd @ 15% O <sub>2</sub>	0.35	8760	1.53
HAP	0.0217 g/bhp-hour	0.63	8760	2.76

**Past Actual Emissions for Up-rated Existing Gas Turbine - FGT No. 1507 (13,000 bhp)**

Pollutant	Emission Factor	lb/hr	hr/yr	tons/yr
CO	7-yr test avg.	2.66	8009	10.65
NOx	7-yr test avg.	9.24	8009	37.00
PM	5 lb/MMscf	0.64	8009	2.56
SO <sub>2</sub>	5-yr test avg.	0.07	8009	0.28
VOC	1-yr test avg.	0.29	8009	1.16
HAP	NA	0.63	8009	2.52

**ATTACHMENT A**  
**FGT Compressor Station No. 15**  
**Phase V Modifications**  
**Replacement of FGT No. 1507**

**Potential Emissions for New Gas Turbine - FGT No. 1508 (7222 bhp)**

<b>Pollutant</b>	<b>Emission Factor</b>	<b>lb/hr</b>	<b>hr/yr</b>	<b>tons/yr</b>
CO	50 ppmvd @ 15% O2	6.96	8760	30.48
NOx	25 ppmvd @ 15% O2	5.70	8760	24.97
PM	0.0066 lb/MMBtu	0.42	8760	1.84
SO2	10 grains/100 scf	1.73	8760	7.58
VOC	10 ppmvd @ 15% O2	1.49	8760	6.53
HAP	0.0217 g/bhp-hour	0.35	8760	1.51

**ATTACHMENT A**  
**FGT Compressor Station No. 15**  
**Phase V Modifications**  
**Replacement of FGT No. 1507**

**Potential Emissions for New Emergency Generator, FGT No. GEN-003 (670 bhp)**

Pollutant	Emission Factor	lb/hr	hr/yr	tons/yr
CO	1.33 g/bhp-hour	1.96	892	0.60
NOx	2.0 g/bhp-hour	2.95	892	0.70
PM	0.00999 lb/MMBtu	0.05	892	0.00
SO <sub>2</sub>	10 grains/100 scf	0.14	892	0.00
VOC	0.28 g/bhp-hour	0.41	892	0.20

**Potential Emissions from New Fugitive Leaks from Pumps, Compressors, Valves, Fittings, Etc.**

Pollutant	Emission Factor	lb/hr	hr/yr	tons/yr
VOC	EPA-453/R-95-017	NA	8760	0.95

**Total Potential Emissions from EU-005, Miscellaneous Activities**

Pollutant	tons/yr
CO	0.60
NOx	0.70
PM	0.00
SO <sub>2</sub>	0.00
VOC	1.15



**ATTACHMENT A**  
**FGT Compressor Station No. 15**  
**Phase V Modifications**  
**Replacement of FGT No. 1507**

**Actual Hours of Operation - Existing Gas Turbine, FGT No. 1507**

Parameter	2000	1999	1998	1997	1996	1995	1994	Avg.
Hours	8520	7498	5273	6788	5487	6996	ND	5795
CO	7.7	1.61	0.95	3.35	0.392	0.32	4.32	2.66
NOx	7.7	9.82	6.43	11	12.6	11.3	5.81	9.24
SO <sub>2</sub>	0.05	0.03	ND	0.13	0.11	0.01	ND	0.07
VOC	ND	ND	ND	ND	ND	0.29	ND	0.29

8009 <--- Average hours for last two years of operation

Data is from the Department's ARMS database.

# DRAFT PERMIT

## PERMITTEE:

Florida Gas Transmission Company  
1400 Smith Street  
Houston, TX 77002

### *Authorized Representative:*

Danny Pribble, V.P. of Operations

Taylor Compressor Station No. 15 Air Permit No. 1230034-009-AC Facility ID No. 1230034 SIC No. 4922 Permit Expires: April 1, 2003
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## PROJECT AND LOCATION

This permit authorizes the construction of a new 7222 bhp gas turbine compressor engine (FGT No. 1508), the replacement of an existing 13,000 bhp gas turbine compressor engine (FGT No. 1507), and the replacement of two existing emergency generators (GEN01 and GEN02) with a new emergency generator (FGT No. GEN03). The new equipment will be installed at existing Compressor Station No. 15, which is located on Pisgah Road approximately 1 mile east of U.S. Highway 19 near Perry in Taylor County, Florida. The UTM coordinates are Zone 17, 249.02 km East, and 3339.60 km North.

This permit is a modification of original Permit No. 1230034-007-AC.

## STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and Title 40, Part 60 of the Code of Federal Regulations. The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

## CONTENTS

- 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

(Date)

## SECTION 1. GENERAL INFORMATION (Draft Permit)

### FACILITY AND PROJECT DESCRIPTION

The existing facility operates as a compressor station in Taylor County for Florida Gas Transmission Company's natural gas pipeline. This project affects only emissions units 003, 004, 005, and 006. After the project is complete, the facility will consist of the following emissions units.

ID	Emission Unit Description
001	<b>FGT Unit Nos. 1501 to 1505:</b> Five 2000 bhp gas-fired reciprocating internal combustion engines (Worthington Model No. SEHG-8) were installed as compressor engines in 1962 (three), 1966 (one) and 1968 (one). <i>No changes from this project.</i>
002	<b>FGT Unit No. 1506:</b> One 4000 bhp gas-fired reciprocating internal combustion engine (Cooper Bessemer Model No. 8W-330-C2) was installed as a compressor engine in 1991, subject to PSD review. <i>No changes from this project.</i>
004	<b>FGT Unit No. 1508:</b> A new 7222 bhp natural gas-fired gas turbine will be installed as a compressor engine (Cooper-Rolls Model 501-KC7-DLE) subject to the conditions of this permit.
005	<b>Unregulated Emissions Units:</b> A new 670 bhp natural gas-fired emergency generator (Waukesha Model No. L36GL) identified as "GEN03". Also includes miscellaneous fugitive emission leaks from pumps, valves, flanges, etc.
006	<b>FGT Unit No. 1507:</b> A new 13,000 bhp natural gas-fired gas turbine will be installed as a compressor engine (Solar Model No. Mars 100 T-13000S) subject to the conditions of this permit.

*{Permitting Note: Emissions Unit 003 (Solar Model No. Mars 90 T-13000S) was formerly identified as FGT No. 1507 and shall be permanently shutdown and removed as part of this project.}*

### REGULATORY CLASSIFICATION

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

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

**Title V:** Because potential emissions of at least one regulated pollutant exceed 100 tons per year, the existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM/PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), and volatile organic compounds (VOC).

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

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

### 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 06/07/02; complete.
- Permit No. 1230034-007-AC previously issued on 10/26/01.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS (Draft Permit)

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1. Permitting Authority: All documents related to PSD preconstruction review shall be submitted to the Department's Bureau of Air Regulation at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All other applications for permits to construct, modify, or operate emissions units shall be submitted to the Department's 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 Northeast District Office at the above address.
3. Appendices: The following Appendices are attached as part of this permit: Appendix CF (Citation Format); Appendix FM (Custom Fuel Monitoring Plan for NSPS Gas Turbines); Appendix GC (General Conditions); Appendix GG (NSPS Subpart GG Requirements for Gas Turbines); and Appendix SC (Standard Conditions).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and Title 40, Part 60 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Source Obligation: This project is subject to Rule 62-212.400(2)(g), F.A.C., which states, "If a previously permitted facility or modification becomes a facility or modification which would be subject to the preconstruction review requirements of this rule if it were a proposed new facility or modification solely by virtue of a relaxation in any federally enforceable limitation on the capacity of the facility or modification to emit a pollutant (such as a restriction on hours of operation), which limitation was established after August 7, 1980, then at the time of such relaxation the preconstruction review requirements of this rule shall apply to the facility or modification as though construction had not yet commenced on it." This includes, but is not limited to, increases in the heat input rates or pollutant emission rates for Emissions Units 004 and 006. [Rule 62-212.400(2)(g), F.A.C.]
8. Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to each Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (Draft Permit)

#### A. GAS TURBINE COMPRESSOR ENGINE NO. 1507 (EU-006)

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

##### **Emissions Unit No. 006: New Gas Turbine Compressor Engine No. 1507**

*Description:* The new gas turbine is a Solar Mars 100 T-13000S that will be used as a compressor engine for the natural gas pipeline.

*Fuel:* The gas turbine fires only natural gas (SCC No 2-02-002-01). The maximum natural gas firing rate is approximately 109,900 cubic feet per hour based on a heating value of 1040 BTU per SCF of gas.

*Capacity:* At 114 MMBtu per hour of heat input, the gas turbine produces approximately 13,000 bhp. The gas turbine is intended to operate at or near capacity.

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

*Stack Parameters:* When operating at capacity, exhaust gases exit a rectangular stack (7.55 feet by 7.55 feet) that is 60 feet tall with a flow rate of approximately 184,818 acfm at 896° F.

#### APPLICABLE STANDARDS AND REGULATIONS

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

#### EQUIPMENT

2. Emissions Unit 003: The existing Solar Mars 90 T-13000S gas turbine shall be permanently shutdown and removed from the site. The shutdown unit will be replaced by Emissions Unit 006, which will be identified as FGT No. 1507. [Applicant Request; Rule 62-212.400(PSD), F.A.C.]
3. Gas Turbine Compressor Engine No. 1507: The permittee is authorized to install a new Solar Mars 100 T-15000S gas turbine that is de-rated to 13,000 bhp. The de-rated unit is identified as a Solar Mars 100 T-13000S gas turbine. 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 (7.55 feet by 7.55 feet) that is 60 feet tall. [Applicant Request]

#### PERFORMANCE RESTRICTIONS

4. Permitted Capacities: The maximum heat input rate to the gas turbine shall not exceed 114 MMBtu per hour while producing approximately 13,000 bhp based on a compressor inlet air temperature of 59° F, 100% load, and a higher heating value (HHV) of 1040 BTU per SCF for natural gas. Heat input rates will vary depending upon gas turbine characteristics, load, and ambient conditions. For the gas turbine, the permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial testing. Performance data shall be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(PTE), F.A.C.]
5. 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.]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (Draft Permit)**

**A. GAS TURBINE COMPRESSOR ENGINE NO. 1507 (EU-006)**

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

**EMISSIONS STANDARDS**

7. Emissions Standards: Emissions from the gas turbine shall not exceed the following limits for carbon monoxide (CO), nitrogen oxides (NOx), opacity, particulate matter (PM), sulfur dioxide (SO<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>	12.2	53.44	Avoid Rule 62-212.400, F.A.C.
NOx <sup>b</sup>	25.0 ppmvd @ 15% O <sub>2</sub>	10.0	43.80	Rule 62-212.400, F.A.C. 40 CFR 60.332
SO <sub>2</sub> <sup>c</sup>	10.0 grains of sulfur per 100 SCF of gas	3.1	13.58	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.333
Opacity <sup>d</sup>	10% opacity, 6-minute average	Not Applicable		Avoid Rule 62-212.400, F.A.C.
PM <sup>e</sup>	Good combustion practices (Factor: 0.0066 lb/MMBtu)	0.7	3.07	Avoid Rule 62-212.400, F.A.C.
VOC <sup>e</sup>	Good combustion practices (Factor: 2.5 ppmvd @ 15% O <sub>2</sub> )	0.4	1.75	Avoid Rule 62-212.400, F.A.C.

- a. The CO standards are based on the average of three test runs as determined by EPA Method 10.
- b. The NOx standards are based on the average of three test runs as determined EPA Method 20.
- c. The fuel sulfur specification is based on the maximum limit specified by Federal Energy Regulatory Commission (FERC) and effectively limits the potential SO<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. For both PM and VOC, the efficient combustion of clean fuels is indicated by compliance with opacity and CO standards. Equivalent maximum PM emissions are based on AP-42, Table 3.1-2a. Equivalent maximum VOC emissions were conservatively assumed to be 10% of the vendor's data for total unburned hydrocarbon. No testing required.
- f. Equivalent maximum emissions are based on the maximum expected emissions, permitted capacity, a compressor inlet air temperature of 59° F, and 8760 hours of operation per year. For comparison purposes, the permittee shall provide a reference table with the initial compliance test report of mass emission rates versus the compressor inlet temperatures. Each test report shall include measured mass emission rates for CO, NOx and SO<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.

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (Draft Permit)**

**A. GAS TURBINE COMPRESSOR ENGINE NO. 1507 (EU-006)**

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

**EMISSIONS PERFORMANCE TESTING**

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

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

Tests shall also be conducted in accordance with the requirements specified in Section 4, Appendix SC of this permit. The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for compliance testing unless prior written approval is received from the administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

- 9. Initial Compliance Tests: The gas turbine shall be tested to demonstrate initial compliance with the emission standards for CO, NOx, and visible emissions. The initial tests shall be conducted within 60 days after achieving at least 90% of the maximum permitted capacity, but not later than 180 days after initial operation of the gas turbine. The initial NOx performance tests shall be conducted at approximately four evenly spaced points between the minimum normal operating load and 100% of peak load. Each of the three low-load NOx performance tests shall consist of three, 20-minute test runs. The peak load NOx performance test shall consist of three, 1-hour test runs. The CO performance tests shall be conducted concurrently with the NOx performance tests at peak load. SO2 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]
- 10. Annual Compliance Tests: During each federal fiscal year (October 1<sup>st</sup> to September 30<sup>th</sup>), the gas turbine shall be tested to demonstrate compliance with the emission standards for CO, NOx, and visible emissions. CO and NOx emissions shall be tested concurrently at permitted capacity. SO2 emissions shall be calculated based on fuel flow and vendor analysis of fuel sulfur content. [Rule and 62-297.310(7)(a)4, F.A.C. and to avoid Rule 62-212.400, F.A.C.]
- 11. 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**

- 12. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Section 4, Appendix SC of this permit. In addition, NOx emissions shall be corrected to ISO ambient atmospheric conditions and compared to the NSPS Subpart GG standard identified in Appendix GG of this permit for each required test. For each run, the test report shall also

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (Draft Permit)**

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**A. GAS TURBINE COMPRESSOR ENGINE NO. 1507 (EU-006)**

indicate the natural gas firing rate (cubic feet per hour), heat input rate (MMBtu per hour), the power output (bhp), percent base load, and the inlet compressor temperature. [Rule 62-297.310(8), F.A.C.; 40 CFR 60.334]

13. Custom Fuel Monitoring Schedule: In lieu of the NSPS fuel monitoring requirements of 40 CFR 60.334 of Subpart GG, the Department approves the custom fuel-monitoring schedule specified in Appendix FM of this permit. [Rule 62-4.070(3), F.A.C.; 40 CFR 60.334]
14. 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. Within the 10 days of a request by the Department or the Compliance Authority, the permittee shall 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 3. EMISSIONS UNIT SPECIFIC CONDITIONS (Draft Permit)

### B. GAS TURBINE COMPRESSOR ENGINE NO. 1508 (EU-004)

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

#### Emissions Unit No. 004: New Gas Turbine Compressor Engine No. 1508

*Description:* The new gas turbine is a Cooper-Rolls Model 501-KC7 DLE that will be used as a compressor engine for the natural gas pipeline.

*Fuel:* The gas turbine fires only natural gas (SCC No 2-02-002-01). The maximum natural gas firing rate is approximately 60,700 cubic feet per hour based on a heating value of 1040 BTU per SCF of gas.

*Capacity:* At a compressor inlet air temperature of 59° F, the gas turbine produces 7222 bhp when firing approximately 63 MMBtu (HHV) per hour of natural gas.

*Controls:* The efficient combustion of natural gas at high temperatures minimizes emissions of carbon monoxide (CO), particulate matter (PM/PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), and volatile organic compounds (VOC). Lean premix combustion technology reduces nitrogen oxide (NO<sub>x</sub>) emissions.

*Stack Parameters:* When operating at 100% capacity, exhaust gases exit a rectangular stack (88" x 66") that is 61.17 feet tall with a flow rate of approximately 98,400 acfm at 960° F.

#### APPLICABLE STANDARDS AND REGULATIONS

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

#### EQUIPMENT

2. Gas Turbine Compressor Engine No. 1508: The permittee is authorized to install, tune, maintain and operate a new Cooper-Rolls Model 501-KC7 DLE gas turbine as a pipeline compressor engine. The gas turbine design shall incorporate lean premix combustion technology to reduce emissions of nitrogen oxides below the permitted limits. Ancillary equipment includes an automated gas turbine control system, an inlet air filtration system, and a rectangular stack (88" x 66") that is 61.17 feet tall. The permittee identifies the gas turbine compressor engine as FGT No. 1508. [Applicant Request; Design]

#### PERFORMANCE RESTRICTIONS

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

**B. GAS TURBINE COMPRESSOR ENGINE NO. 1508 (EU-004)**

**EMISSIONS STANDARDS**

6. Emissions Standards: Emissions from the gas turbine shall not exceed the following limits for carbon monoxide (CO), nitrogen oxides (NOx), opacity, particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), and volatile organic compounds (VOC).

Pollutant	Standards		Equivalent Maximum Emissions		Rule Basis <sup>h</sup>
	Limit	Units	lb/hour <sup>f</sup>	TPY <sup>g</sup>	
CO <sup>a</sup>	50.0	ppmvd @ 15% O <sub>2</sub>	7.0	30.66	Avoid Rule 62-212.400, F.A.C.
NOx <sup>b</sup>	25.0	ppmvd @ 15% O <sub>2</sub>	5.7	24.97	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
SO <sub>2</sub> <sup>c</sup>	10.0 grains of sulfur per 100 SCF of natural gas		1.7	7.45	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.333
Opacity <sup>d</sup>	10% opacity, 6-minute average		Not Applicable		Avoid Rule 62-212.400, F.A.C.
PM <sup>e</sup>	Good combustion practices (Factor: 0.0066 lb/MMBtu)		0.4	1.75	Avoid Rule 62-212.400, F.A.C.
VOC <sup>e</sup>	Good combustion practices (Factor: 10 ppmvd @ 15% O <sub>2</sub> )		1.5	6.57	Avoid Rule 62-212.400, F.A.C.

- a. The CO standards are based on the average of three test runs as determined by EPA Method 10.
- b. The NOx standards are based on the average of three test runs as determined EPA Method 20.
- c. The fuel sulfur specification is based on the maximum limit specified by Federal Energy Regulatory Commission (FERC) and effectively limits the potential SO<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. 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. Equivalent maximum VOC emissions were based on vendor data. No testing required.
- f. Equivalent maximum hourly emission rates are the maximum expected emissions based on permitted capacity and a compressor inlet air temperature of 59° F. For comparison purposes, the permittee shall provide a reference table with the initial compliance test report of mass emission rates versus the compressor inlet temperatures. Each test report shall include measured mass emission rates for CO, NOx and SO<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. Equivalent maximum annual emissions are based on 8760 hours of operation per year.
- h. The emissions standards of this permit ensure that the project does not trigger the PSD preconstruction review requirements of Rule 62-212.400, F.A.C.

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (Draft Permit)**

**B. GAS TURBINE COMPRESSOR ENGINE NO. 1508 (EU-004)**

**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 {Notes: The method shall be based on a continuous sampling train. The ascarite trap may be omitted or the interference trap of section 10.1 may be used in lieu of the silica gel and ascarite traps.}
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Gas Turbines

Tests shall also be conducted in accordance with the requirements specified in Section 4, Appendix SC of this permit. The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for compliance testing unless prior written approval is received from the administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

8. Initial Compliance Tests: The gas turbine shall be tested to demonstrate initial compliance with the emission standards for CO, NOx, and visible emissions. The initial tests shall be conducted within 60 days after achieving at least 90% of the maximum permitted capacity, but not later than 180 days after initial operation of the gas turbine. The initial NOx performance tests shall be conducted at approximately four evenly spaced points between the minimum normal operating load and 100% of peak load. Each of the three low-load NOx performance tests shall consist of three, 20-minute test runs. The peak load NOx performance test shall consist of three, 1-hour test runs. The CO performance tests shall be conducted concurrently with the NOx performance tests at peak load. SO2 emissions shall be calculated based on an analysis of the natural gas fuel sulfur content. [Rule 62-297.310(7)(a)1, F.A.C.; 40 CFR 60.8 and 60.335]
9. Annual Compliance Tests: During each federal fiscal year (October 1<sup>st</sup> to September 30<sup>th</sup>), the gas turbine shall be tested to demonstrate compliance with the emission standards for CO, NOx, and visible emissions. CO and NOx emissions shall be tested concurrently at permitted capacity. SO2 emissions shall be calculated based on the vendor analysis of fuel sulfur content. [Rule and 62-297.310(7)(a)4, F.A.C. and to avoid Rule 62-212.400, F.A.C.]
10. Test Notification: The permittee shall notify the Compliance Authority in writing at least 30 days prior to any initial NSPS performance tests and at least 15 days prior to any other required tests. [Rule 62-297.310(7)(a)9, F.A.C.; 40 CFR 60.7 and, 60.8]

**RECORDS AND REPORTS**

11. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Section 4, Appendix SC of this permit. In addition, NOx emissions shall be corrected to ISO ambient atmospheric conditions and compared to the NSPS Subpart GG standard

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (Draft Permit)**

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**B. GAS TURBINE COMPRESSOR ENGINE NO. 1508 (EU-004)**

identified in Appendix GG of this permit for each required test. For each run, the test report shall indicate the natural gas firing rate (cubic feet per hour), heat input rate (MMBtu per hour), the power output (bhp), percent base load, and the inlet compressor temperature. [Rule 62-297.310(8), F.A.C.; 40 CFR 60.335]

12. Custom Fuel Monitoring Schedule: In lieu of the NSPS fuel monitoring requirements of 40 CFR 60.334 of Subpart GG, the Department approves the custom fuel-monitoring schedule specified in Appendix FM of this permit. [Rule 62-4.070(3), F.A.C.; 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. Within the 10 days of a request by the Department or the Compliance Authority, the permittee shall 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 3. EMISSIONS UNIT SPECIFIC CONDITIONS (Draft Permit)**

**C. MISCELLANEOUS ACTIVITIES**

This permit recognizes the following miscellaneous support activities.

<b>Emissions Unit No. 005: Miscellaneous Activities</b>	
004	Support equipment includes: <ul style="list-style-type: none"><li>• One Waukesha Model No. L36GL emergency generator (670 bhp) fired exclusively with natural gas and identified as FGT No. GEN03;</li><li>• Miscellaneous fugitive emission leaks from valves, flanges, etc.</li></ul>

*{Permitting Note: The new 670 bhp emergency generator (GEN 03) replaces a 150 bhp gas-fired emergency generator (GEN-01) and a 220 bhp gas-fired emergency generator (GEN-02).}*

**SECTION 4. APPENDICES**  
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- Appendix CF. Citation Format
- Appendix FM. Custom Fuel Monitoring Plan for NSPS Gas Turbines
- Appendix GC. General Conditions
- Appendix GG. NSPS Subpart GG Requirements for Gas Turbines
- 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 FM

CUSTOM FUEL MONITORING PLAN FOR NSPS GAS TURBINES

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

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

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



**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

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.

003	<b>FGT Unit Nos. 1507:</b> One up-rated 13,180 bhp natural gas-fired gas turbine (Solar Model No. Mars 90 T-13000S) was installed as a compressor engine in 1994, subject to PSD.
004	<b>FGT Unit Nos. 1508:</b> One 7222 bhp natural gas-fired gas turbine will be installed as a compressor engine (Cooper-Rolls Model 501-KC7-DLE) subject to the conditions of this permit.

**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).

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

- Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt-hour.
- F = 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" values when firing natural gas as provided by the manufacturer are approximately 12.7 and 11.23 for FGT Nos. 1507 and 1508, respectively. The equivalent emission standards are 170 and 192 ppmvd at 15% oxygen, respectively. The emissions standards in Section III of this permit are more stringent than this requirement.}

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

Section 60.333 Standard for sulfur dioxide.

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

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

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

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

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

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

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

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

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.}

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

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

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

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

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

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

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

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

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

**EMISSIONS AND CONTROLS**

1. **Plant Operation - Problems:** If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. **Circumvention:** The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. **Excess Emissions Allowed:** Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]
4. **Excess Emissions Prohibited:** Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
5. **Excess Emissions - Notification:** In case of excess emissions resulting from malfunctions, the 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. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(203), F.A.C.]
8. **General Visible Emissions:** No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. [Rule 62-296.320(4)(b)1, F.A.C.]
9. **Unconfined Particulate Emissions:** During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

**TESTING REQUIREMENTS**

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

**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



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**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:

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

**RECORDS AND REPORTS**

19. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]
20. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]



## Florida Gas Transmission Company

1967 Commonwealth Lane, Tallahassee, FL 32303, (850) 350-5000, Fax Downstairs (850) 350-5001, Fax Upstairs (850) 350-5002

June 6, 2002

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

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JUN 07 2002

BUREAU OF AIR REGULATION

Reference: Facility: 1230034  
Permit No. 1230034-007-AC  
Compressor Station No. 15, Perry, Taylor County

Dear Mr. Fancy:

**Subject: Application for Air Construction Permit Revision**

Florida Gas Transmission Company (FGT) has received the above referenced construction permit to increase the horsepower of an existing Solar Mars 90 turbine from 12,600 hp (ISO) to 13,000 hp (ISO). Solar Turbines cannot supply a Mars 90 turbine to replace the existing turbine and can only provide a Mars 100 de-rated to 13,000 hp (ISO). FGT is requesting a change of the existing construction permit to allow the replacement of the Mars 90 with a de-rated Mars 100. The de-rated Mars 100 has a slightly higher heat input than the Mars 90. Emissions will remain essentially the same and FGT requests that the emission limits in the construction permit not be changed.

Enclosed are supporting information and application pages for the proposed change. FGT understands that no processing fee is required since this facility is operated under a Part 70 Permit.

FGT respectfully requests that this application be expedited in order that the new turbine can be installed during the first week of July. Your expedited review will be greatly appreciated.

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

Sincerely,

Jacob Krautsch  
Division Environmental Specialist

## Attachments

CC: Rick Craig, w/o attachments  
Jim Thompson, Phase V  
V. Duane Pierce, Ph.D., AQMcs, LLC  
Larry Parrish, Compressor Station No. 15

## **Attachment A**

### **Comparison Tables And Supporting Information**

**Table 1. Engine Parameters: Mars 90 T-13000 vs. Mars 100 Derated to T-13000 at ISO Conditions**

Parameter	Mars 90 T-13000	Mars 100 Derated To T-13000
Compressor Engine	1507	1507
Type	Gas Turbine	Gas Turbine
Manufacturer	Solar	Solar
Unit Size	13,000 bhp (ISO)	13,000 bhp (ISO)
Heat Input <sup>a</sup>	8,419 Btu/hp-hr	8,165 Btu/hp-hr
Maximum Fuel Consumption <sup>b</sup>	0.1067 MMscf/hr	0.1099 MMscf/hr
Speed	8,779 rpm	8,982 rpm
Stack Parameters	60 ft	60 ft
Stack Height	7.55 ft x 7.55 ft	7.55 ft x 7.55 ft
Stack Diameter	(rectangular)	(rectangular)
Exhaust Gas Flow	177,911 acfm	184,818 acfm
Exhaust Temperature	868 °F	896 °F
Exhaust Gas Velocity	52.0 ft/sec	54.0 ft/sec
<p><b>NOTE:</b></p> <p>acfm = actual cubic feet per minute.  bhp = brake horsepower.  Btu/hp-hr = British thermal units per brake horsepower per hour.  °F = degrees Fahrenheit.  ft = feet.  ft/sec = feet per second.  MMscf/hr = million standard cubic feet per hour.  rpm = revolutions per minute.</p> <p><sup>a</sup> Based on vendor heat rate value plus 10%  <sup>b</sup> Based on vendor value plus 10% and heating value for natural gas of 1040 British thermal units per standard cubic foot (Btu/scf).</p>		

**Table 2. Emissions: Mars 90 T-13000 vs. Mars 100 Derated to T-13000 at ISO Conditions**

<b>Pollutant</b>	<b>Reference</b>	<b>Mars 90 Emissions (lb/hr)</b>	<b>Mars 100 Emissions (lb/hr)</b>
Nitrogen Oxides	Manufacturer Data	10.04	10.33
Carbon Monoxide	Manufacturer Data	12.23	12.58
Volatile Organic Compounds	Manufacturer Data	0.35	0.36
Particulate Matter*	AP-42, Table 3.1-2a	0.73	0.75
Sulfur Dioxide*	FERC Limit	3.05	3.14
HAPs	GRI HapCalc 3.0	0.63	0.63

### Applicability of New Source Performance Standards (NSPS)

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

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

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

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

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

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

For uprated Engine No. 1507

$$Y = \text{Btu/bhp-hr} \times 1.055 \text{ Kj/Btu} \times \text{hp-hr}/745.7 \text{ watt-hour}$$

$$= 8,982 \text{ Btu/bhp-hr} \times 1.055 \text{ Kj/Btu} \times \text{hp-hr}/745.7 \text{ watt-hour}$$

$$= 12.7 \text{ Kj/watt-hr}$$

$$STD = 0.0150 (14.4/12.7) + 0$$

$$= 0.017 \%$$

$$= 170 \text{ ppm}_v$$

# **ATTACHMENT B**

## **DEP Forms**



# APPLICATION FOR AIR PERMIT - TITLE V SOURCE

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

## I. APPLICATION INFORMATION

### Identification of Facility

1. Facility Owner/Company Name: Florida Gas Transmission Company	
2. Site Name: Compressor Station No. 15	
3. Facility Identification Number: 1230034 [ ] Unknown	
4. Facility Location: Street Address or Other Locator: P.O. Box 8 City: Perry County: Taylor Zip Code: 32347-0930	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

### Application Contact

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

### Application Processing Information (DEP Use)

1. Date of Receipt of Application:	6-7-02
2. Permit Number:	1230034-009-AE
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

**Purpose of Application**

**Air Operation Permit Application**

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

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

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

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

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

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

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

Operation permit number to be revised/corrected: 1230034-003-AV

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

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

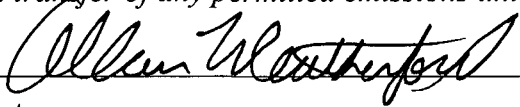
Reason for revision: \_\_\_\_\_

**Air Construction Permit Application**

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

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

**Owner/Authorized Representative or Responsible Official**

1. Name and Title of Owner/Authorized Representative or Responsible Official: Allan Weatherford, Tallahassee Regional Director
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Florida Gas Transmission Company Street Address: 1967 Commonwealth Lane City: Tallahassee State: FL Zip Code: 32303
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (850)350-5020 Fax: (850)350-5001
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [ ], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i>  Signature:  Date: 6/4/02

\* 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)380-5035 Fax: (850) 350-5001

4. Professional Engineer Statement:

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

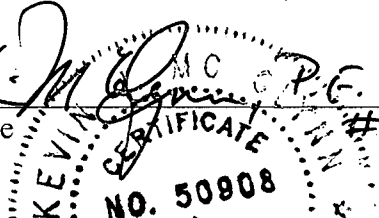
*(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant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

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

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

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

*If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.*

Signature *Kevin M. Garcia, P.E.*  
(seal)  #50908

Date *June 4, 2002*

\* Attach any exception to certification statement.

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**III. EMISSIONS UNIT INFORMATION**

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

**A. GENERAL EMISSIONS UNIT INFORMATION  
(All Emissions Units)**

**Emissions Unit Description and Status**

<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. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>13,000 ISO bhp natural gas fired turbine compressor unit, Engine No. 1507 (12,720 bhp at site elevation and with inlet and outlet losses).</p>			
<p>4. Emissions Unit Identification Number:</p> <p><input checked="" type="checkbox"/> No ID ID: 003</p>			
<p>5. Emissions Unit Status Code: A</p>	<p>6. Initial Startup Date: 4/2/02</p>	<p>7. Emissions Unit Major Group SIC Code: 49</p>	<p>8. Acid Rain Unit? <input type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>The existing Solar Mars 90 T-13000S turbine engine will be replaced by a Mars 100 derated to 13,000 bhp (ISO). 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 Information Section  2  of  4**

**Emissions Unit Control Equipment**

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

The proposed engine will incorporate dry, low NO<sub>x</sub> combustion technology.

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

**Emissions Unit Details**

1. Package Unit:		
Manufacturer:	Solar	Model
Number: Mars 100-T13000S		
2. Generator Nameplate Rating:		MW
3. Incinerator Information:		
	Dwell Temperature:	°F
	Dwell Time:	seconds
	Incinerator Afterburner Temperature:	°F

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

**Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate:	114.25 mmBtu/hr	
2. Maximum Incineration Rate:	NA	lb/hr
3. Maximum Process or Throughput Rate:	NA	
4. Maximum Production Rate:	NA	
5. Requested Maximum Operating Schedule:	24 hours/day	7 days/week
	52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		
Heat input is 114.25 MM Btu/hr based on vendor specifications of 103.86 MMBtu/hr plus 10%.		

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

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? 1507		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):  NA			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:  None			
5. Discharge Type Code: V	6. Stack Height: 60 feet	7. Exit Diameter: 7.55 x 7.55 feet	
8. Exit Temperature: 896 °F	9. Actual Volumetric Flow Rate: 184,818 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): 249.02 North (km): 3339.60			
14. Emission Point Comment (limit to 200 characters):			



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

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

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  Natural gas fired turbine engine driving a natural gas compressor, operating full time.		
2. Source Classification Code (SCC): 2-02-002-01		3. SCC Units: million cubic feet burned
4. Maximum Hourly Rate: 0.1099	5. Maximum Annual Rate: 962.30	6. Estimated Annual Activity Factor: NA
7. Maximum % Sulfur: 0.03	8. Maximum % Ash: 0.0	9. Million Btu per SCC Unit: 1040
10. Segment Comment (limit to 200 characters):  Fuel use based on vendor data plus 10%.  Percent Sulfur is based on maximum Federal Energy Regulatory Commission (FERC) limit of 10 gr S/100scf and gas density of 0.0455 lb/scf.		

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

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):		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):		

# **ATTACHMENT C**

## **Vendor Information**

**Solar Mars 100 Turbine Derated to T-13000S**

## Mars 15000S derated to 13000S hp at site conditions

SOLAR TURBINES INCORPORATED  
 ENGINE PERFORMANCE CODE REV. 2.88  
 CUSTOMER: Florida Gas  
 JOB ID:

DATE RUN: 30-MAY-02  
 RUN BY: witherspoon, leslie

MARS 100-T15000S  
 CS/MD  
 122F MATCH  
 GAS  
 TMF-2S REV. 3.1

### DATA FOR NOMINAL PERFORMANCE

Fuel Type	SD NATURAL GAS		
Elevation	Feet	110	
Inlet Loss	in. H2O	3.0	
Exhaust Loss	in. H2O	3.0	
Engine Inlet Temp.	Deg. F	59.0	95.0
Relative Humidity	%	60.0	60.0
Elevation Loss	Hp	52	43
Inlet Loss	Hp	167	143
Exhaust Loss	Hp	70	64
Driven Equipment Speed	RPM	8601	8413
Optimum Equipment Speed	RPM	8601	8413
Gas Generator Speed	RPM	10879	10811
Specified Load	Hp	12720	10380
Net Output Power	Hp	12720	10380
Fuel Flow	MMBtu/hr	103.86	91.00
Heat Rate	Btu/Hp-hr	8165	8767
Inlet Air Flow	lbm/hr	319182	280492
Engine Exhaust Flow	lbm/hr	323103	283925
PCD	psi(g)	222.9	195.1
PT Inlet Temp. (T5)	Deg. F	1286	1297
Display T5, S/W	Deg. F	1326	1329
Exhaust Temperature	Deg. F	896	940

SOLAR TURBINES INCORPORATED  
ENGINE PERFORMANCE CODE REV. 2.88  
CUSTOMER: Florida Gas  
JOB ID:

DATE RUN: 30-MAY-02  
RUN BY: witherspoon, leslie

NEW EQUIPMENT PREDICTED EMISSION PERFORMANCE  
DATA FOR POINT NUMBER 1

Fuel: SD NATURAL GAS Customer: Florida Gas  
Water Injection: NO Inquiry Number:  
Number of Engines Tested: 0  
Model: MARS 100-T15000S CS/MD 122F MATCH GAS  
SHIPMENTS AFTER 1/95  
Emissions Data: REV. 0.0

The following predicted emissions performance is based on the following  
specific single point: (see attached)

Hp= 12720, %Full Load= 86.9, Elev= 110 ft, %RH= 60.0, Temperature= 59.0 F

NOX		CO		UHC	
NOM	MAX	NOM	MAX	NOM	MAX
*	25.00	*	50.00	*	25.00 PPMvd at 15% O2
*	10.33	*	12.58	*	3.60 lbm/hr
*	45.24	*	55.09	*	15.78 ton/yr

\* NOMINAL EMISSIONS DATA UNAVAILABLE FOR THIS ENGINE  
-----

IMPORTANT NOTES

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

\*\*\*\*\* NOMINAL EMISSIONS DATA UNAVAILABLE \*\*\*\*\*

SOLAR TURBINES INCORPORATED  
ENGINE PERFORMANCE CODE REV. 2.88  
CUSTOMER: Florida Gas  
JOB ID:

DATE RUN: 30-MAY-02  
RUN BY: witherspoon, leslie

NEW EQUIPMENT PREDICTED EMISSION PERFORMANCE  
DATA FOR POINT NUMBER 2

Fuel: SD NATURAL GAS            Customer: Florida Gas  
Water Injection: NO            Inquiry Number:  
Number of Engines Tested: 0  
Model: MARS 100-T15000S   CS/MD   122F MATCH   GAS  
                      SHIPMENTS AFTER 1/95  
Emissions Data: REV. 0.0

The following predicted emissions performance is based on the following specific single point: (see attached)

Hp= 10380, %Full Load= 80.6, Elev= 110 ft, %RH= 60.0, Temperature= 95.0 F

NOX		CO		UHC		
NOM	MAX	NOM	MAX	NOM	MAX	
*	25.00	*	50.00	*	25.00	PPMvd at 15% O2
*	8.92	*	10.86	*	3.11	lbm/hr
*	39.06	*	47.56	*	13.62	ton/yr

\* NOMINAL EMISSIONS DATA UNAVAILABLE FOR THIS ENGINE  
-----

IMPORTANT NOTES

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



## Florida Gas Transmission Company

August 23, 2001

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

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Jeff Koerner, P.E.  
New Source Review Section  
Bureau of Air Regulation  
Florida Department of Environmental Protection  
Twin Towers Office Bldg.  
2600 Blairstone  
Tallahassee, FL 32399-2400

RECEIVED

AUG 27 2001

BUREAU OF AIR REGULATION

Reference: Request for Additional Information Dated July 18, 2001  
Project No. 1230034-007-AC  
Compressor Station No. 15 (Taylor County), Phase V Modification

Dear Mr. Koerner:

**Subject: Response to Request for Additional Information**

The following is being sent in response to the above referenced Request for Additional Information.

1. *For compressor engine no. 1507 (gas turbine), please identify:*

- *The date of the initial performance test;*

**Response:** The date of the initial performance test was March 17, 1995.

- *The date of commencement of commercial operation;*

**Response:** The date of commencement of commercial operation was October 14, 1994.

- *Any emission factors used in this application that differ from the initial air construction permit application, and;*

**Response:** The emission factors used in this application that differ from the initial air construction permit application are listed below. These differences are due to changes in vendor provided emission factors and fuel use for the proposed new turbine configuration versus the original configuration and to changes in AP-

42 emission factors. Additionally, HAP emissions were not estimated in the original application.

**Table 1. Changes in Emission Factors**

<b>Pollutant</b>	<b>Original Emission Factor</b>	<b>Source</b>	<b>New Emission Factor</b>	<b>Source</b>	<b>Comments</b>
NO <sub>x</sub>	16.14 lb/hr	Vendor	10.4 lb/hr	Vendor	Change reflects new engine size and better NO <sub>x</sub> control technology
CO	11.71 lb/hr	Vendor	12.23 lb/hr	Vendor	Change reflects new engine size and new NO <sub>x</sub> control technology
VOC	0.67 lb/hr	Vendor	0.35 lb/hr	Vendor	Change reflects new engine size and new NO <sub>x</sub> control technology
PM	5 lb/MMscf	AP-42 Table 1.4-1	0.0066 lb/MMBtu	AP-42, Table 3.1-2a, 04/00	PM emission changes due to revised AP-42 emission factors and change in fuel use
SO <sub>2</sub>	10 grains/100 scf	Vendor (fuel use)	10 grains/100 scf	Vendor (fuel use)	Emissions estimated by material balance and vendor provided fuel use
HAPS	None	NA	0.0217 g/bhp-hr	Gas Research Institute HapCalc 3 software	HAP factors were not available at time of original application

- *Any emissions standards requested in this application that differ from the current Title V operation permit.*

**Response:** The following emission standard changes have been requested:

**Table 2. Changes in Requested Standards**

<b>Emission Unit</b>	<b>Pollutant</b>	<b>Current Title V Standard</b>	<b>Requested New Standard</b>
1507	NO <sub>x</sub>	16.14 lb/hr (42 ppmv)	5.7 lb/hr (25 ppmv)
1507	SO <sub>2</sub>	3.61 lb/hr	3.05 lb/hr

Note: That the NO<sub>x</sub> emission rate on the current 1507 has been reduced to 25 ppmv (~9.61 lb/hr) but the permitted lb/hr and ton per year emission rates have not been changed.

2. *For the facility, were any existing emissions units modified or new emissions units added after 1995?*

**Response:** No new emission units were added. The original turbine 1507, a Mars 90 T-12000S (12,600 bhp), was replaced by a Mars 90 T-13000S (12,600 bhp) in December 1997. The original turbine had NO<sub>x</sub> emissions of 42 ppmv and the replacement unit had NO<sub>x</sub> emissions of 25 ppmv. This first Mars 90 T-13000S replacement unit was replaced with an identical second unit in March 1998 due to bearing problems in the first. NO<sub>x</sub> emissions of the second replacement unit were the same as the first replacement unit.

FGTC believes that the above responses do not constitute material changes to the application; therefore, a new certification statement by the authorized responsible official has not been included.

Additional Request: Ms. Hui Liang of the DEP Northeast District has indicated to Mr. Jake Krautsch that FGT should request that the particulate matter (PM) limits for the turbines be

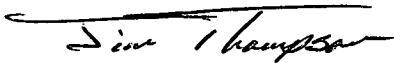


Florida Gas Transmission Company  
Response to July 18, RAI  
Project No. 1230034-007-AC  
August 23, 2001  
Page 4

dropped from the permit. FGT, therefore, requests that PM emission limits not be included in the permit for these turbines.

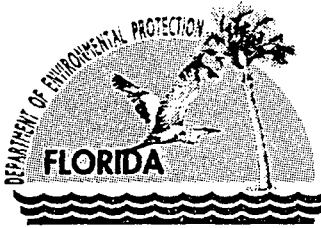
If you have any questions or need additional information, please call me at (800) 381-1477 or Dr. Duane Pierce at (281) 373-5365.

Sincerely,



Jim Thompson  
Project Manager, Environmental

CC: James Alexander, Phase V, w/o attachments  
Dan Pribble, w/o attachments  
Jim Thompson, Phase V  
Jake Krautsch, FGT  
V. Duane Pierce, Ph.D., AQMcs, LLC  
Larry Parrish, Compressor Station No. 15



# Department of Environmental Protection

Jeb Bush  
Governor

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

David B. Struhs  
Secretary

April 29, 2002

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Florida Gas Transmission Company  
1400 Smith Street  
Houston, TX 77002

*Authorized Representative:*

Mr. Danny Pribble, V.P. of Operations

Re: Florida Gas Transmission Company – Taylor County Compressor Station No. 15  
Extension of Air Construction Permit Expiration Date  
Air Permit No. 1230034-007-AC

Dear Mr. Pribble:

On April 24, 2002, Florida Gas Transmission Company requested an extension of the expiration date of air construction Permit No. 1230034-007-AC for the Taylor County Compressor Station No. 15 located on Pisgah Road approximately one mile east of U.S. Highway 19 near Perry in Taylor County, Florida. Florida Gas Transmission Company requests the additional time to complete construction, perform the required tests and submit a timely application for a Title V air operation permit. The Department approves this request.

The expiration date is hereby extended from **October 1, 2002** to **April 1, 2003** to provide the necessary time to complete construction and submit a complete application for a Title V air operation permit. This permitting action does not authorize any new construction. A copy of this letter shall be filed with the referenced permit and shall become part of the permit. This permitting decision is issued pursuant to Chapter 403, Florida Statutes.

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 of the Florida Statutes (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 of the Florida Administrative Code (F.A.C.)

*"More Protection, Less Process"*

*Printed on recycled paper.*

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.

Mediation is not available in this proceeding.

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. 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.

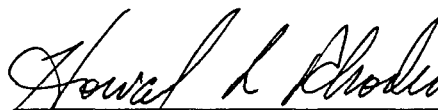
Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable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

This permitting decision is final and effective on the date filed with the clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition pursuant to Rule 62-110.106, F.A.C., and the petition conforms to the content requirements of Rules 28-106.201 and 28-106.301, F.A.C. Upon timely filing of a petition or a request for extension of time, this action will not be effective until further order of the Department.

Any party to this permitting decision (order) has the right to seek judicial review of it under Section 120.68, F.S., 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.



Howard L. Rhodes, Director  
Division of Air Resources Management

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this order was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on 4/29/02 to the person(s) listed:

Mr. Danny Pribble, 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.

Victoria Siskin  
(Clerk)

April 29, 2002  
(Date)

**SENDER: COMPLETE THIS SECTION**

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

1. Article Addressed to:

Mr. Danny Pribble  
 Vice President of Operations  
 Florida Gas Transmission Company  
 1400 Smith Street  
 Houston, TX 77002

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) *H. Wyatt* B. Date of Delivery *5-3-02*

C. Signature *H. Wyatt*  Agent  
 Addressee

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

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

4. Restricted Delivery? (Extra Fee)  Yes

7001 0320 0001 3692 8956

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

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

OFFICIAL USE

7001 0320 0001 3692 8956

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

Postmark  
 Here

Sent To  
 Danny Pribble  
 Street, Apt. No.  
 or P.O. Box No. Smith Street  
 City, State, ZIP+4  
 Houston, TX 77002

PS Form 3800, January 2001

See Reverse for Instructions

**SENDER: COMPLETE THIS SECTION**

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

1. Article Addressed to:

Mr. Danny Pribble  
 Vice President of Operations  
 Florida Gas Transmission Company  
 P.O. Box 1188  
 Houston, TX 77251

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly): *H. WYATT* Date of Delivery: *JUN 14 2000*

C. Signature: *H. WYATT*  Agent  Addressee

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

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

4. Restricted Delivery? (Extra Fee)  Yes

7001 0320 0001 3692 8482

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

7001 0320 0001 3692 8482

**OFFICIAL USE**

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	

Postmark  
Here

Total Mr. Danny Pribble  
 Vice President of Operations  
 Florida Gas Transmission Company  
 P.O. Box 1188  
 Houston, TX 77251

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Draft Air Permit No. 1230034-009-AC

Florida Gas Transmission Company

Taylor Compressor Station No. 15

Phase V Modifications, Replacement of Compressor Engine No. 1507

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification to the Florida Gas Transmission Company for equipment at Compressor Station No. 15; which is located on Pisgah Road approximately 1 mile east of U.S. Highway 19 near Perry in Taylor County, Florida. The applicant's authorized representative is Mr. Richard Craig, Vice President of Operations. The applicant's mailing address is Florida Gas Transmission Company, 1400 Smith Street, Houston, TX 77002.

The existing facility operates as a compressor station in Taylor County for Florida Gas Transmission Company's natural gas pipeline. It is considered a Title V and a PSD major source of air pollution. In October of 2001, the Department issued Permit No. 1230034-007-AC, which authorized the construction of a new 7222 bhp gas turbine compressor engine No. 1508, the up-rating of existing gas turbine compressor engine No. 1507 to 13,180 bhp, and the replacement of the two existing emergency generators with a single emergency generator. In conjunction with the up-rated compressor engine No. 1507, the applicant requested a lower NOx emissions standard, which allowed the project to net out of PSD preconstruction review.

For this project, the applicant requests modification of the previous permit to allow the replacement of existing compressor engine No. 1507 (Solar Mars 90 T-13000S) with a Solar Mars 100 T-13000S de-rated to 13,000 bhp. Although the heat input rate is slightly higher, the emissions standards remain unchanged. The overall project results in emissions increases from the new compressor engines and emergency generator as well as emissions decreases from the permanent shutdown of the existing Solar Mars 90 T-13000S gas turbine. The net emissions increases are: 74 tons of carbon monoxide per year; 33 tons of nitrogen oxides per year; 2 tons of particulate matter per year; 21 tons of sulfur dioxide per year; and 8 tons of volatile organic compounds per year. The project is not subject to PSD preconstruction review because the net emissions increases are less than the PSD significant emissions rates. In addition, total emissions of hazardous air pollutants (HAP) from the project are predicted to be less than 2 tons per year, which is much less than the HAP thresholds that would trigger a case-by-case MACT determination. Based on the manufacturer's estimated performance and the emissions standards established in the permit, the gas turbines will readily comply with the federal New Source Performance Standards of Subpart GG in 40 CFR 60, adopted by reference in Rule 62-204.800, 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 this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

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

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

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination. (c) A statement of how and

TALLAHASSEE DEMOCRAT  
PUBLISHED DAILY  
TALLAHASSEE-LEON-FLORIDA

STATE OF FLORIDA COUNTY OF LEON:

Before the undersigned authority personally appeared Don Morgan who on oath says that he is Legal Advertising Representative of the Tallahassee Democrat, a daily newspaper published at Tallahassee in Leon County, Florida; that the attached copy of advertising being a Legal Ad in the matter of

PUBLIC NOTICE OF INTENT

in the Second Judicial Circuit Court was published in said newspaper in the issues of:

JUNE 17, 2002

Affiant further says that the said Tallahassee Democrat is a newspaper published at Tallahassee, in the said Leon County, Florida, and that the said newspaper has heretofore been continuously published in said Leon County, Florida each day and has been entered as second class mail matter at the post office in Tallahassee, in said Leon 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 never paid nor promised any person, firm or coporation any discount, rebate, commission or refund for the purpose of securing this publication in the said newspaper.

DON MORGAN *Don Morgan*

LEGAL ADVERTISING REPRESENTATIVE

Sworn To or Affirmed and Subscribed Before Me.

This 18<sup>th</sup> Day of June 2002. by Katie Knight  
Personally Known *K*

OR Produced Identification \_\_\_\_\_

Type of Identification Produced \_\_\_\_\_

(SEAL)

Notary Public  
State of Florida



*Katie Knight*

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, Suite 200B  
Jacksonville, FL 32256-7590  
Telephone: 904/807-3300  
Fax: 904/448-4319

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.

JUNE 17, 2002



**SENDER: COMPLETE THIS SECTION**

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

1. Article Addressed to:

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

**COMPLETE THIS SECTION ON DELIVERY**

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

*H. Wyatt* JUL 06 2002

C. Signature  Agent  Addressee

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

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

4. Restricted Delivery? (Extra Fee)  Yes

7001 0320 0001 3692 8383

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

OFFICIAL USE

7001 0320 0001 3692 8383

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

Postmark  
Here

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



## Florida Gas Transmission Company

1967 Commonwealth Lane, Tallahassee, FL 32303, (850) 350-5000, Fax Downstairs (850) 350-5001, Fax Upstairs (850) 350-5002

June 6, 2002

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

JUN 07 2002

BUREAU OF AIR REGULATION

Reference: Facility: 1230034  
Permit No. 1230034-007-AC  
Compressor Station No. 15, Perry, Taylor County

Dear Mr. Fancy:

**Subject: Application for Air Construction Permit Revision**

Florida Gas Transmission Company (FGT) has received the above referenced construction permit to increase the horsepower of an existing Solar Mars 90 turbine from 12,600 hp (ISO) to 13,000 hp (ISO). Solar Turbines cannot supply a Mars 90 turbine to replace the existing turbine and can only provide a Mars 100 de-rated to 13,000 hp (ISO). FGT is requesting a change of the existing construction permit to allow the replacement of the Mars 90 with a de-rated Mars 100. The de-rated Mars 100 has a slightly higher heat input than the Mars 90. Emissions will remain essentially the same and FGT requests that the emission limits in the construction permit not be changed.

Enclosed are supporting information and application pages for the proposed change. FGT understands that no processing fee is required since this facility is operated under a Part 70 Permit.

FGT respectfully requests that this application be expedited in order that the new turbine can be installed during the first week of July. Your expedited review will be greatly appreciated.

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

Sincerely,

Jacob Krautsch  
Division Environmental Specialist

Attachments

CC: Rick Craig, w/o attachments  
Jim Thompson, Phase V  
V. Duane Pierce, Ph.D., AQMcs, LLC  
Larry Parrish, Compressor Station No. 15

## **Attachment A**

### **Comparison Tables And Supporting Information**

**Table 1. Engine Parameters: Mars 90 T-13000 vs. Mars 100 Derated to T-13000 at ISO Conditions**

Parameter	Mars 90 T-13000	Mars 100 Derated To T-13000
Compressor Engine	1507	1507
Type	Gas Turbine	Gas Turbine
Manufacturer	Solar	Solar
Unit Size	13,000 bhp (ISO)	13,000 bhp (ISO)
Heat Input <sup>a</sup>	8,419 Btu/hp-hr	8,165 Btu/hp-hr
Maximum Fuel Consumption <sup>b</sup>	0.1067 MMscf/hr	0.1099 MMscf/hr
Speed	8,779 rpm	8,982 rpm
Stack Parameters	60 ft	60 ft
Stack Height	7.55 ft x 7.55 ft	7.55 ft x 7.55 ft
Stack Diameter	(rectangular)	(rectangular)
Exhaust Gas Flow	177,911 acfm	184,818 acfm
Exhaust Temperature	868 °F	896 °F
Exhaust Gas Velocity	52.0 ft/sec	54.0 ft/sec

**NOTE:**

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

<sup>a</sup> Based on vendor heat rate value plus 10%

<sup>b</sup> Based on vendor value plus 10% and heating value for natural gas of 1040 British thermal units per standard cubic foot (Btu/scf).

**Table 2. Emissions: Mars 90 T-13000 vs. Mars 100 Derated to T-13000 at ISO Conditions**

<b>Pollutant</b>	<b>Reference</b>	<b>Mars 90 Emissions (lb/hr)</b>	<b>Mars 100 Emissions (lb/hr)</b>
Nitrogen Oxides	Manufacturer Data	10.04	10.33
Carbon Monoxide	Manufacturer Data	12.23	12.58
Volatile Organic Compounds	Manufacturer Data	0.35	0.36
Particulate Matter*	AP-42, Table 3.1-2a	0.73	0.75
Sulfur Dioxide*	FERC Limit	3.05	3.14
HAPs	GRI HapCalc 3.0	0.63	0.63

### Applicability of New Source Performance Standards (NSPS)

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

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

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

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

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

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

For uprated Engine No. 1507

$$Y = \text{Btu/bhp-hr} \times 1.055 \text{ Kj/Btu} \times \text{hp-hr}/745.7 \text{ watt-hour}$$

$$= 8,982 \text{ Btu/bhp-hr} \times 1.055 \text{ Kj/Btu} \times \text{hp-hr}/745.7 \text{ watt-hour}$$

$$= 12.7 \text{ Kj/watt-hr}$$

$$STD = 0.0150 (14.4/12.7) + 0$$

$$= 0.017 \%$$

$$= 170 \text{ ppm}_v$$

# **ATTACHMENT B**

## **DEP Forms**



# APPLICATION FOR AIR PERMIT - TITLE V SOURCE

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

## I. APPLICATION INFORMATION

### Identification of Facility

1. Facility Owner/Company Name: Florida Gas Transmission Company	
2. Site Name: Compressor Station No. 15	
3. Facility Identification Number: 1230034 [ ] Unknown	
4. Facility Location: Street Address or Other Locator: P.O. Box 8 City: Perry County: Taylor Zip Code: 32347-0930	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

### Application Contact

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

### Application Processing Information (DEP Use)

1. Date of Receipt of Application:	6-7-02
2. Permit Number:	12300 34-007-AC
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

**Purpose of Application**

**Air Operation Permit Application**

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

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

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

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

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

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

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

Operation permit number to be revised/corrected: 1230034-003-AV

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

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

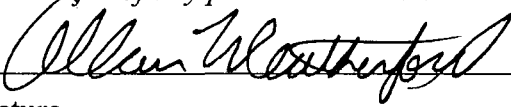
Reason for revision: \_\_\_\_\_

**Air Construction Permit Application**

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

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

**Owner/Authorized Representative or Responsible Official**

1. Name and Title of Owner/Authorized Representative or Responsible Official: Allan Weatherford, Tallahassee Regional Director
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Florida Gas Transmission Company Street Address: 1967 Commonwealth Lane City: Tallahassee State: FL Zip Code: 32303
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (850)350-5020 Fax: (850)350-5001
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [ ], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i>   Signature  6/4/02 Date

\* Attach letter of authorization if not currently on file.

**Professional Engineer Certification**

1. Professional Engineer Name: Kevin McGlynn Registration Number: 50908
2. Professional Engineer Mailing Address: Organization/Firm: McGlynn Consulting Company Street Address: 1967 Commonwealth Lane City: Tallahassee State: FL Zip Code: 32303
3. Professional Engineer Telephone Numbers: Telephone: (850)380-5035 Fax: (850) 350-5001

4. Professional Engineer Statement:

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

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

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

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

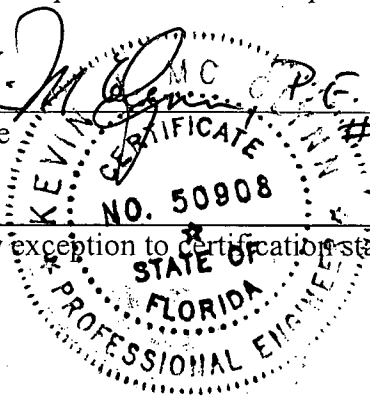
*If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [X], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me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

*If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ] , if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.*

Signature *Kevin J. Quinn, P.E.* #50908

Date *June 4, 2002*

(seal)



\* Attach any exception to certification statement.

**III. EMISSIONS UNIT INFORMATION**

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

**A. GENERAL EMISSIONS UNIT INFORMATION  
(All Emissions Units)**

**Emissions Unit Description and Status**

<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. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>13,000 ISO bhp natural gas fired turbine compressor unit, Engine No. 1507 (12,720 bhp at site elevation and with inlet and outlet losses).</p>			
<p>4. Emissions Unit Identification Number:</p> <p><input checked="" type="checkbox"/> No ID ID: 003</p>			
<p>5. Emissions Unit Status Code:</p> <p>A</p>	<p>6. Initial Startup Date: 4/2/02</p>	<p>7. Emissions Unit Major Group SIC Code:</p> <p>49</p>	<p>8. Acid Rain Unit?</p> <p><input type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>The existing Solar Mars 90 T-13000S turbine engine will be replaced by a Mars 100 derated to 13,000 bhp (ISO). 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 Information Section  2  of  4

**Emissions Unit Control Equipment**

<p>1. Control Equipment/Method Description (Limit to 200 characters per device or method):</p> <p>The proposed engine will incorporate dry, low NO<sub>x</sub> combustion technology.</p>
<p>2. Control Device or Method Code(s): NA</p>

**Emissions Unit Details**

<p>1. Package Unit:          Manufacturer: Solar Model          Number: Mars 100-T13000S</p>						
<p>2. Generator Nameplate Rating: MW</p>						
<p>3. Incinerator Information:</p> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 100px;">Dwell Temperature:</td> <td style="text-align: right;">°F</td> </tr> <tr> <td style="padding-left: 100px;">Dwell Time:</td> <td style="text-align: right;">seconds</td> </tr> <tr> <td style="padding-left: 50px;">Incinerator Afterburner Temperature:</td> <td style="text-align: right;">°F</td> </tr> </table>	Dwell Temperature:	°F	Dwell Time:	seconds	Incinerator Afterburner Temperature:	°F
Dwell Temperature:	°F					
Dwell Time:	seconds					
Incinerator Afterburner Temperature:	°F					

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

**Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate:	114.25 mmBtu/hr	
2. Maximum Incineration Rate:	NA	lb/hr
3. Maximum Process or Throughput Rate:	NA	
4. Maximum Production Rate:	NA	
5. Requested Maximum Operating Schedule:		
	24 hours/day	7 days/week
	52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		
Heat input is 114.25 MM Btu/hr based on vendor specifications of 103.86 MMBtu/hr plus 10%.		

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

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? 1507		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):  NA			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:  None			
5. Discharge Type Code: V	6. Stack Height: 60 feet	7. Exit Diameter: 7.55 x 7.55 feet	
8. Exit Temperature: 896 °F	9. Actual Volumetric Flow Rate: 184,818 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): 249.02 North (km): 3339.60			
14. Emission Point Comment (limit to 200 characters):			



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

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

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  Natural gas fired turbine engine driving a natural gas compressor, operating full time.		
2. Source Classification Code (SCC): 2-02-002-01		3. SCC Units: million cubic feet burned
4. Maximum Hourly Rate: 0.1099	5. Maximum Annual Rate: 962.30	6. Estimated Annual Activity Factor: NA
7. Maximum % Sulfur: 0.03	8. Maximum % Ash: 0.0	9. Million Btu per SCC Unit: 1040
10. Segment Comment (limit to 200 characters):  Fuel use based on vendor data plus 10%.  Percent Sulfur is based on maximum Federal Energy Regulatory Commission (FERC) limit of 10 gr S/100scf and gas density of 0.0455 lb/scf.		

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

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):		
2. Source Classification Code (SCC):		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):		

# **ATTACHMENT C**

## **Vendor Information**

**Solar Mars 100 Turbine Derated to T-13000S**

# Mars 15000S derated to 13000S hp at site conditions

SOLAR TURBINES INCORPORATED  
 ENGINE PERFORMANCE CODE REV. 2.88  
 CUSTOMER: Florida Gas  
 JOB ID:

DATE RUN: 30-MAY-02  
 RUN BY: witherspoon, leslie

MARS 100-T15000S  
 CS/MD  
 122F MATCH  
 GAS  
 TMF-2S REV. 3.1

## DATA FOR NOMINAL PERFORMANCE

Fuel Type	SD NATURAL GAS		
Elevation	Feet	110	
Inlet Loss	in. H2O	3.0	
Exhaust Loss	in. H2O	3.0	
Engine Inlet Temp.	Deg. F	59.0	95.0
Relative Humidity	%	60.0	60.0
Elevation Loss	Hp	52	43
Inlet Loss	Hp	167	143
Exhaust Loss	Hp	70	64
Driven Equipment Speed	RPM	8601	8413
Optimum Equipment Speed	RPM	8601	8413
Gas Generator Speed	RPM	10879	10811
Specified Load	Hp	12720	10380
Net Output Power	Hp	12720	10380
Fuel Flow	MMBtu/hr	103.86	91.00
Heat Rate	Btu/Hp-hr	8165	8767
Inlet Air Flow	lbm/hr	319182	280492
Engine Exhaust Flow	lbm/hr	323103	283925
PCD	psi(g)	222.9	195.1
PT Inlet Temp. (T5)	Deg. F	1286	1297
Display T5, S/W	Deg. F	1326	1329
Exhaust Temperature	Deg. F	896	940

SOLAR TURBINES INCORPORATED  
ENGINE PERFORMANCE CODE REV. 2.88  
CUSTOMER: Florida Gas  
JOB ID:

DATE RUN: 30-MAY-02  
RUN BY: witherspoon, leslie

NEW EQUIPMENT PREDICTED EMISSION PERFORMANCE  
DATA FOR POINT NUMBER 1

Fuel: SD NATURAL GAS                      Customer: Florida Gas  
Water Injection: NO                        Inquiry Number:  
Number of Engines Tested: 0  
Model: MARS 100-T15000S   CS/MD   122F MATCH   GAS  
    SHIPMENTS AFTER 1/95  
Emissions Data: REV. 0.0

The following predicted emissions performance is based on the following  
specific single point: (see attached)

Hp= 12720, %Full Load= 86.9, Elev= 110 ft, %RH= 60.0, Temperature= 59.0 F

NOX		CO		UHC	
NOM	MAX	NOM	MAX	NOM	MAX
*	25.00	*	50.00	*	25.00 PPMvd at 15% O2
*	10.33	*	12.58	*	3.60 lbm/hr
*	45.24	*	55.09	*	15.78 ton/yr

\* NOMINAL EMISSIONS DATA UNAVAILABLE FOR THIS ENGINE  
-----

IMPORTANT NOTES

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

\*\*\*\*\* NOMINAL EMISSIONS DATA UNAVAILABLE \*\*\*\*\*

SOLAR TURBINES INCORPORATED  
ENGINE PERFORMANCE CODE REV. 2.88  
CUSTOMER: Florida Gas  
JOB ID:

DATE RUN: 30-MAY-02  
RUN BY: witherspoon, leslie

NEW EQUIPMENT PREDICTED EMISSION PERFORMANCE  
DATA FOR POINT NUMBER 2

Fuel: SD NATURAL GAS                   Customer: Florida Gas  
Water Injection: NO                    Inquiry Number:  
Number of Engines Tested: 0  
Model: MARS 100-T15000S   CS/MD   122F MATCH   GAS  
  SHIPMENTS AFTER 1/95  
Emissions Data: REV. 0.0

The following predicted emissions performance is based on the following  
specific single point: (see attached)

Hp= 10380, %Full Load= 80.6, Elev= 110 ft, %RH= 60.0, Temperature= 95.0 F

NOX		CO		UHC	
NOM	MAX	NOM	MAX	NOM	MAX
*	25.00	*	50.00	*	25.00 PPMvd at 15% O2
*	8.92	*	10.86	*	3.11 lbm/hr
*	39.06	*	47.56	*	13.62 ton/yr

\* NOMINAL EMISSIONS DATA UNAVAILABLE FOR THIS ENGINE  
-----

IMPORTANT NOTES

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



## Florida Gas Transmission Company

1967 Commonwealth Lane, Tallahassee, FL 32303, (850) 350-5000, Fax Downstairs (850) 350-5001, Fax Upstairs (850) 350-5002

June 6, 2002

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

JUN 07 2002

BUREAU OF AIR REGULATION

Reference: Facility: 1230034  
Permit No. 1230034-007-AC  
Compressor Station No. 15, Perry, Taylor County

Dear Mr. Fancy:

**Subject: Application for Air Construction Permit Revision**

Florida Gas Transmission Company (FGT) has received the above referenced construction permit to increase the horsepower of an existing Solar Mars 90 turbine from 12,600 hp (ISO) to 13,000 hp (ISO). Solar Turbines cannot supply a Mars 90 turbine to replace the existing turbine and can only provide a Mars 100 de-rated to 13,000 hp (ISO). FGT is requesting a change of the existing construction permit to allow the replacement of the Mars 90 with a de-rated Mars 100. The de-rated Mars 100 has a slightly higher heat input than the Mars 90. Emissions will remain essentially the same and FGT requests that the emission limits in the construction permit not be changed.

Enclosed are supporting information and application pages for the proposed change. FGT understands that no processing fee is required since this facility is operated under a Part 70 Permit.

FGT respectfully requests that this application be expedited in order that the new turbine can be installed during the first week of July. Your expedited review will be greatly appreciated.

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

Sincerely,

Jacob Krautsch  
Division Environmental Specialist

Attachments

CC: Rick Craig, w/o attachments  
Jim Thompson, Phase V  
V. Duane Pierce, Ph.D., AQMcs, LLC  
Larry Parrish, Compressor Station No. 15

## **Attachment A**

### **Comparison Tables And Supporting Information**



**Table 1. Engine Parameters: Mars 90 T-13000 vs. Mars 100 Derated to T-13000 at ISO Conditions**

Parameter	Mars 90 T-13000	Mars 100 Derated To T-13000
Compressor Engine	1507	1507
Type	Gas Turbine	Gas Turbine
Manufacturer	Solar	Solar
Unit Size	13,000 bhp (ISO)	13,000 bhp (ISO)
Heat Input <sup>a</sup>	8,419 Btu/hp-hr	8,165 Btu/hp-hr
Maximum Fuel Consumption <sup>b</sup>	0.1067 MMscf/hr	0.1099 MMscf/hr
Speed	8,779 rpm	8,982 rpm
Stack Parameters	60 ft	60 ft
Stack Height	7.55 ft x 7.55 ft	7.55 ft x 7.55 ft
Stack Diameter	(rectangular)	(rectangular)
Exhaust Gas Flow	177,911 acfm	184,818 acfm
Exhaust Temperature	868 °F	896 °F
Exhaust Gas Velocity	52.0 ft/sec	54.0 ft/sec

**NOTE:**

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

<sup>a</sup> Based on vendor heat rate value plus 10%

<sup>b</sup> Based on vendor value plus 10% and heating value for natural gas of 1040 British thermal units per standard cubic foot (Btu/scf).

**Table 2. Emissions: Mars 90 T-13000 vs. Mars 100 Derated to T-13000 at ISO Conditions**

<b>Pollutant</b>	<b>Reference</b>	<b>Mars 90 Emissions (lb/hr)</b>	<b>Mars 100 Emissions (lb/hr)</b>
Nitrogen Oxides	Manufacturer Data	10.04	10.33
Carbon Monoxide	Manufacturer Data	12.23	12.58
Volatile Organic Compounds	Manufacturer Data	0.35	0.36
Particulate Matter*	AP-42, Table 3.1-2a	0.73	0.75
Sulfur Dioxide*	FERC Limit	3.05	3.14
HAPs	GRI HapCalc 3.0	0.63	0.63

### Applicability of New Source Performance Standards (NSPS)

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

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

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

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

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

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

For uprated Engine No. 1507

$$Y = \text{Btu/bhp-hr} \times 1.055 \text{ Kj/Btu} \times \text{hp-hr}/745.7 \text{ watt-hour}$$

$$= 8,982 \text{ Btu/bhp-hr} \times 1.055 \text{ Kj/Btu} \times \text{hp-hr}/745.7 \text{ watt-hour}$$

$$= 12.7 \text{ Kj/watt-hr}$$

$$STD = 0.0150 (14.4/12.7) + 0$$

$$= 0.017 \%$$

$$= 170 \text{ ppm}_v$$

# **ATTACHMENT B**

## **DEP Forms**

# APPLICATION FOR AIR PERMIT - TITLE V SOURCE

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

## I. APPLICATION INFORMATION

### Identification of Facility

1. Facility Owner/Company Name: Florida Gas Transmission Company	
2. Site Name: Compressor Station No. 15	
3. Facility Identification Number: 1230034 [ ] Unknown	
4. Facility Location: Street Address or Other Locator: P.O. Box 8 City: Perry County: Taylor Zip Code: 32347-0930	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

### Application Contact

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

### Application Processing Information (DEP Use)

1. Date of Receipt of Application:	6-7-02
2. Permit Number:	1230034-007-AC
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

**Purpose of Application**

**Air Operation Permit Application**

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

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

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

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

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

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

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

Operation permit number to be revised/corrected: 1230034-003-AV

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

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

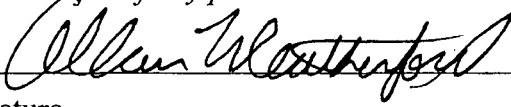
Reason for revision: \_\_\_\_\_

**Air Construction Permit Application**

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

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

**Owner/Authorized Representative or Responsible Official**

1. Name and Title of Owner/Authorized Representative or Responsible Official: Allan Weatherford, Tallahassee Regional Director
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Florida Gas Transmission Company Street Address: 1967 Commonwealth Lane City: Tallahassee State: FL Zip Code: 32303
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (850)350-5020 Fax: (850)350-5001
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [ ], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i>   _____ Signature  6/4/02 _____ Date

\* Attach letter of authorization if not currently on file.

**Professional Engineer Certification**

1. Professional Engineer Name: Kevin McGlynn Registration Number: 50908
2. Professional Engineer Mailing Address: Organization/Firm: McGlynn Consulting Company Street Address: 1967 Commonwealth Lane City: Tallahassee State: FL Zip Code: 32303
3. Professional Engineer Telephone Numbers: Telephone: (850)380-5035 Fax: (850) 350-5001

4. Professional Engineer Statement:

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

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

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

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

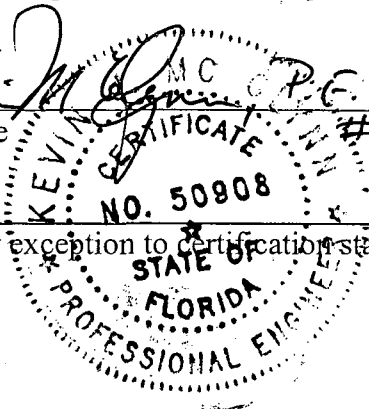
*If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [X], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me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

*If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.*

Signature  #50908

Date June 4, 2002

(seal)



\* Attach any exception to certification statement.



**III. EMISSIONS UNIT INFORMATION**

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

**A. GENERAL EMISSIONS UNIT INFORMATION  
(All Emissions Units)**

**Emissions Unit Description and Status**

<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. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>13,000 ISO bhp natural gas fired turbine compressor unit, Engine No. 1507 (12,720 bhp at site elevation and with inlet and outlet losses).</p>			
<p>4. Emissions Unit Identification Number:</p> <p><input checked="" type="checkbox"/> No ID ID: 003</p>			
<p>5. Emissions Unit Status Code:</p> <p>A</p>	<p>6. Initial Startup Date: 4/2/02</p>	<p>7. Emissions Unit Major Group SIC Code:</p> <p>49</p>	<p>8. Acid Rain Unit?</p> <p><input type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>The existing Solar Mars 90 T-13000S turbine engine will be replaced by a Mars 100 derated to 13,000 bhp (ISO). 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 Information Section  2  of  4

**Emissions Unit Control Equipment**

<p>1. Control Equipment/Method Description (Limit to 200 characters per device or method):</p> <p>The proposed engine will incorporate dry, low NO<sub>x</sub> combustion technology.</p>
<p>2. Control Device or Method Code(s): NA</p>

**Emissions Unit Details**

<p>1. Package Unit:          Manufacturer: Solar Model          Number: Mars 100-T13000S</p>						
<p>2. Generator Nameplate Rating: MW</p>						
<p>3. Incinerator Information:</p> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 40px;">Dwell Temperature:</td> <td style="text-align: right;">°F</td> </tr> <tr> <td style="padding-left: 40px;">Dwell Time:</td> <td style="text-align: right;">seconds</td> </tr> <tr> <td style="padding-left: 20px;">Incinerator Afterburner Temperature:</td> <td style="text-align: right;">°F</td> </tr> </table>	Dwell Temperature:	°F	Dwell Time:	seconds	Incinerator Afterburner Temperature:	°F
Dwell Temperature:	°F					
Dwell Time:	seconds					
Incinerator Afterburner Temperature:	°F					

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

**Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate:	114.25 mmBtu/hr
2. Maximum Incineration Rate:	NA lb/hr
3. Maximum Process or Throughput Rate:	NA
4. Maximum Production Rate:	NA
5. Requested Maximum Operating Schedule:	
	24 hours/day                      7 days/week
	52 weeks/year                      8760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):	
Heat input is 114.25 MM Btu/hr based on vendor specifications of 103.86 MMBtu/hr plus 10%.	

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

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? 1507		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):  NA			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:  None			
5. Discharge Type Code: V	6. Stack Height: 60 feet	7. Exit Diameter: 7.55 x 7.55 feet	
8. Exit Temperature: 896 °F	9. Actual Volumetric Flow Rate: 184,818 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): 249.02 North (km): 3339.60			
14. Emission Point Comment (limit to 200 characters):			

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

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

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  Natural gas fired turbine engine driving a natural gas compressor, operating full time.		
2. Source Classification Code (SCC): 2-02-002-01		3. SCC Units: million cubic feet burned
4. Maximum Hourly Rate: 0.1099	5. Maximum Annual Rate: 962.30	6. Estimated Annual Activity Factor: NA
7. Maximum % Sulfur: 0.03	8. Maximum % Ash: 0.0	9. Million Btu per SCC Unit: 1040
10. Segment Comment (limit to 200 characters):  Fuel use based on vendor data plus 10%.  Percent Sulfur is based on maximum Federal Energy Regulatory Commission (FERC) limit of 10 gr S/100scf and gas density of 0.0455 lb/scf.		

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

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):		
2. Source Classification Code (SCC):		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):		

# **ATTACHMENT C**

## **Vendor Information**

**Solar Mars 100 Turbine Derated to T-13000S**

**Mars 15000S derated to 13000S hp at site conditions**

SOLAR TURBINES INCORPORATED  
 ENGINE PERFORMANCE CODE REV. 2.88  
 CUSTOMER: Florida Gas  
 JOB ID:

DATE RUN: 30-MAY-02  
 RUN BY: witherspoon, leslie

MARS 100-T15000S  
 CS/MD  
 122F MATCH  
 GAS  
 TMF-2S REV. 3.1

DATA FOR NOMINAL PERFORMANCE

Fuel Type	SD NATURAL GAS		
Elevation	Feet	110	
Inlet Loss	in. H2O	3.0	
Exhaust Loss	in. H2O	3.0	
Engine Inlet Temp.	Deg. F	59.0	95.0
Relative Humidity	%	60.0	60.0
Elevation Loss	Hp	52	43
Inlet Loss	Hp	167	143
Exhaust Loss	Hp	70	64
Driven Equipment Speed	RPM	8601	8413
Optimum Equipment Speed	RPM	8601	8413
Gas Generator Speed	RPM	10879	10811
Specified Load	Hp	12720	10380
Net Output Power	Hp	12720	10380
Fuel Flow	MMBtu/hr	103.86	91.00
Heat Rate	Btu/Hp-hr	8165	8767
Inlet Air Flow	lbm/hr	319182	280492
Engine Exhaust Flow	lbm/hr	323103	283925
PCD	psi(g)	222.9	195.1
PT Inlet Temp. (T5)	Deg. F	1286	1297
Display T5, S/W	Deg. F	1326	1329
Exhaust Temperature	Deg. F	896	940

SOLAR TURBINES INCORPORATED  
 ENGINE PERFORMANCE CODE REV. 2.88  
 CUSTOMER: Florida Gas  
 JOB ID:

DATE RUN: 30-MAY-02  
 RUN BY: witherspoon, leslie

NEW EQUIPMENT PREDICTED EMISSION PERFORMANCE  
 DATA FOR POINT NUMBER 1

Fuel: SD NATURAL GAS Customer: Florida Gas  
 Water Injection: NO Inquiry Number:  
 Number of Engines Tested: 0  
 Model: MARS 100-T15000S CS/MD 122F MATCH GAS  
 SHIPMENTS AFTER 1/95  
 Emissions Data: REV. 0.0

The following predicted emissions performance is based on the following specific single point: (see attached)

Hp= 12720, %Full Load= 86.9, Elev= 110 ft, %RH= 60.0, Temperature= 59.0 F

NOX		CO		UHC	
NOM	MAX	NOM	MAX	NOM	MAX
*	25.00	*	50.00	*	25.00 PPMvd at 15% O2
*	10.33	*	12.58	*	3.60 lbm/hr
*	45.24	*	55.09	*	15.78 ton/yr

\* NOMINAL EMISSIONS DATA UNAVAILABLE FOR THIS ENGINE  
 -----

IMPORTANT NOTES

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

\*\*\*\*\* NOMINAL EMISSIONS DATA UNAVAILABLE \*\*\*\*\*



SOLAR TURBINES INCORPORATED  
ENGINE PERFORMANCE CODE REV. 2.88  
CUSTOMER: Florida Gas  
JOB ID:

DATE RUN: 30-MAY-02  
RUN BY: witherspoon, leslie

NEW EQUIPMENT PREDICTED EMISSION PERFORMANCE  
DATA FOR POINT NUMBER 2

Fuel: SD NATURAL GAS Customer: Florida Gas  
Water Injection: NO Inquiry Number:  
Number of Engines Tested: 0  
Model: MARS 100-T15000S CS/MD 122F MATCH GAS  
SHIPMENTS AFTER 1/95  
Emissions Data: REV. 0.0

The following predicted emissions performance is based on the following  
specific single point: (see attached)

Hp= 10380, %Full Load= 80.6, Elev= 110 ft, %RH= 60.0, Temperature= 95.0 F

NOX		CO		UHC	
NOM	MAX	NOM	MAX	NOM	MAX
*	25.00	*	50.00	*	25.00 PPMvd at 15% O2
*	8.92	*	10.86	*	3.11 lbm/hr
*	39.06	*	47.56	*	13.62 ton/yr

\* NOMINAL EMISSIONS DATA UNAVAILABLE FOR THIS ENGINE  
-----

IMPORTANT NOTES

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