Florida Department of Environmental Protection

Southwest District Office
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926

PERMITTEE

Florida Gas Transmission Company
2405 Lucien Way, Suite 200
Maitland, FL 32751-7047

Authorized Representative:
David W. Shellhouse Vice President, Southeast Operations

Air Permit No. 0170035-016-AO
Air Operation Permit

FGTC Station 26, Lecanto, Citrus Co.
Citrus County, Florida

PROJECT

This is the final air operation permit, which authorizes the operation of FGTC Station 26, Lecanto, Citrus Co., which is a natural gas pipeline compressor station facility (Standard Industrial Classification No. 4922). This project renews Air Operation permit 0170035-014-AO for this facility. The facility is located in Citrus County at 245 North Maylen Road in Lecanto, Florida. The UTM coordinates are Zone 17, 353.2 km East, and 3194.0 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); and Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

Permitting Authority: Applications for air operation permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4 and 62-210 of the Florida Administrative Code (F.A.C.). The Permitting Authority responsible for making a permit determination for this project is the District Office. The Permitting Authority's physical address is: 13051 North Telecom Parkway, Temple Terrace, Florida 33637-0926. The Permitting Authority's mailing address is: 13051 North Telecom Parkway, Temple Terrace, Florida 33637-0926. The Permitting Authority's telephone number is 813-470-5700.

Petitions. A person whose substantial interests are affected by the proposed decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Department's Office of General Counsel, MS #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, Agency_Clerk@dep.state.fl.us. Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this notice. Petitions filed by any other person must be filed within 14 days of receipt of this proposed action. A petitioner must 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 each 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, as well as the rules and statutes which entitle the petitioner to relief; (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 permitting authority'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 permitting authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

Effective Date: This permitting decision is final and effective on the date filed with the clerk of the Permitting Authority 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 Permitting Authority.

Judicial Review: 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 30 days after this order is filed with the clerk of the Department.

0170035-016-AO Effective Date: July 26th, 2016
Renewal Application Due Date: May 27th, 2021
Expiration Date: July 26th, 2021

Executed in Hillsborough County, Florida.

for

Pamala Vazquez
Program Administrator
Permitting & Waste Cleanup Program
Southwest District

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Air Permit package was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on the date indicated below to the following persons.

David W. Shellhouse, Florida Gas Transmission Company, dave.shellhouse@energytransfer.com
Janice Taylor, Florida Gas Transmission Company, janice.taylor@energytransfer.com
Bob Thompson, Florida Gas Transmission Company, bob.thompson@energytransfer.com
Max Grondahl, Florida DEP Southwest District, max.grondahl@dep.state.fl.us
Danielle Henry, Florida DEP Southwest District, danielle.d.henry@dep.state.fl.us

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

Cathy Rodriguez July 26th, 2016
(Clerk) (Date)

FACILITY DESCRIPTION

This facility is a natural gas pipeline compression station comprised of two natural gas-fired turbines. The facility also includes two emergency generators and ancillary equipment that are exempt from air permitting requirements.

The existing facility consists of the following emissions units (EU).

EU No.	Emission Unit Description
001	Engine 2601 - 7000 bhp gas turbine compressor engine
004	Engine 2603 - 20,500 bhp combustion turbine compressor engine

1. APPLICABLE REGULATIONS

A summary of applicable regulations is shown in the following table.

Regulation	EU No(s).
Federal Rule Citations	
40 CFR 60, Subpart A, NSPS General Provisions	001, 004
40 CFR 60, Subpart GG – Standards of Performance for Stationary Gas Turbines	001
40 CFR 60, Subpart KKKK – Standards of Performance for Stationary Combustion Turbines	004
State Rule Citations	
Rule 62-204.800, F.A.C., Federal Regulations Adopted by Reference	001, 004
Rule 62-210.300, F.A.C., Permits Required	All
Rule 62-297.310, F.A.C., General Compliance Test Requirements	004

EXEMPT EMISSION SOURCES/ACTIVITIES

- Miscellaneous Support Equipment including one 500 gallon petroleum contact water (PCW) storage tank, one 100 barrel condensate storage tank, three pressurized odorant tanks, two lubricating oil storage tanks, one used lubricating oil storage tank, oil drums, and pipeline equipment such as valves and flanges, all of which are potential sources of fugitive volatile organic compound (VOC) emissions. These tanks and equipment are exempt from permitting in accordance with the provisions of Rule 62-210.300(3)(b)(1), F.A.C. (Generic Emission Unit or Activity Exemption). [Rule 62-210.300(3)(b)(1), F.A.C.]

{Permitting Note – Several of the storage tanks were assigned Emission Unit ID No. 003 in Construction Permit 0170035-012-AC.}

- Two Emergency Generator Stationary Spark Ignition (SI) Reciprocating Internal Combustion Engines (RICE) consisting of GEN03 and GEN04, each of which are Generac® emergency generators with 454 HP natural gas-fired spark ignition (SI) four-stroke rich burn (4SRB) reciprocating internal combustion engines (RICE). These engines are exempt from permitting in accordance with the provisions of Rule 62-210.300(3)(a)(35), F.A.C. (Stationary Reciprocating Internal Combustion Engines). These SI 4SRB RICE engines are subject to and shall comply with the applicable requirements of Federal New Source Performance Standard (NSPS) 40 CFR 60 Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines). These engines are also subject to Federal NESHAP 40 CFR 63 Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines), but in accordance with Subpart ZZZZ 40 CFR 63.6590(c)(1), these engines must meet the requirements of Subpart ZZZZ by meeting the requirements of NSPS 40 CFR 60 Subpart JJJJ, and no further requirements apply under Subpart ZZZZ.) [Rule 62-210.300(3)(a)(35)(c), F.A.C.]

{Permitting Note – These two emergency generator engines combined were assigned EU ID No. 005 in Construction Permit 0170035-012-AC.}

FACILITY REGULATORY CLASSIFICATION

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is not a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.
- This facility is a natural minor source of air pollution.

PERMIT HISTORY/AFFECTED PERMITS

This permit replaces Operation Permit No. 0170035-014-AO.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Southwest District of the Department of Environmental Protection (Department). The mailing address, phone number and e-mail address is:

   Florida Department of Environmental Protection
   Southwest District Office
   Air and Solid Waste Permitting Program
   13051 North Telecom Parkway
   Temple Terrace, Florida 33637-0926
   Telephone: 813-470-5700
   E-mail: SWD_Air_Permitting@dep.state.fl.us

   All documents related to applications for permits to operate an emissions unit shall be submitted to the above e-mail address and/or address.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Florida Department of Environmental Protection (Department), Southwest District Office's Compliance Assurance Program. The mailing address, phone number and e-mail address is:

   Florida Department of Environmental Protection
   Southwest District Office
   Compliance Assurance Program
   13051 North Telecom Parkway
   Temple Terrace, Florida 33637-0926
   Telephone: 813-470-5700
   E-mail: SWD_Air@dep.state.fl.us

3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); Appendix D (Common Testing Requirements); Appendix NSPS 40 CFR 60 Subpart A - General Provisions; Appendix NSPS 40 CFR 60 Subpart GG - Standards of Performance for Stationary Gas Turbines; and Appendix NSPS 40 CFR 60 Subpart KKKK - Standards of Performance for Stationary Combustion Turbines.

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

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 new emissions unit shall be constructed and no existing emissions unit shall be 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. Renewal. Prior to 60 days before the expiration date of this permit, the permittee shall apply for a renewal of the permit. A renewal application shall be timely and sufficient. If the application is submitted prior to 60 days before expiration of the permit, it will be considered timely and sufficient. If the renewal application is submitted at a later date, it will not be considered timely and sufficient unless it is submitted and made complete prior to the expiration of the operation permit. When the application for renewal is timely and sufficient, the existing permit shall remain in effect until the renewal application has been finally acted upon by the Department. To properly apply for an operation permit, the applicant shall submit the following:

   a. the appropriate permit application form *(see current version of Rule 62-210.900, F.A.C. (Forms and Instructions), and/or FDEP Division of Air Resource Management website at: http://www.dep.state.fl.us/air/)*;

   b. the appropriate operation permit application fee from Rule 62-4.050(4)(a), F.A.C.; and

   c. copies of the most recent compliance test reports required by Specific Condition Nos. A.10. & B.9., if not previously submitted.

   [Rules 62-4.090, 62-210.300(2), and 62-210.900, F.A.C.]

A. EU 001 - Engine 2601

This section of the permit addresses the following emissions unit.

EU No.	Emission Unit Description
001	Engine 2601 – 7000 bhp gas turbine compressor engine This emissions unit is a Solar Model Taurus 60-7302S combustion turbine compressor engine rated at approximately 7,200 bhp with a maximum heat input rate of 66.6 MMBtu/hour (ISO) when operated at capacity. After initial startup, the unit is intended to operate at or near capacity. This unit is equipped with dry, low NOx combustion technology to minimize NOx emissions. Exhaust gases exit through a 63 foot tall stack with an exit diameter of 6.0 feet, at 920° F and a flow rate of approximately 90,285 acfm when operating at capacity

FEDERAL REGULATIONS

A.1. Federal Regulatory Requirements: This emission unit is subject to 40 CFR 60, Subpart GG – Standards of Performance for Stationary Gas Turbines, which is adopted by reference in Rule 62-204.800, F.A.C.

40 CFR Part 60 Subpart GG Applicable Provision References

*(Note - **Entire section** applies unless otherwise noted with specific applicable subsection references shown below the section title.)*

Section	Title
60.330	Applicability and designation of affected facility. *(All)*
60.331	Definitions. *(All)*
60.332	Standard for nitrogen oxides. (a)(2), (a)(3), (c)
60.333	Standard for sulfur dioxide. (b)
60.334	Monitoring of operations. (h)(3)(i)
60.335	Test methods and procedures. (a), (b)(1) &(2), (c)

{Permitting Note - These applicability references are based upon current operations as reflected in the operation permit renewal application dated 05/26/11. Any change in equipment or operations may change the applicable provisions.}

[Rule 62-204.800(8), F.A.C.]

PERFORMANCE RESTRICTIONS

A.2. Permitted Capacity: The maximum fuel heat input rate to the combustion turbine engine shall not exceed 66.6 MMBtu/hour (producing approximately 7200 bhp (ISO) based on compressor inlet air at 59° F; 50% relative humidity, inlet pressure of 1 atmosphere, 100% load) based on higher heating value (HHV) of 1040 Btu/scf for natural gas. Heat input rates will vary depending upon combustion turbine

characteristics, load, and ambient conditions. Compliance with this heat input limitation shall be demonstrated on a monthly average basis.
[Construction Permit No. 0170035-015-AC; Rule 62-210.200(PTE), F.A.C.]

A.3. Authorized Fuel: The combustion turbine engine shall fire only pipeline quality natural gas containing no more than 10 grains of sulfur per 100 standard cubic feet (scf) of gas.
[Construction Permit No. 0170035-015-AC; 40 CFR 60.333(b); Rule 62-210.200(PTE), F.A.C.]

{Permitting Note: The above limitation is based upon a Federal Energy Regulatory Commission (FERC) natural gas tariff sheet sulfur content limit of 10 grains S/100 scf (corresponds to approximately 0.05 % by weight), and is more stringent than, and therefore satisfies, the requirements of the applicable sulfur dioxide (SO_2) emission limitation contained in NSPS Subpart GG (i.e., a maximum fuel sulfur content limit of 0.8% S by weight - 40 CFR 60.333(b)).}

A.4. Restricted Operation: The hours of operation of are not limited (8760 hours per year).
[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

A.5. Emissions Standards: Emissions shall not exceed the following:

Pollutant	Emission Limit(s)	Equivalent Maximum Emissions[a]		Basis
		lb/hour	TPY	
NOx	25 ppmv (corrected to 15% O_2 & dry basis) [b]	6.0	26.4	Construction Permit 0170035-011-AC (synthetic minor source[c])
	187 ppmv (corrected to ISO conditions, 15% O_2, & dry basis)	---	---	NSPS Subpart GG 40 CFR 60.332(a)(2)
CO	50.0 ppmvd @ 15% O2	7.3	32.0	Construction Permit 0170035-011-AC (synthetic minor source[c])
SO_2	10.0 grains of sulfur per 100 SCF of gas [d]	1.8	8.0	Construction Permit 0170035-011-AC
	Fuel < 0.8% S by weight [e]	---	---	NSPS Subpart GG 40 CFR 60.333(b)
Visible Emissions (VE)	10% opacity [f]	*Not Applicable*		Rule 62-4.070(3), F.A.C. Construction Permit 0170035-011-AC

{Permitting Notes:

a. Equivalent Maximum Annual Emission rates are for information only – not limitations. Equivalent maximum NOx and CO emissions are based on the maximum allowable emission rates, permitted capacity, HHV at ISO conditions, and 8760 hours of operation per year. Each test report shall include measured mass lbs/hour emission rates for CO and NOx.

b. NOx Emission Limits - This 25 ppmvd limitation, originally established in Construction Permit 0170035-008-AC, is more stringent than, and therefore satisfies, the applicable NOx limitation contained in NSPS Subpart GG 40 CFR 60.332(a)(2) of 187 ppmv (corrected to ISO conditions, 15% O_2, & dry basis). Since the requested limit is only a small fraction of the NSPS limit, the 25 ppmvd limit is not based on, or subject to, correction to ISO condition as is the NSPS Subpart GG limit.)

c. The emissions standards for this emissions unit ensure that the facility remains a minor source of air pollution with respect to both PSD and Title V air permit programs.

d. To reduce potential SO_2 emissions, the permittee shall comply with a maximum sulfur content of 10 grains of sulfur/100 scf as specified in the current Federal Energy Regulatory Commission (FERC) tariff sheet. (Actual fuel sulfur levels are expected to be less than 1 grain per 100 scf.)

e. Compliance with the FERC natural gas tariff effectively limits the fuel sulfur content to approximately 0.05% by weight, which is well below, and therefore satisfies, the federal standard in NSPS Subpart GG 40 CFR 60.333(b) (shown in the above table).

f. The visible emissions standard serves as a surrogate standard to show efficient combustion.}

[Construction Permit No. 0170035-015-AC; 40 CFR 60.332(a) and 60.333 (Subpart GG); Rules 62-4.070(3), 62-204.800(8), and 62-210.200 (Definition of Potential to Emit), F.A.C.]

TESTING REQUIREMENTS

A.6. Annual Compliance Tests: During each calendar year (January 1st to December 31st), the emissions unit shall be tested to demonstrate compliance with the emissions standards for Visible Emissions (VE). The permittee also shall perform an annual visible inspection of the gas turbine, filters, and associated piping system for rust spots, cracks, leaks, and odors. Safety valves and stacks shall also be visually inspected to ensure proper working order. The results of the visible emissions observation and visual inspections shall be reported with the following additional items: a report on any non-routine maintenance conducted on this emissions unit, and a general description of the activities and operation of this emissions unit since the last test.
[Rule 62-297.310(8)(a)1, F.A.C.]

A.7. Compliance Tests Prior to Renewal: Except as provided in subparagraph 62-297.310(8)(b)3., F.A.C. (see Appendix D – Common Testing Requirements), in addition to the annual compliance tests specified above, compliance tests shall also be performed for carbon monoxide (CO) and nitrogen oxides (NOx) prior to obtaining a renewed operation permit to demonstrate compliance with the emission limits in Specific Condition **A.5.** CO and NOx emissions shall be tested concurrently at 90-100% of permitted capacity for the ambient conditions during the test *(see also Item 1. in Appendix D)*. NOx emissions for each test shall also be corrected to ISO ambient atmospheric conditions and compared to the NSPS Subpart GG standard identified in 40 CFR 60.334(a)(2) and Specific Condition No. A.4. for each required test.

[NSPS Subpart GG 40 CFR 60.334; Rules 62-210.300(2)(a) and 62-297.310(8)(b), F.A.C.]

{Permitting Note: Tests which are only required once during the term of a permit prior to obtaining a renewed permit should be performed roughly five years from the previous test.}

A.8. Test Requirements: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit.
[Rule 62-297.310(9), F.A.C.]

A.9. Test Methods: Required tests shall be performed in accordance with the following reference methods:

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
7E or 20	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources (The visible emissions (VE) tests shall be conducted by a certified observer and be a minimum of thirty (30) minutes in duration. The test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur.)
10	Determination of Carbon Monoxide Emissions from Stationary Sources (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.)

The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department.

[Rules 62-204.800, F.A.C.; and Appendix A of 40 CFR 60]

RECORDS AND REPORTS

A.10. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the natural gas firing rate (cubic feet per hour), the heat input rate (MMBtu per hour), the power output (bhp), the percent of base load, and the compressor inlet temperature. Each test report shall include measured mass lbs/hour emission rates for CO and NOx.
[Construction Permit No. 0170035-015-AC; Rule 62-297.310(10), F.A.C.]

A.11. Operational Data: Using the automated gas turbine control systems, the permittee shall monitor and record monthly heat input (MMBtu) (based on the natural gas usage and the average natural gas heating value), power output (bhp), and hours of operation for each turbine compressor engine. Within the 10 days of a request by the Department, the permittee shall be able to summarize the following information on a monthly average basis: average heat input (MMBtu per hour); average power output (bhp); and hours of gas turbine operation.
[Construction Permit No. 0170035-015-AC; Rule 62-4.070(3), F.A.C.]

A.12. Operation and Maintenance: For the replacement of combustion turbine components to facilitate prompt repair and return the unit to its original specifications, the permittee shall comply with the following notification and testing requirements.

a. Components shall only be replaced with functionally equivalent "like-kind" equipment. Replacement components may consist of improved or newer equipment, but such components shall not change operation or increase the capacity (heat input and power output rates) of the combustion turbine. Replacement components that affect emissions shall be designed to achieve the emissions standards specified in all valid air permits and shall achieve these standards or better. After a component replacement, the combustion turbine compressor engine remains subject to the standards of all valid air permits.

b. The permittee shall notify the Compliance Authority within seven days after beginning any replacement of the gas generator component of the compressor engine. Within seven days of first fire on a replacement gas generator, the permittee shall submit the following information to the Compliance Authority: date of first fire and certification from the vendor that the replacement gas generator is a functionally equivalent "like-kind" component. The vendor certification shall also identify the make, model number, maximum heat input rate (MMBtu/hour), power output (bhp) at ISO conditions, and that the permitted emission rates are achievable with the replacement component. This notification may be made by letter, fax, or email. A copy of the information shall be kept on site at the compressor station. Within 60 days of restarting the unit after a gas generator replacement, the permittee shall conduct stack tests to demonstrate compliance with the applicable emission standards. The permittee shall notify the Compliance Authority in writing at least 15 days prior to conducting these tests. If the proposed test schedule must be changed due to valid issues with equipment shakedown or test team schedules, the Compliance Authority may accept a shorter notice. The permittee shall comply with all permit requirements for test notification, test methods, test procedures, and reporting.

c. After investigation and for good cause, the Department may require special compliance tests pursuant to Rule 62-297.310(7)(b), F.A.C.

[Construction Permit No. 0170035-015-AC; Rules 62-4.130, 62-4.160(2), (6), and (15), 62-210.200, and 62-297.310(7)(b), F.A.C.]

B. EU 004 – Engine 2603

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
004	Engine 2603 – 20,500 bhp combustion turbine compressor engine This emission unit is a Solar Titan Model No. 130-20502SA combustion turbine compressor engine rated at approximately 20,500 bhp with a maximum heat input rate of 174.5 MMBtu/hour (ISO) when operating at capacity. After initial startup, the unit is intended to operate at or near capacity. This unit is equipped with lean premix low-NOx combustion technology to minimize NOx emissions. Exhaust gases exit through a 55 foot tall stack with a 7.5 foot x 8 foot exit, with flow rate of approximately 232,782 acfm at 944°F when operating at capacity.

FEDERAL REGULATIONS

B.1. Federal Regulatory Requirements: This emission unit is subject to 40 CFR 60, Subpart KKKK – Standards of Performance for Stationary Combustion Turbines, which is adopted by reference in Rule 62-204.800, F.A.C.

40 CFR 60 Subpart KKKK Applicable Provision References *

*(Note - **Entire section** applies unless otherwise noted with specific applicable subsection references shown below the section title.)*

Section Title

Introduction

60.4300 What is the purpose of this subpart? *(All)*

Applicability

60.4305 Does this subpart apply to my stationary combustion turbine? *(All)*

Emission Limits

60.4315 What pollutants are regulated by this subpart? *(All)*

60.4320 What emission limits must I meet for nitrogen oxides (NOx)? (a)

60.4330 What emission limits must I meet for sulfur dioxide (SO2)? (a)(2)

General Compliance Requirements

60.4333 What are my general requirements for complying with this subpart? (a)

Monitoring

60.4340 How do I demonstrate continuous compliance for NO_X if I do not use water or steam injection? (a)

60.4365 How can I be exempted from monitoring the total sulfur content of the fuel? (a)

Reporting

60.4375 What reports must I submit?
(b)

Performance Tests

60.4400 How do I conduct the initial and subsequent performance tests, regarding NOX? *(All)*

Definitions

60.4420 What Definitions apply to this subpart? *(All)*

Table 1. to Subpart KKKK of Part 60 - Nitrogen Oxides Emission Limits

NOx emission standards for "New turbine firing natural gas" with "heat input at peak load of > 50 MMBtu/hr and ≤ 850 MMBtu/hr"

[Construction Permit No. 0170035-015-AC; Rule 62-204.800(8), F.A.C.]

PERFORMANCE RESTRICTIONS

B.2. Permitted Capacity: The maximum heat input rate to the combustion turbine engine is 174.5 MMBtu per hour (producing approximately 20,500 bhp (ISO) based on a compressor inlet air temperature of 59° F; a compressor inlet pressure of 1 atmosphere; 100% load) based on a higher heating value (HHV) of 1040 Btu/scf for natural gas. Heat input rates will vary depending upon combustion turbine characteristics, load, and ambient conditions. Performance data shall be adjusted for the appropriate site conditions in accordance with the manufacturer's performance curves and/or equations on file with the Department. Except for startup and shutdown, operation below 50% base load is prohibited.
[Construction Permit No. 0170035-015-AC; Rule 62-210.200(PTE), F.A.C.]

B.3. Authorized Fuel: The combustion turbine engine shall fire only natural gas with a maximum sulfur content of 10 grains per 100 standard cubic feet (scf) of natural gas.
[Construction Permit No. 0170035-015-AC; 40 CFR 60 Subpart KKKK; Rule 62-210.200(PTE), F.A.C.]

{Permitting Note: The above limitation is based upon a Federal Energy Regulatory Commission (FERC) natural gas sulfur content limit of 10 grains S/100 scf (corresponds to approximately 0.05 % by weight), and is more stringent than, and therefore satisfies, the requirements of the applicable sulfur dioxide (SO_2) limitations contained in NSPS Subpart KKKK (i.e., 0.60 lbs SO_2/MMBtu - 40 CFR 60.4330).}

B.4. Restricted Operation: The hours of operation of are not limited (8760 hours per year).
[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

B. EU 004 – Engine 2603

EMISSIONS STANDARDS

B.5. Emissions Standards: Emissions shall not exceed the following:

Pollutant	Emissions Limits	Equivalent Maximum Emissions[e]		Basis[j]
		lb/hour	TPY	
CO	25.0 ppmvd @ 15% oxygen	9.5	41.7	Const. Permit 0170035-012-AC Synthetic minor source[f]
NO_X	15.0 ppmvd @ 15% oxygen[a]	9.4	41.1	Const. Permit 0170035-012-AC Synthetic minor source[f]
	25.0 ppmvd @ 15% oxygen	---	---	NSPS Subpart KKKK 40 CFR 60.4320 & Table 1 to Subpart KKKK
SO_2	10 grains of sulfur/100 scf[b]	4.8	21.0	Const. Permit 0170035-012-AC
	0.060 lb SO_2/MMBtu[c]	---	---	NSPS Subpart KKKK 40 CFR 60.4330
Visible Emissions (VE)	10% opacity[d]	*Not Applicable*		Rule 62-4.070(3), F.A.C

{Permitting Notes:

1. *This state 15 ppmvd limitation is more stringent than, and therefore satisfies, the NSPS Subpart KKKK 40 CFR 60.4320 limitation of 25.0 ppmvd @ 15% O_2 contained in Table 1 to Subpart KKKK.*
2. *To reduce potential SO_2 emissions, the permittee shall comply with a maximum sulfur content of 10 grains of sulfur/100 scf as specified in the current Federal Energy Regulatory Commission (FERC) tariff sheet. (Actual fuel sulfur levels are expected to be less than 1 grain per 100 scf.)*
3. *Compliance with the FERC natural gas tariff effectively limits the potential SO_2 emissions to 0.027 lb/MMBtu, which is less than half of federal standard in NSPS Subpart KKKK 40 CFR 60.4330. (Actual SO_2 levels are expected to be less than 0.0027 lb/MMBtu.)*
4. *The visible emissions standard serves as a surrogate standard to show efficient combustion.*
5. *The equivalent maximum emissions are provided for informational purposes and are based on: the permitted capacity; HHV at ISO conditions; full operation (8760 hours per year); and the permit standards (CO, NO_X, and SO_2).*
6. *The CO, NO_X and SO_2 emissions standards of this emissions unit ensure that the facility remains a minor source of air pollution with respect to both PSD and Title V air permit programs.}*

[Construction Permit No. 0170035-015-AC; 40 CFR 60.4320; and 40 CFR 60.4330; Rules 62-4.070(3), 62-204.800(8), and 62-210.200 (Definition of Potential to Emit), F.A.C.]

TESTING REQUIREMENTS

B.6. Annual Compliance Tests: During each calendar year (January 1st to December 31st), the emissions unit shall be tested to demonstrate compliance with the emissions standards for carbon monoxide (CO), nitrogen oxides (NO_X), and visible emissions (VE). For NOx compliance testing only, the subsequent

compliance test shall be conducted no more than 14 calendar months following the previous NOx performance test. CO and NO_X emissions shall be tested concurrently at permitted capacity.
[Construction Permit No. 0170035-015-AC; NSPS Subpart KKKK 40 CFR 60.4400(a) and Rule 62-297.310(8)(a)1, F.A.C.

B.7. Test Requirements: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit.
[Rule 62-297.310(9), F.A.C.]

B.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
7E or 20	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources (The visible emissions (VE) tests shall be conducted by a certified observer and be a minimum of thirty (30) minutes in duration. The test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur.)
10	Determination of Carbon Monoxide Emissions from Stationary Sources (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.)

The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department.

[Rules 62-204.800, F.A.C.; and Appendix A of 40 CFR 60]

RECORDS AND REPORTS

B.9. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the natural gas firing rate (cubic feet per hour), the heat input rate (MMBtu per hour), the power output (bhp), the percent of base load, and the compressor inlet temperature. Each test report shall include measured mass lbs/hour emission rates for CO and NOx
[Construction Permit No. 0170035-015-AC; Rule 62-297.310(10), F.A.C.]

B.10. Operational Data: Using the automated gas turbine control systems, the permittee shall monitor and record monthly heat input (MMBtu) (based on the natural gas usage and the average natural gas heating value), power output (bhp), and hours of operation for each turbine compressor engine. Within the 10 days of a request by the Department, the permittee shall be able to summarize the following information on a monthly average basis: average heat input (MMBtu per hour); average power output (bhp); and hours of gas turbine operation.
[Construction Permit No. 0170035-015-AC; Rule 62-4.070(3), F.A.C.]

B.11. Operation and Maintenance: For the replacement of combustion turbine components to facilitate prompt repair and return the unit to its original specifications, the permittee shall comply with the following notification and testing requirements.

a. Components shall only be replaced with functionally equivalent "like-kind" equipment. Replacement components may consist of improved or newer equipment, but such components shall not change operation or increase the capacity (heat input and power output rates) of the combustion turbine. Replacement components that affect emissions shall be designed to achieve the emissions standards specified in all valid air permits and shall achieve these standards or better. After a component replacement, the combustion turbine compressor engine remains subject to the standards of all valid air permits.

b. The permittee shall notify the Compliance Authority within seven days after beginning any replacement of the gas generator component of the compressor engine. Within seven days of first fire on a replacement gas generator, the permittee shall submit the following information to the Compliance Authority: date of first fire and certification from the vendor that the replacement gas generator is a functionally equivalent "like-kind" component. The vendor certification shall also identify the make, model number, maximum heat input rate (MMBtu/hour), power output (bhp) at ISO conditions, and that the permitted emission rates are achievable with the replacement component. This notification may be made by letter, fax, or email. A copy of the information shall be kept on site at the compressor station. Within 60 days of restarting the unit after a gas generator replacement, the permittee shall conduct stack tests to demonstrate compliance with the applicable emission standards. The permittee shall notify the Compliance Authority in writing at least 15 days prior to conducting these tests. If the proposed test schedule must be changed due to valid issues with equipment shakedown or test team schedules, the Compliance Authority may accept a shorter notice. The permittee shall comply with all permit requirements for test notification, test methods, test procedures, and reporting.

c. After investigation and for good cause, the Department may require special compliance tests pursuant to Rule 62-297.310(7)(b), F.A.C.

[Construction Permit No. 0170035-015-AC; Rules 62-4.130, 62-4.160(2), (6), and (15), 62-210.200, and 62-297.310(7)(b), F.A.C.]